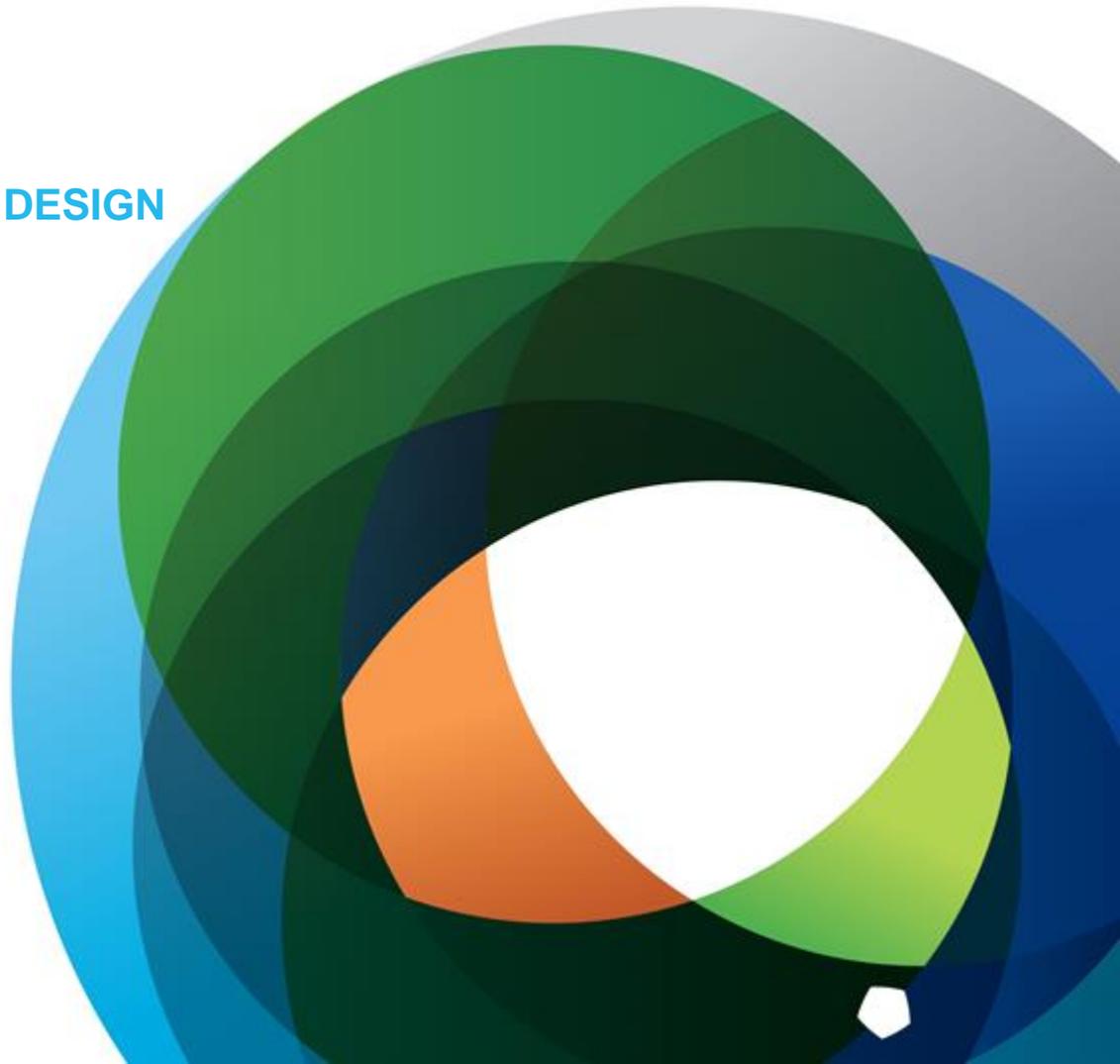


**ENERGY SECURITY BOARD  
POST 2025 ELECTRICITY MARKET DESIGN  
STAKEHOLDER FEEDBACK**

OPTIONS PAPER 30 APRIL 2021  
PUBLIC CONSULTATION

THEMES AND ISSUES RAISED IN  
SUBMISSIONS

JUNE 2021



# Overview of submissions



- This summary pack is intended to provide an overview of stakeholder feedback received to the ESB Post-2025 Market Design Options Paper (April 2021)
- The information set out in this pack is intended as a summary only and any information attributed to parties is to provide context.
- Details of stakeholder submissions can be found here:
- <https://energyministers.gov.au/publications/post-2025-market-design-options-%E2%80%93-consultation>

# Summary of feedback received



- Total of 104 written submissions received to April consultation
- 100 non-confidential submissions – published on Energy National Cabinet Reform Committee (NCRC) website and ESB microsite
- Over 30 stakeholder briefings, including CEO roundtables (pre consultation) and deep dive sessions across reform workstreams
- Feedback reviewed across workstream teams – considerable input received

Stakeholder	# of submissions
Large customers / customer groups	6
Generator / gentailers	18
Network Service Providers	10
Industry peak bodies	12
Private equity	2
Consultants / academic groups	12
Manufacturers	6
New energy providers	18
Govt dept / agencies	7
Individuals	5
Environment/Climate Action groups	8



# RESOURCE ADEQUACY MECHANISMS AND AGING THERMAL RETIREMENT

# Overview of submissions (1/2)



**OVERVIEW:** Generally, stakeholders held mixed views on the nature and definition of resource adequacy problems and the need to address them with new or enhanced mechanisms. Of the 76 out of 104 submissions that discussed RAMs, stakeholders were most engaged with the modifications to the RRO sections and generally unsupportive of modifications to the RRO without a clearer case for change. Otherwise, stakeholders were broadly supportive of increased transparency around jurisdictional investment and believed existing notice of closure and exit arrangements to be sufficient to manage exits without limiting operational flexibility.

- **Nature of the resource adequacy problem:** stakeholders fell into three groups when considering this problem:
  - Most considered there is **not a material resource adequacy problem** in the national electricity market (NEM) and broadly supported the continuation of current market regulations and arrangements. Particularly in relation to enhancements to the retailer reliability obligation (RRO), most stakeholders believed existing market arrangements are sufficient to enable timely entry and orderly exit of resources (including Tilt Renewables, Meridian Energy, Aust Aluminium Council, Major Energy Users) or that the ESB had not sufficiently justified why existing mechanisms were not fit-for-purpose (including Flow Power, RWE Renewables, CEC, Neoen, Quartermain Advisory). Most still supported increased transparency and provision of information from jurisdictions.
  - The second considered that **resource adequacy problems were emerging** or were likely to emerge in the near future, with mixed views on the need to address this by delaying exit of thermal generation capacity (Delta Energy), vs encouraging entry of new dispatchable technologies (Energy Australia, Jemena).
  - Others (including Tango Energy/Pacific Hydro), considered the **problem remained undefined**, which made it difficult for them to assess the trade-offs of various resource adequacy proposals put forward.



- **Views on process and direction of workstream:**

- Many stakeholders suggested that there had been inadequate time to consider the options or options that were not sufficiently considered or articulated to allow for substantive consultation (including Neoen, SnowyHydro, AEC, Transgrid, Tilt, Stanwell).

*In our opinion, there is still insufficient detail or analysis on how the proposed reforms would work, what impacts they would have on the market and participants, and costs and benefits to the market and consumers – Stanwell, p. 2.*

- Some stakeholders considered that the principles/measures of success outlined by the ESB were sound, however, did not believe that the options put forward, particularly the retailer reliability obligation (RRO) options, met these principles (including AGL, CEC, Origin).

- **Other key notes:**

- Many stakeholders noted a **need to consider operating reserves** within the resource adequacy mechanism (RAMs) discussion as a complementary or alternative and less costly mechanism to boost investment (including Delta, Origin, Tango Energy/Pacific Hydro, AGL, Flow Power).
- Approx. 10% of submissions were from **environmental groups** emphasising the lack of acknowledgement of emissions objectives within the arrangements for timely entry and orderly exit, and concerns related to the physical RRO having the potential to artificially retain emissions intensive generators (including Queensland Conservation Council, Environment Victoria, Community Power Agency).



**OVERVIEW:** Stakeholders were largely unsupportive of modifications to the RRO as either the case for change had not been made or the risk of imposing costs on consumers for little benefit was considered to be high, without more analysis. Of those who believed modifications were necessary, there were mixed views on the shift to a triggerless financial vs a physical RRO. Some also noted that detailed design and analysis had not yet been conducted by the ESB and would be needed to properly assess the risks associated with each option.

- **Effectiveness and sufficiency of the current retailer reliability obligation (RRO)**

- Some **generators** such as Tilt Renewables and Meridian Energy did not believe there to be sufficient evidence to suggest there were reliability issues unable to be managed with existing mechanisms/the existing RRO. Others including Snowy Hydro, Alinta, AGL, CS Energy, Iberdrola and Origin argued that there are significant costs to implement modifications (financial triggerless or physical) with no demonstrated benefits.

*While a strengthened RRO may provide some additional assurance that higher levels of contracting are in place in the short-term, it remains doubtful that this will translate to the types of large-scale and long-term investments that policymakers are seeking as an outcome from the obligation – AGL, p. 15.*

- Majority of **retailers** including Flow Power, Shell Energy, Enova Energy were not supportive of modifications to the RRO, believing the case for change had not been made.
- Majority of **large loads** did not see the case for change (Australian Aluminium Council) or think the RRO options would deliver new investment or achieve the measures of success (Major Energy Users, EUAA and Bluescope). This was echoed by ACCIONA and AEC and other **consumer groups** including the Network of Illawarra Consumers of Energy and ACOSS.



- **Effectiveness and sufficiency of the current RRO continued...**

- Many stakeholders such as Hydro Tasmania, Snowy Hydro, Finncorn Consulting (ECA) and Enel X also noted that the current RRO had not been in place for sufficient time to understand its efficacy and the implications of altering it were therefore unknown.

*The current RRO remains untested and so it is not clear what evidence justifies a change at this time – Hydro Tasmania, p. 7.*

- **Need to move to a triggerless financial RRO**

- The majority of submissions focussed on the physical RRO, with only a small number specifically comparing the triggerless financial RRO to the current RRO or physical RRO.
- ReAmped Energy, Bluescope and General Electric Australia were supportive of removing the T-3 trigger to increase contracting and therefore strengthen investment signals. ENGIE specifically stated that a financial triggerless was preferable to a physical if a change is needed as it utilised the existing energy contract market.
- Others such as AEC, AFMA and Alinta did not consider removing the T-3 trigger to strengthen market signals compared with the current RRO.

*We appreciate that a FRRO with minimised triggers may increase the volume of contract activities, however, Alinta Energy does not consider that it would sufficiently strengthen market signals. If implemented, we believe retailers may seek to offset this additional hedging risk and cost through many shorter term products in an uncertain environment – Alinta, p. 3*

- Many stakeholders who commented on the triggerless financial RRO also noted the need to review the market liquidity obligation (MLO) if the T-3 trigger was removed (including Snowy Hydro, Hydro Tasmania, Shell Energy, Reach Solar).



- **Need to move to a physical RRO**

- Stakeholders were largely unsupportive of modifications to the RRO, with many (including PIAC, Bluescope, Monash Uni, Flow Power) specifically opposed to a physical RRO.
- A small number of **generators**, including Energy Australia and Delta, supported the move to a physical triggerless RRO to provide a stronger signal for medium to longer term capacity needs via explicitly valuing “physical” capacity. One **retailer**, Aurora Energy, was conditionally supportive of the physical triggerless over the financial triggerless as it allowed for increased retailer flexibility. Others such as St Baker Energy, Energy Queensland and EDL also supported the physical RRO as providing a stronger investment signal than a financial RRO. There were mixed views on the merits of a triggered vs triggerless physical RRO.

*Without the link between physical and financial contracts there remains a risk there is a mismatch between the financial and physical positions and generation capacity is not incentivised to respond to manage price risk. – EDL, p. 21.*

- **Renewables/storage providers** including CEC, Neoen, Enel GP, Enel X and Tesla did not support a physical RRO specifically as the case has not been made as to the benefits, retail competition is likely to be compromised and significant costs will be passed on to consumers.
- Other generators such as Stanwell and Tango Energy/Pacific Hydro showed reluctance to comment without further detail on the implications of the RRO options. St Baker Energy, Iberdrola, SnowyHydro and CS Energy, for example, noted that the significant scale and lead-time to implement a physical RRO had not been accounted for in the ESB’s current assessment of the options.



- **Implications of moving to a physical RRO**

- Many stakeholders believed that the implications of moving to a physical RRO had been underplayed in the ESB's options.
  - Aust Aluminium Council, Flow Power and CEC, for example, commented on the significant compliance, enforcement and implementation costs of a physical RRO, which would ultimately be borne by consumers.

*The physical RRO introduces new costs associated with buying certificates that have no intrinsic value, other than for retailers to meet their obligations under the scheme. Ultimately these additional costs will be passed on to consumers. - CEC, p. 3.*

- The majority of **retailers** noted the likelihood of increasing barriers to entry and retail innovation. A significant proportion of other stakeholders, including Snowy Hydro, the Australia Institute, Stanwell, Monash Uni and CEC seconded this.

*This proposal would be a radical structural change for the industry, introducing an entirely new form of market exchange, shifting investment risks away from shareholders and onto consumers or taxpayers – Snowy Hydro, p. 4.*

- St Baker Energy, Iberdrola, SnowyHydro and CS Energy, for example, noted that the enormity of moving to a physical RRO and the lead-time to implement it had not been accounted for in the presentation of the ESB's options.



**OVERVIEW:** Most generators believed existing notice of closure arrangements were sufficient to manage exits and any additional information provision would be operationally limiting. Retailers also generally believed existing notice of closure mechanisms to be sufficient. On the other hand, consumers and large loads were broadly supportive of increased transparency regarding exits and concerned about disorderly exits increasing costs to consumers.

- **Mothballing, seasonal shutdown and recall times:**

- The majority of **generators/gentailers**, including Iberdrola, Delta, Alinta and ENGIE, believed that increased information provision on mothballing/seasonal shutdowns was unnecessary and poses constraints on operational flexibility of plants. This constraint was seconded by others such as the AEC, the Reliability Panel and ACCIONA.

*To the extent the ESB's concern relates to mothballing or seasonal operation, ENGIE notes that these are normal commercial practices which are carried out when price signals indicate a plant or unit is temporarily surplus to requirements... the ESB should avoid discouraging such practices through excessive requirements on plant owners and be wary that it may actually force plant into early retirement if attempts are made to force uncommercial plant to continue to run. – ENGIE, p. 4.*

- **Retailers**, including Flow Power and Shell Energy, also noted that there was no case to show that existing notice of closure arrangements are insufficient.
- Other stakeholders who commented on exit arrangements, including Energy Users Association of Aust and Finncorn Consulting (ECA), generally supported increased information provision around retirements, mothballing and seasonal shutdowns providing this did not limit the orderly exit of plants. In contrast, the Clean Energy Investor Group specifically supported increased information provision to inform an orderly transition.



- **Views on an integrated process for early exit:**

- A small number of stakeholders (including Major Energy Users) commented on this, with broad support for a process to manage early exit. There was common agreement that this could integrate well with existing processes.
- **Environmental groups** and some **academics** specifically advocated for mechanisms to support the rapid exit of thermal generation, with many (including the Peoples Climate Assembly, Queensland Conservation Council and IEEFA) recommending the orderly exit mechanisms proposed by Jotzo & Mazouz and the Blueprint Institute, which embed environmental goals into the decision-making process.

- **Views on orderly exit management contracts (OEMCs):**

- The majority of stakeholders who commented on OEMCs were unsupportive of the proposal (including Aust Aluminium Council, Clean Energy Investor Group, ACCIONA), with a belief that they would undermine the role of the market.

*While the intentions underlying these proposals are understandable, such mechanisms risk prompting actions by governments and generation owners which undercut the role of markets and market signals. – Australian Aluminium Council, p. 4.*

- A small number including IEEFA did support the proposal as a last resort mechanism or under certain design conditions.

# Integrating Jurisdictional Investment Schemes (1/2)



**OVERVIEW:** Stakeholders were broadly supportive of coordination across jurisdictions and the financial principles put forward. Stakeholders also largely supported increased transparency from jurisdictions but had mixed views on the need for new information to be provided to jurisdictions.

- **Views on financial principles:**

- Some stakeholders, including Reach Solar, Energy Efficiency Council, AEC and Bright Sparks, specifically stated that jurisdictional investment distorted market outcomes and needed to be managed. UPC AC Renewables, AEC, Energy Networks Australia and St Baker Energy believed that the ESB should accept that states would continue to act on their political interests and IEEFA noted jurisdictional underwriting schemes were an effective means to replace capacity.

- For these reasons, there was strong support amongst stakeholders for coordination across jurisdictions.

*A NEM-wide consistent approach to jurisdictional underwriting could help the whole system align on the best way to build replacement capacity while indicative market pricing suggests ongoing real deflation in wholesale electricity prices – IEEFA, p. 14.*

- ACOSS and Tilt Renewables also noted that a national emissions policy would have a similar effect of aligning jurisdictions.
- There was also strong support for the financial principles put forward for jurisdictional investment and for agreed national principles for contracting. Some noted omissions from the financial principles identified by stakeholders included:
  - Investment in transition of workers from thermal gen sectors (AEC)
  - Need to provide sufficient revenue certainty over longer timeframes for capital intensive investments (General Electric Aust)
  - Cost recovery through State budgets and using direct contracting with thermal gen as a last resort (PIAC)
- Neoen was of the view that the ESB should not interfere with jurisdictional investment schemes.



- **Views on information provision to/from jurisdictions:**

- The majority of stakeholders who commented supported increased provision of information from jurisdictions to allow market participants to better respond to market signals (including Energy Efficiency Council, Bright Sparks, Major Energy Users).

*The MEU agrees with the ESB that more information provided to the market enhances the ability of market participants to better respond to the market signals with certainty and confidence – Major Energy Users, p. 10.*

- Stakeholders held mixed views, however, on the need to provide greater information to jurisdictions. For example:
  - Energy Networks Australia was supportive of market bodies providing additional advice to governments to reduce the risk that policies are designed with imperfect information and will have unintended consequences for consumers.
  - The CEC and Network of Illawarra Consumers of Energy did not believe any additional advice was needed and current publicly available advice was sufficient.
  - Finncorn Consulting (ECA) was supportive of additional information provision to jurisdictions although was unclear why current sources of info were considered insufficient.
- Stakeholders broadly agreed that any information to or from jurisdictions should not be duplicative on any information already provided as this would be inefficient.

# ESSENTIAL SYSTEM SERVICES (ESS) & AHEAD MECHANISMS

# Overview of submissions



**OVERVIEW:** Continued support for establishing essential system services (ESS) with spot markets where feasible and structured procurement where not, with recognition of progress already underway. Of the submissions that discuss ESS, most stakeholders have left detailed feedback to the ongoing AEMC rule change processes. Mixed feedback received on each initiative, with general support for the options associated with frequency (fast frequency response services and a market-based approach for primary frequency response), and a range of responses regarding the procurement of system strength, for UCS and SSM, for operating reserves, and for the potential next reforms of inertia, unbundling, and ahead markets.

## General:

- General agreement on the urgency of the need to address missing markets for Essential System Services.
- Support for the services identified by the ESB as the ones to be considered; frequency, inertia, operating reserve, and system strength.
- Concerns raised that proposals do not fully consider how to transition to a net zero or fully renewable system, with some concerns the proposals may preference old technology and do not give sufficient consideration to DSP (e.g. Tesla, ACCOSS, EDL, EEC, Enel X).
- Concerns raised that ESS has not been given due attention in the ESB process (AEC), with others expressing support for the AEMC taking 'sole coverage' of these reforms (CS Energy).

*The AEC maintains the “missing markets” component of the ESS line of work is the most urgent in the NEM. In contrast with the healthy reliability outlooks in AEMO’s Electricity Statement of Opportunities, AEMO’s Renewable Integration Studies indicate clear and present dangers in maintaining a secure system without these markets. ... Despite this, the component struggles to achieve the high-level focus that such urgency implies, presumably due to its “eye glazing” nature.*

## Process:

- General support for the establishment of ESS (including operating reserve) and “missing markets” to be handled through AEMC rule changes on foot, noting progress has been made in FFR and system strength, with draft determinations already published.
- Some stakeholders expressed confusion with how the dual processes (ESB and AEMC rule changes) will be managed and take feedback into account, with many choosing to instead provide detailed feedback to the AEMC processes, rather than through the ESB.
- Some stakeholders stressed the need for cost benefit analysis CBA of the ESS reform (eg Shell, Aust aluminium council) and the need for further analysis to be undertaken for how the ESS will interact with one another (eg Stanwell).



**OVERVIEW:** General support for the reforms underway to introduce new fast frequency response (FFR) services and consider market-based approaches to procurement of primary frequency response (PFR).

## **Primary frequency response:**

- Generators and gentailers support a market-based PFR to be established.
- Noted that further work is required to be completed to quantify the amount of PFR required

## **Most stakeholders support creation of two new markets for fast frequency response service:**

- General support for unbundling and creation of specific FFR markets.
- Concerns with the implementation timeline (3 years), with new entrants in particular expressing a desire to see expedited implementation (Tesla, Enel X, Tilt Renewables, CEC).

## **Some concerns expressed that inertia is not being explicitly considered as part of frequency reforms underway:**

- A number of large generators consider that explicit consideration for valuing inertia should be included in the current FFR proposals (Delta, CS Energy, Hydro Tas), and therefore express reservations in supporting the proposals, while others also highlight the need to prioritise consideration of an inertia market in line with the introduction of FFR markets.

*[Origin supports] the introduction of the proposed new 2-second FFR markets given they will increase the resilience of the system to frequency incursions as inertia levels decline with the exit of thermal plant. It is important to note, however, that FFR is not a perfect substitute for inertia, and continuing investigation of an appropriate mechanism to incentivise the provision of inertia should remain a priority.*



**OVERVIEW:** Increase in support for further consideration of operating reserves as a RAM, while there were mixed views given for operating reserves as an ESS, with many stakeholders considering the need (as an ESS) has not been established and concerns raised around the costs of change.

## Mixed views in establishing a separate operating reserves market as an ESS:

- Most stakeholders did not support implementation of an operating reserves as an ESS for reasons that included;
  - need has not been established,
  - market already provides operating reserves and will continue to provide it,
  - expected flexibility of the future fleet and energy market conditions should enable sufficient response to address future uncertainty
  - or that they do not expect it to be required after the other ESS have been established (AEC, Shell, Stanwell, Tilt Renewables, EUAA, IEEFA, Neoen, ECA).

*In 2020 the AEC supported further work on the Operating Reserve concept, which was then seen to have both RAM and ESS benefit. The ESB moved it for further study into the ESS stream which appropriately explored its ability to support short-term supply/demand balancing and ramping. This work is uncovering that the existing market incentives appear adequate for balancing and ramping, even in light of changing technologies, as long as the market continues to deliver sufficient underlying capacity and storage energy volume.*

- However, some suggest it could be valuable in managing peak demand and emerging conditions (Trevor St Baker Innovation Fund, Tesla, Delta Electricity) or supporting demand-side participation (EEC, Iberdrola).
- Some users expressed a concern that a new market for operating reserves may be unhedgeable and that cost-recovery mechanisms require detailed consideration (Aust Aluminium Council, AFMA, Quartermaine Advisory), with some raising concerns that there will be an additional cost to consumers without clear benefits (Finncorn Consulting, Bluescope, MEU)



## **Support for assessing operating reserve as a resource adequacy mechanism (RAM):**

- Many generators and gentailers consider that operating reserve should be considered as a RAM, suggest an operating reserve could be useful to addressing the need for dispatchability and providing additional spot market returns (AEC, Energy Australia, CEC, AGL, Origin Energy, Flowpower, Engie)

*“The Operating Reserve has a RAM effect by adding some additional spot market returns to a peaking plant that sits just outside the dispatched merit order during moments of low reserves”- AEC*

*“We strongly support a dynamic operating reserve... however, we consider that an operating reserve is likely to provide more value as a mechanism to maintain system reliability and incentivise dispatchable generation, rather than as a security service” - AGL*

- Stakeholders encourage the ESB and market bodies to further consider the impact on investment in flexible capacity (Snowy Hydro) – although some do not consider it will have a noticeable impact (Tesla).
- AEC also considers that consideration of operating reserve as a RAM may enable a simpler implementation than is currently considered by the RAM options outlined in the AEMC’s January Directions paper.

# System Strength, UCS and SSM (1/2)



**OVERVIEW:** General support for a unit commitment for security (UCS), although some generators query whether a rule change is required to implement the UCS, and there were mixed responses for the settings of the optimisation of the scheduler. Mixed responses on transmission business (TNSP)-led procurement of system strength in the investment timeframe. Limited support for operational procurement of system strength and an SSM, with many requesting more clarity.

## Mixed views on long-term system strength framework:

- Support for evolving the “do no harm” and “shortfalls” framework that many consider to have been inefficient.
- Most stakeholders support the framework that has been outlined in the AEMC’s draft determination for TNSP-led procurement of system strength in the investment timeframe, with many positively noting the progress that has been made.
- Others (Trevor St Baker Innovation Fund, Bluescope, Delta Electricity) expressed concern with potential costs with TNSPs having the sole responsibility for procurement of system strength.

## General support for UCS:

- Support for the UCS as a tool that enhances AEMO’s operational capability.

*While some details are yet to be developed, TLT broadly supports the development of the future-time UCS as a decision-making tool for AEMO where interventions maybe necessary to maintain system security via a structured procurement mechanism.*

- Those that responded to the questions or commented on the settings of the UCS expressed concern with optimising to an efficient schedule, with concerns around effectiveness and ability to get the right outcomes from an objective function in an ahead setting and against pre-dispatch, the potential to lead to central commitment, and complexity.
- Stakeholders also expressed a need to further consider the timing and inputs of the UCS.
- There is also some reticence for implementing the UCS; e.g. Snowy Hydro remains concerned that the benefits of a UCS have not been demonstrated.



## Mixed views on continued development of SSM:

- The majority of stakeholders are yet to come to a definitive position on the SSM, with many suggesting further work is required in order to assess the proposal, including:
  - considering further how it will interact with energy and FCAS (Tesla, Enel X),
  - what combinations are required that will not otherwise be available and would require directions (AGL), and
  - further assessing the complementarity (or otherwise) of the long-term investment arrangements for system strength and operational procurement (Engie, AEC, ACOSS).
- Those that are supportive of the SSM consider having an operational procurement mechanism could provide greater competition for services (Finncorn Consulting/ECA), and will better enable generation provision of required services that may not be able to contract with TNSPs (Delta Electricity).

*Essential Services are best procured through competitive market structures. Tools that provide improved operational capability for AEMO such as the Unit Commitment for Security and System Security Mechanism are necessary and should be implemented. - Trevor St Baker Innovation Fund*

- Those that do not support the SSM consider need has not been established (CS Energy, Tilt Renewables, EUAA), and further consideration should wait until long-term contracts for system strength and other new ESS markets (including inertia) have been established and there is operational experience (Aust Aluminium Council, Stanwell, AEC, Neoen).
- However, it is not clear stakeholders have a good understanding of the proposal, and some misconceptions (such as the SSM being a means to procure coal-based resources) seems to have lead to some opposition that will need to addressed in the ongoing consultation, noting the importance of technology neutrality as a design principles for these reforms



**OVERVIEW:** Many generators, gentailers and investors, of the view that progressing an inertia spot market should be prioritised (both incumbent and new entrant e.g. Tesla). Others agree that transitional, structured procurement options are better pursued in the immediate term, with a view to eventually move to a spot market. Networks consider that an inertia spot market is not needed at this stage, and some suggest it may not ever be practical.

## Many stakeholders expressed a view that inertia as a spot market should be prioritised

- Concerns that a spot market for inertia is not being progressed as a priority, nor explicitly considered as part of the frequency reforms already underway, and is instead specified as a 'next reform'.
- CS Energy, Origin Energy, AEC, Delta Electricity, Quinbrook, Stanwell, Energy Australia, Snowy Hydro all strongly support the immediate need for prioritisation of developing a specific inertia spot market, and the AEC has indicated it is working with some members to develop further proposals in this area.

*Stanwell believes that the proposed delayed establishment of a market(s) for inertia is one such gap that the ESB should act on immediately.*

- However others agreed that an inertia spot market should not yet be progressed, given the overlap with other frequency services (Tilt Renewables), it is better suited to contractual approach (AGL), or that further consideration should be given to developing transitional procurement options, such as central procurement (Alinta, CEC, ACCIONA, NFF (NIC)).
- Some stakeholders suggest it may be difficult to price and value inertia (Monash University) and that it may not be required for the more inverter based power system of the future (Reach).
- Networks are also of the view that in the near-term inertia is better placed to be considered under the existing frameworks, although Energy Queensland notes that it may be suitable to auctions in the future.

# Other next reforms – ahead markets and unbundling



**OVERVIEW:** General support expressed for the pathway established for future consideration of ESS, with many stakeholders noting the need to direct resources to deal with the immediate pressing ESS reforms.

## Unbundling:

- Where stakeholders explicitly commented on potential future unbundling of services, they expressed support, particularly where introduced in a technology-neutral manner.

*Tesla is supportive of the approach to create new market signals and ultimately unbundle and value services, provided non-network and asynchronous solutions are afforded an equal playing field to incumbent technologies*

## Ahead markets:

- Stakeholders supported de-prioritising integrated ahead market to a next reform.

*The CEC agrees that ahead markets are not a priority and do not warrant further consideration at this stage. Rather, getting the frequency control and system strength frameworks in place as a matter of urgency, followed by the UCS, should be the focus of the near to medium term.*

- Some stakeholders suggest this should go further to remove any form of energy ahead market from the reform pathway (Engie, CS Energy, Energy Australia), while others (Delta Electricity, Energy Efficiency Council, ACCIONA, Reach Solar) agree or provide tentative support that there may be value in further consideration of a co-optimised ahead market for energy and services in the future and allowing inter-temporal trading.

*“An “Ahead Market” could be of use and features in a number of global energy markets. Despite 23 years of operation, the NEM does not trade intra-day, day ahead, week ahead or month ahead: unlike other energy markets” - Reach*

The background features large, overlapping curved shapes in shades of blue and green. A light blue shape is on the left, a darker blue shape is on the right, and a green shape is at the top center, partially overlapping the others.

# **INTEGRATION OF DISTRIBUTED ENERGY RESOURCES (DER) AND FLEXIBLE DEMAND**

# Overview of submissions (1/2)



**OVERVIEW:** Of the 104 submissions received, 72 discussed the integration of distributed energy resources (DER) and flexible demand. All submissions were supportive of the need to have greater demand side flexibility and integration of DER.

- All submissions noted the importance of increasing the participation of the demand-side in the market. However, there was limited consensus on the various reform proposals. Most supported the intent of the reforms and highlighted various issues that would need to be worked through over time. Some raised concerns on the costs of the reforms that would be passed onto consumers and other market participants.
- **ARENA** noted its continued support for the work and the need for rule changes to progress trader-services, scheduled and flexible trading arrangements. It would also like to see ARENA included as part of the DER framework going forward.
- **Consumer representatives** ACOSS and NICE were critical of the proposed approach. ACOSS wants more engagement with consumer groups on all issues, where NICE does not support the ESB's approach and submits that a DSO is needed instead. EWON was supportive of the approach to consumer protections. PIAC was generally supportive of the reforms and called for an approach to the Maturity Plan to be run like the two-sided market element of the post-2025 work.
- The **ECA** believes that unlocking customer flexibility has many benefits but considers a "that a framework is required to advance a series of interrelated matters relevant to DER in a structured manner and over a reasonable time period, with an appropriate governance framework, funding and decision-making model". It proposes a DER taskforce with appropriate governance and funding, could take responsibility for an energy transition plan

# Overview of submissions (2/2)



- **Networks** were supportive of need to better integrate DER noting the work that is already underway. Some supported the incremental approach to the reforms and taking a customer focus to reward demand-side participation in the market. In discussions with networks outside of the formal submission process, there was some concern amongst networks that the reforms were very focussed on customers only trading with a retailer and networks should continue to play a role in providing demand response, like hot water load control.
- A general theme for **generators and retailers** was support of the ESB taking a customer focus with most recommending the need to maintain competitive markets and reduce barriers for participants.
- **Smaller retailers and aggregators** like Rheem, Enel X and Flow Power were very supportive of the intent of the reforms. Enova energy was the only **small retailer** who was critical noting the reforms were too focussed on technical matters and not removing barriers for small retailers.



**OVERVIEW:** There was limited discussion on the trader-services model – with 21 submissions commenting on this issue. There was general support with the concept noting that there are still many issues that need be worked through. Some retailers and networks noted concerns with potential complexity.

- Overall, those who commented on the trader-service models were supportive of an approach that streamlines participation. Most noted that more work is needed to understand the details.
- Larger **gentailers** like EnergyAustralia, Origin and AGL were concerned about the reforms that would introduce complexity for consumers through needing multiple providers for various services a customer receives. However, Alinta saw the reforms as beneficial in removing barriers for both service providers and customers.
- Smaller **retailers** and **aggregators** were supportive of the proposal but did note some concerns with some of the details. Including Enel X who noted that the overall approach might not bring any benefit to the large number of existing provides already registered in multiple categories.
- **Generators** were mixed in their support with Stanwell questioning the need for the reform.
- **Networks** noted there was more work to be done for the concept with SAPN noting the April paper assumes a linear relationship with the trader and customer which doesn't consider the current triangle relationship between the DNSP, customer and retailer.
- The only **customer representatives** who commented on the trader services model were NICE and ACOSS. NICE saw merit in the proposal but questioned having a universal name called trader rather than keeping a distinction between retailers and other participants. ACOSS does not agree that the trader-services model could be finalised until more is understood about roles and responsibilities.

# Scheduled lite (1/2)



**OVERVIEW:** 30 submissions commented on scheduled lite and were mostly supportive of the models being progressed in a way that did not lead to unnecessary costs and risks on consumers. Some stated that the less onerous “visibility” model would be the most popular. There were also suggestions for penalties for non-compliance, incentives and a cost benefit analysis. There was some concern about low take up levels, unintended consequences and fears that the models would become mandatory in the future.

- Large **gentailers** were mixed in their feedback. Energy Australia and Origin supported progressing the development of a voluntary form of scheduled lite. While AGL considered that scheduling obligations on aggregators of DER should be equivalent to other market participants.
- **Retailers** such as Shell Energy, Enel X and Flow Power agreed the scheduled lite models are reasonable and appropriate.
- **Consumer advocates** were supportive of a voluntary approach with PIAC suggesting the design should factor in a low risk of demand side participants engaging in manipulation or gaming. ACOSS supports the voluntary approach and wants to be involved in a workshop to assess models against the design principles. NICE did not support on the basis it was not consistent with its proposal for a DSO. The ECA emphasized its agreement with the design principle of the scheduled lite models that the costs of the models are not borne by small consumers and the obligations are to be managed by traders and aggregators on behalf of small consumers.
- **Large customers** such as EUAA and Australian Aluminium Council raised strong concern about a potential to move from a voluntary/ “opt-in” form of scheduled lite to a mandatory version in the future. Bluescope was supportive and made useful suggestions about penalties for non-compliance/inaccurate forecasts (withdrawal from category rather than civil penalties).
- **Generators** views were mixed - Snowy Hydro were concerned that the proposed incentives (reduced causer pays and RERT costs) had the potential to undermine the orderly operation of the wholesale and energy services markets. While Stanwell and Jemena were supportive of the iterative approach to improving visibility. The AEC and Engie, considered there would be limited uptake of the models.



- **ARENA** was supportive, while **Smart Energy Council** and **Clean Energy Council** wanted more clarity on the circumstances where scheduled lite would become mandatory. IEEFA supportive but notes further cost benefit analysis needed.
- **Networks** were supportive with ENA, CitiPower, Powercor, United Energy and Essential Energy agreeing with enhancing visibility but noting further work needs to be done on the design of the models.

# Flexible trading arrangements (1/2)



**OVERVIEW:** 34 submissions provided commentary on this issue. The vast majority supported the intent of the proposals with views split on the extent to which the two flexible trading models should be progressed at this time. Large retailers and some networks noted some concerns with potential complexity for customers and the need to fully assess the benefits.

- **Customer representatives** PIAC, ECA and NICE all support the development of flexible trading arrangements (FTAs):
  - The ECA supports the ESB's efforts to create new market opportunities for customers and favours model 2 of the FTAs (noting there are some challenges that need to be overcome in exploring model 2).
  - PIAC considers that the proposed models should be the starting point for ongoing development of flexible arrangements.
  - ACROSS considered that more work was needed before the reforms should be implemented.
- **Networks** had divergent views with Citipower, Powercor and United Energy promoting FTA model 2 as more affordable (than model 1) and workable in the Victorian framework. ENA, SAPN, Essential Energy and Ausnet raised concerns that FTAs would increase complexity for customers with uncertain benefits, recommending trials before progression.
- The AEC, along with **retailers** AGL, EnergyAustralia, Origin and CS Energy also considered that unnecessary complexity would be introduced for consumers and that "off-market" arrangements established by a single retailer for the customer could provide the same outcomes without the complexity. Conversely, Aurora identified the opportunity FTAs presented for unbundling of DER and the reduction of barriers to entry.



- **Aggregators** and service providers including Enel X, Rheem and Vector were strongly supportive of both FTA models, preferring FTA model 2 due to the potential for reduction in costs and increase in flexibility. Wattwatchers and Jet Charge stated that FTA model 2 would provide the lowest cost option for customers and enable them to better integrate DER and develop demand side participation.
- The **Lighting Council Australia** strongly supported the development of FTA model 2, highlighting a broad range of additional use cases that would benefit from expedient progression, in particular the deployment of smart street lighting systems and other initiatives to conserve the use of energy.

# Consumer protections (1/2)



**OVERVIEW:** General support for the application of the consumer risk assessment tool. Several submissions raised the need to review how the NECF and other regulatory frameworks would apply to new demand-side products and services. Large retailers supported a consistent level of consumer protection, with all DER service providers being authorised retailers.

- **Consumer advocates** supported the consumer risk assessment tool:
  - The ECA broadly support the risk-based approach for assessing consumer protections alongside the guiding principles. However, it also notes that the framework needs to ensure that the benefits of the proposed transitions are shared equitably and fairly across all customer groups.
  - EWON supported the tool and recommended low-cost dispute resolution be changed to no-cost resolution to mirror existing mechanisms and suggested that the tool be tested on the rapid growth of residential solar installations and the current retail and network exemption framework.
  - NICE was critical of the tool due to concerns the NECF does not apply to all connection points.
  - ACCC, IEEFA, ACOSS stated that we should consider if the NECF is still fit for purpose.
  - ACOSS noted significant barriers to consumers accessing benefits of DER, and that the tool should consider risks to other consumers and the system.
  - PIAC supports the approach taken by the ESB and supports protections being commensurate with potential harm.
- **Large gentailers:** supported the risk assessment tool and flagged the need for consumers to have consistent consumer protections by DER service providers becoming authorised retailers (AGL, Alinta). AGL suggested the AEMC 2019 Consumer Protections Review recommendations be implemented. EA noted need for the benefits of consumer protection to outweigh the costs, and Aurora noted the need to allocate costs to all participants and not just retailers. AEC noted that overdone protections on removing barriers to switching has hampered innovation and recommended switching reforms should be delayed until market matures.



**OVERVIEW:** General support for the application of the consumer risk assessment tool. Several submissions raised the need to review how the NECF and other regulatory frameworks would apply to new demand-side products and services. Large retailers supported a consistent level of consumer protection, with all DER service providers being authorised retailers.

- **Network businesses:** supported the risk assessment tool (SAPN, CP&U, ENA). Citipower, Powercor and United Energy also noted the need to consider existing market failures and recent ban on door-to-door selling in Victoria. Essential notes tiered approach may be appropriate.
- **New entrants/smaller retailers:** Rheem supported the use of the tool as new risks emerge instead of trying to pre-empt all possible outcomes. Quinbrook supports extending consumer protections to all participants to ensure a level playing field but striking a balance and allow business models to evolve. CEC notes framework should recognise right to install solar PV. Networks should change to accommodate DER, not other way around. Spark supports approach. Others noted need for protection to consumers when their DER assets are controlled by others.
- **Generators:** Neoen noted that consumers could bear risk (partial exposure to wholesale prices, or have their loads controlled) in return for lower prices, like industrial customers. Engie suggests use of voluntary codes be included in the tool.



**OVERVIEW:** There were 29 responses commenting on the issue. There were mixed responses, balance across support, conditional support and some opposition. Concerns centered on future governance, leadership, and proposed 6-monthly releases. Support focused on customer centricity and pragmatic decision making.

- General agreement that continuing work on DER integration was critical, but no consensus that the maturity plan as proposed was the preferred method of implementation. There was recognition of the importance of customer engagement but support for the maturity plan was conditional on the future governance, and several suggestions were made including partnering with ARENA.
- **Retailers** were conditionally supportive of the maturity plan, supportive of measures that progress DER integration with customer participation, but clarity on future governance was raised by most retailers.
- **Manufacturers, installers, and clean energy groups** expressed opposition however there was recognition that dedicated effort was required to resolve DER integration in a way that did not rush decision making. Supporters suggested including in the proposed DER governance committee.
- **Consumer groups** made strong recommendations for increased consumer representation including the appointment of a consumer chair as part of any future governance structure. Calls were made to combine the DER roadmap and maturity plan, to include a vision for the integration of DER as well as use existing processes i.e. the Energy Compact and ARENA's DEIP program.
- **Networks** were conditionally supportive of measures which developed future participation in the two-sided market, with customer participation, but again raised concerns about leadership, and future governance. Support for integration with AEMC to streamline consultation burden.
- **ECA** supported an incentive driven narrative, with a genuine commitment to stakeholder co-design. The ECA also raised concerns on the uncertainty of the maturity plan's integration of the existing or proposed DER integration processes. The ECA proposed a DER taskforce.



**OVERVIEW:** 27 responses commented with a focus on recommended improvements for backstop mechanisms, as well as measures to alleviate the need or use of a backstop through market mechanisms and increasing load.

- General agreement that efficient mechanisms to increase load and encourage market participation should be pursued to address minimum demand. While many agreed a backstop may be necessary there were calls for more thought and structure in how these backstops they may be implemented
- **Retailers** were concerned that centralised command and control backstop solutions hindering the ability of solutions to emerge that would respond to market price signals and create market benefits. AGL recommended defined limits of control and increased visibility of the impact on customers if backstop mechanisms are used.
- **DER Manufacturers, installers, and clean energy groups** encouraged the roll out and increased participation, through incentives and market access, of flexible loads such as residential batteries, community batteries, electric vehicles, smart appliances and C&I loads to maximise use of abundant energy in the day rather than curtailing it.
- **Networks** said backstops while necessary are a last resort mechanism, and that networks have additional solutions that can be utilised such as dynamic connection agreements, smart meters and existing demand management programs. SAPN supported short term mechanisms like a reverse RERT and hoped over time lower retail prices would be offered to customers during minimum demand periods.
- ECA recognised the need for an emergency backstop, but any on-going measures needed engaging with consumers and social licence. Strongly advocates for backstop programs which maximise customer opportunity to voluntarily participate in solutions, rather than imposing control measures on all customers.
- IEEFA and SEC opposed extending the rooftop solar cut-off beyond South Australia and suggested sunsetting the mechanism when PEC was established. SAPN noted that physical disconnection of the inverter should be seen as an interim measure in SA and not a template for national approach.



**OVERVIEW:** There were 19 responses commenting on the issue. There were a range of views on future roles and responsibilities, and while there was agreement that defining the future roles for market participants was critical to the accelerated integration of DER, there was no consensus on the future roles of networks or aggregators across the industry.

- General agreement that efficient mechanisms to increase load and encourage market participation should be pursued to address minimum demand. While many agreed a backstop may be necessary there were many concerns about current or proposed implementation and calls for more thought and structure in how backstops may be rolled out or implemented
- **Retailers** were not well represented on this topic. AGL supported a national connections framework, based on guidelines regulated by the AER, and comments that AEMO's project symphony trial will provide value insights into the future roles and responsibilities for DER stakeholders. AGL also recommends the continued procurement of Non-network solutions through the existing RIT-D and RIT-T, although supports lowering the current consideration threshold from \$5 million. AGL also supports ensuring competition for in-front-of-the-meter storage, and a structured procurement digital platform, with the eventual evolution being a real time distribution market. Other retailers were clear that the role of networks should not be extended into the role of the aggregator, and that the ringfencing rules be upheld.
- **Industry Groups** did not share a consensus position on this topic and supported a range of positions. They did not support DNSPs playing a role as a market participant but supported DNSP's being DSO's and having limited control of customer's DER assets where it was the most efficient outcome for customers. There was also concern that the balance between transparency/accountability and facilitating/encouraging participation has not been achieved, which will limit realising the value of DER.
- **Networks** were consistent with their support for DNSPs to have the role of the DSOs in the future. Citi Power et al also raised concerns that DNSPs should retain the role of procuring DER for non-network solutions. Indicated support for new ways to use DER to improve efficiency of networks, but highlighted that whilst tariff reform should be progressed, it has failed to show results to date (Snowy Hydro, EEC, CEC).
- Rheem raised concerns about the role of DNSPs using their position to deliberately inhibit the integration of DER, and Tesla supports a starting principle that control of the DER sits with aggregators, and that DNSP should not perform that role of trader in any circumstance.

# Responsibilities for active DER



**OVERVIEW:** Overall support for transition to applying dynamic limits, but some concerns noted about extent of role / responsibility for networks. 15 submissions commented on this issue.

- There was general agreement that the introduction of dynamic limits could be beneficial as guardrail for the systems, but not an open support for DNSPs to extend their responsibilities into aggregator space.
- **Consumer groups:** Want to see more work done to clarify long term grid architecture and roles and responsibilities (ACOSS, PIAC) before supporting clear delineation of network responsibilities. Largely silent on the dynamic limits before details are worked through.
- **Retailers, aggregators and installers:** Supportive of interoperability standards to make switching easier between providers, strong advocates of the aggregator responsibilities for control, optimisation and limits of DER, and very cautious of expanding the role of the network beyond providing the guardrails and limits that need to be met (Tesla). Some not in favour of SA Relevant Agent model (AGL), and support adoption of tech standards and interoperability, and national rules harmonisation (Origin) as longer-term solution. Others want more emphasis on local energy market solutions (Enova).
- **Industry groups:** Some have indicated little / no support for an emergency backstop other than SA (IEEF, Smart Energy Council). Others are in favour of DNSPs providing a direct load control role (Master Electricians), and some question whether DNSPs should have increased role in community storage. Several want to ensure the additional responsibilities for dynamic limits to not allow DNSPs to encroach on the role of aggregators / retailers (CEC, EEC).
- **Networks:** In favour of increased tariff reform, but stressed importance of keeping tariffs simple for customers such they know how to respond (EQ). Others stress that future reforms should not always require a trader to manage customer DER, leaving options for networks to provide load control services (CPPC, ENA). Several has added support for dynamic envelopes on the path to a more mature evolution of the DSO responsibilities for networks (AusGrid, Essential), but may be many years before rolled out NEM wide AusNet)

# TRANSMISSION AND ACCESS

# Overview of submissions (1/2)



**OVERVIEW:** Around half of submissions addressed the issue of transmission access reform. While a number of generators and investors remain opposed to locational marginal pricing (LMP) in any form, a range of customer, generator, network, academic and other stakeholders expressed support for LMP in some form.

- Mixed views but evidence of growing acceptance that the current access regime needs to change.
- Of those submissions that mentioned REZs, the majority were supportive. The EUAA considered that the ESB's proposals were sensible, but questioned their relevance given the agendas of State governments. Several stakeholders, including the CEIG and RWE, agreed with the ESB's view that REZs need to be accompanied by access reform in order to provide an incentive to locate within a REZ, however others felt that REZs could work as a standalone model.
- None of the generator peak bodies endorsed the medium term access reform proposals, but for different reasons. ENA and EUAA were modestly supportive of the congestion management model (CMM) + connection fee model. ECA endorsed their consultant's report (Finnicorn), which strongly favoured a shift towards LMP/FTRs as soon as possible and CMM + connection fee as a stepping stone.
- Many expressed concern about the proposal to move from a medium to a long term model on grounds that it is disruptive to change the access regime. However, there was a diversity of views on whether it was preferable to retain one of the medium term options into the long term, or just move straight to the long term solution (with a long lead time advocated particularly by generators). Stakeholders, including the CEC, commented that the medium term access models needed to be developed in more detail in order to be able to understand the impacts on different parties.
- Stakeholders generally want to streamline the transmission investment process further, however there were mixed views on whether the RIT-T classes of benefits should be broadened. Customers reiterated their support for models that involve generators contributing towards the cost of transmission.

# Supportive views on access reform (1/2)



**OVERVIEW:** A range of customer, generator, network, academic and other stakeholders expressed support for LMPs in some form. That support was evenly spread between LMP/FTRs, CMM(REZ) and CMM + connection fee. However, only a small group expressed support for a stepping-stone approach involving both LMPs/FTRs and CMM. Additionally, a number of respondents who were not ready to express a preference for any specific model were willing to support further work to explore the options.

- ECA, Engie, UPC/AC, Enel Green Power, Monash University, Brett Layton, Finncorn Consulting and the Network of Illawarra Consumers of Energy expressed support for a move to LMP/FTR (and Alinta Energy was "broadly accepting" of such a move in the long term). Enel Green Power additionally supported the CMM as a medium term stepping stone.
- RWE supported the CMM (REZ) model as it provides certainty for investors in a REZ. They commented that "if there are parts of the grid where you can connect without access fees and still get the benefits of rebates, then there will be leakage, and the REZ concept will deflate like a balloon".
- Spark Infrastructure supported an interim solution that responds to concerns raised with respect to LMPs/FTRs.
- The ENA, EUAA and Quartermaine considered that the hybrid model would be a reasonable step forward. The ENA expressed support for the overall direction of the ESB's reform pathway.
- Finncorn Consulting (engaged by the ECA to provide an independent view) expressed strong support for a shift towards LMPs as soon as possible, suggesting that this was the most important reform in the whole post 2025 portfolio. They also supported the CMM + connection fee model as a medium term solution. Finncorn's position was endorsed in the ECA's submission.
- A number of submissions, including Jemena, HydroTasmania, Essential Energy, and the ENA supported further work to develop and assess a detailed medium term access model.



- Non-generator submissions that supported access reform typically focussed on the benefits of improved locational signals.
- Finncorn Consulting (engaged by the ECA to provide an independent view) highlighted the likelihood of adverse outcomes arising because of the discrepancy between the way the transmission system is planned (to deliver efficient, least cost outcomes) and the market design which systematically drives generation investment decisions that do not align with the ISP.
- The ECA stated that they “agree with the AEMC and ESB analysis which demonstrates very material affordability benefits to consumers through both more efficient investment, and more efficient dispatch of current and new generation capacity in regard to transmission constraints”.
- One party considered that the ESB is overestimating the cost and difficulty of introducing LMPs/FTRs, and underestimating the likelihood of difficulties in moving away from an interim solution in the future.
- Generators that supported some form of access reform, including Engie, RWE, UPC/AC Renewables and Enel Green Power, typically saw benefits in terms of promoting revenue certainty by reducing subsequent connection risk.
- Some stakeholders, including Monash University and Tesla, expressed support for models that enable storage to be remunerated for the network services that they can provide (such as alleviating congestion).

# Unsupportive views on access reform (1/2)



**OVERVIEW:** Opposition primarily came from generators and investors. Of those stakeholders that opposed locational pricing, a diverse range of reasons were given, with the most common concerns being the potential for disruption associated with the stepping stone approach, and needing to understand a detailed design of the medium-term access models.

- The generator peak bodies each opposed the medium term access proposals, but had differing views about how best to proceed:
  - The AEC noted that there were mixed views among their membership regarding the benefits of access reform. They were concerned at the potential for disruption if we were to adopt a medium term access model and then switch to a long term model a few years later. Whilst not endorsing the introduction of LMPs, if it were to occur, the AEC would prefer a single set of reforms with a far-dated implementation date (not before 2030). The AEC noted that the prospect of future LMPs/FTRs would drive similar investment outcomes in advance of the reforms being implemented.
  - The CEC is opposed to LMP/FTRs in any timeframe and is also concerned at options that form a stepping stone to LMP/FTRs. The CEC questions whether dispatch inefficiencies are sufficiently costly to justify the introduction of the CMM. They said that further detail and analysis is required before any of the medium term access models could be recommended to Ministers.
  - The CEIG is also opposed to LMP/FTRs, however they agree that the current access regime is unsustainable. Instead they endorse a centrally planned access regime to apply across the NEM, similar to what is proposed for REZs. With respect to the CMM (REZ) option, the CEIG expressed concern at the proposal for non-REZ generators to be exposed to LMPs with no ability to hedge. The CEIG commented that further clarity is required in order to be able to properly assess the impact of medium term access reform.

# Unsupportive views on access reform (2/2)



**OVERVIEW: Opposition primarily came from generators and investors in generators.** Of those stakeholders that opposed locational pricing, a diverse range of reasons were given, with the most common concerns being the potential for disruption associated with the stepping-stone approach, and the lack of detail in the medium-term access models.

- A number of generators were opposed to solutions that are a stepping stone to LMP/FTR. In contrast, Alinta Energy and Engie that suggested that a move straight to LMP/FTRs would be preferable to a stepping stone approach.
- A common reason for not supporting the congestion management model is that it was not developed in sufficient detail for stakeholders to be able to assess its impact on them. EnergyAustralia and Neoen expressed concern about the potential for the CMM to give rise to new forms of gaming behaviour.
- Several stakeholders, including EDL, said that there was insufficient evidence of a problem in operational timeframes. Some stakeholders, including Snowy Hydro, suggested that LMPs do not address the true problem, which is underinvestment in transmission.
- Grattan Institute considered that the LMP/FTR model would introduce an unjustified level of complexity and uncertainty. They did not comment on the medium term access options.
- Enel Green Power and CEIG expressed concern that CMM (REZ) would make investments outside REZs unbankable as they would be exposed to LMPs with no opportunity to hedge.
- AFMA, the ASX, Flow Power, CS Energy and the CEFC expressed concern about the potential impact on contracts.
- A small number of stakeholders expressed support for some of the alternative models including G-TUOS and a connection fee approach. Edify Energy submitted an alternative mechanism with some similarities to CMM, called the congestion relief market. PIAC and ACOSS endorsed the PIAC cost sharing model as a substitute for access reform.



**OVERVIEW:** Stakeholders generally supportive of further efforts to streamline the transmission investment process, however there were mixed views on whether the RIT-T classes of benefits should be broadened. Customers reiterated their support for models that involve generators contributing towards the cost of transmission.

- Customer representatives, including EUAA, MEU, PIAC, ACROSS, BlueScope Steel and the Aluminium Council reiterated that customers should not be required to bear all the cost and risk of transmission investment.
- There was general support for a more timely and streamlined process for transmission investment decision making, especially from renewables investors. Some respondents noted that there was an important role for the RIT-T in exploring the merits of different options. The ENA proposed to streamline the process by removing the ISP feedback loop.
- The AEC, Essential Energy, AusNet Services and several customer representatives expressed concern at any moves to expand the classes of benefits to be considered in the RIT-T, particularly in relation to wider economic benefits. In contrast, the CEIG, some renewable generators, TransGrid, Spark Infrastructure and Snowy Hydro supported an expansion of the RIT-T. The ENA adopted a cautious approach, supporting further consideration of the issue while noting that previous reviews had recommended against expanding the classes of benefits.
- While few submissions addressed the issue of transmission cost allocation, Grattan Institute and TasNetworks noted that it was a critical issue to be resolved if new transmission investment is to proceed in a timely fashion.
- ATCO and Jemena expressed their support for more competition in transmission procurement, whereas Spark Infrastructure highlighted the potential for higher costs under a contestable model.
- The Grattan Institute suggested that “It may be that a more radical solution, such as ownership of the shared system by a national transmission company should be considered”. Similarly, the Network of Illawarra Consumers of Energy proposed the establishment of a national transmission operator owned by the government.