

OPERATIONAL SECURITY MECHANISM

DEEP DIVE 1: MARKET POWER

THURSDAY 19 OCTOBER 2022
10:30AM - 12:30PM

AEMC

Acknowledgement of Country

We acknowledge that we are hosting this meeting from the lands traditionally owned by the Gadigal people of the Eora nation.

We also acknowledge the Traditional Custodians of the various lands on which you all work today and the Aboriginal and Torres Strait Islander people participating in this meeting.

We pay our respects to Elders past, present and emerging and celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to the lands and waters of Australia.

Agenda

- | | | |
|----|--|-----------------------|
| 1. | Introduction | Commissioner Shepherd |
| 2. | Recap: How the OSM would work | Amy Wiech |
| 3. | Market power: the problem we're trying to solve <ul style="list-style-type: none">• Types of market power impacting the OSM• Example case study | Amy Wiech |
| 4. | Theme 1: Nature and materiality of potential market power issues <i>Time for discussion</i> | Haven Roche |
| 5. | Theme 2: Our proposed solution to address potential market power issues <i>Time for discussion</i> | Clare Stark |
| 7. | Next steps for the rule change process | Shannon Culic |
| 8. | Close | Commissioner Shepherd |

Meeting protocols

- Please remain on mute and raise your hand or use the chat to ask questions.
- Please be respectful of the views of others.
- Attendees at this meeting must not enter into any discussion, activity or conduct that may infringe, on their part or on the part of other members, any applicable competition laws.
- For example, members must not discuss, communicate or exchange any commercially sensitive information, including information relating to prices, marketing and advertising strategy, costs and revenues, terms and conditions with third parties, terms of supply or access.

Recap: Objectives for development of essential system services

The ESB's final post-2025 advice on essential system services:



New market based arrangements to value the services needed to support the changing mix of resources



New market mechanisms to support efficient scheduling and dispatch by AEMO

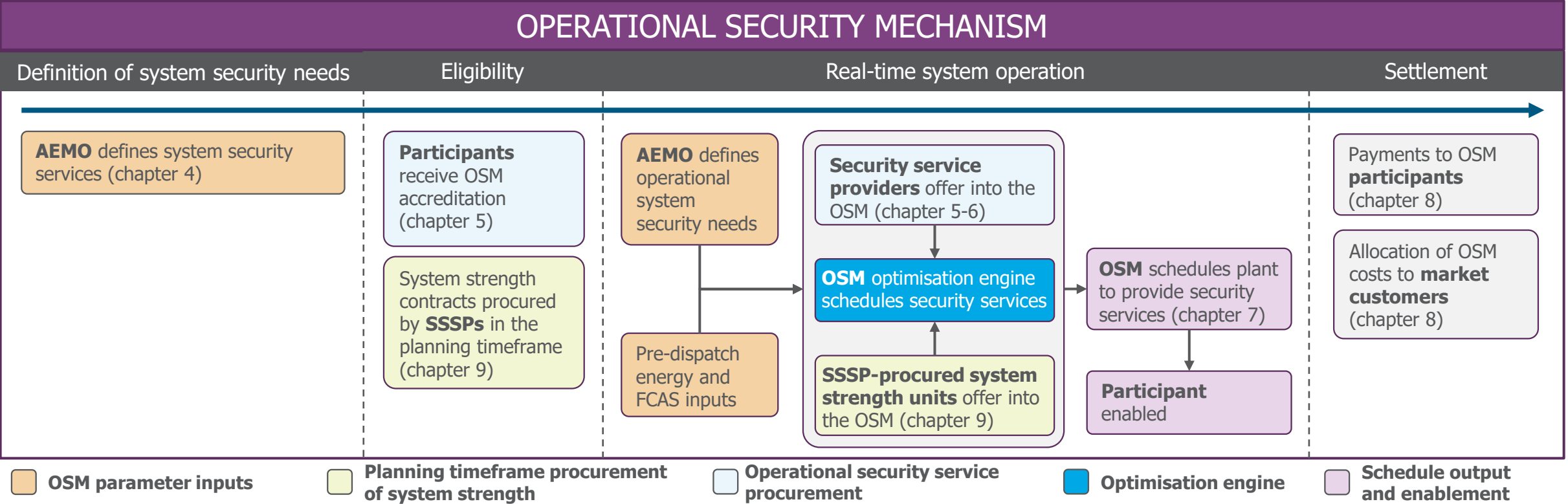


A range of supply & demand-based technologies and resources to deliver these essential services

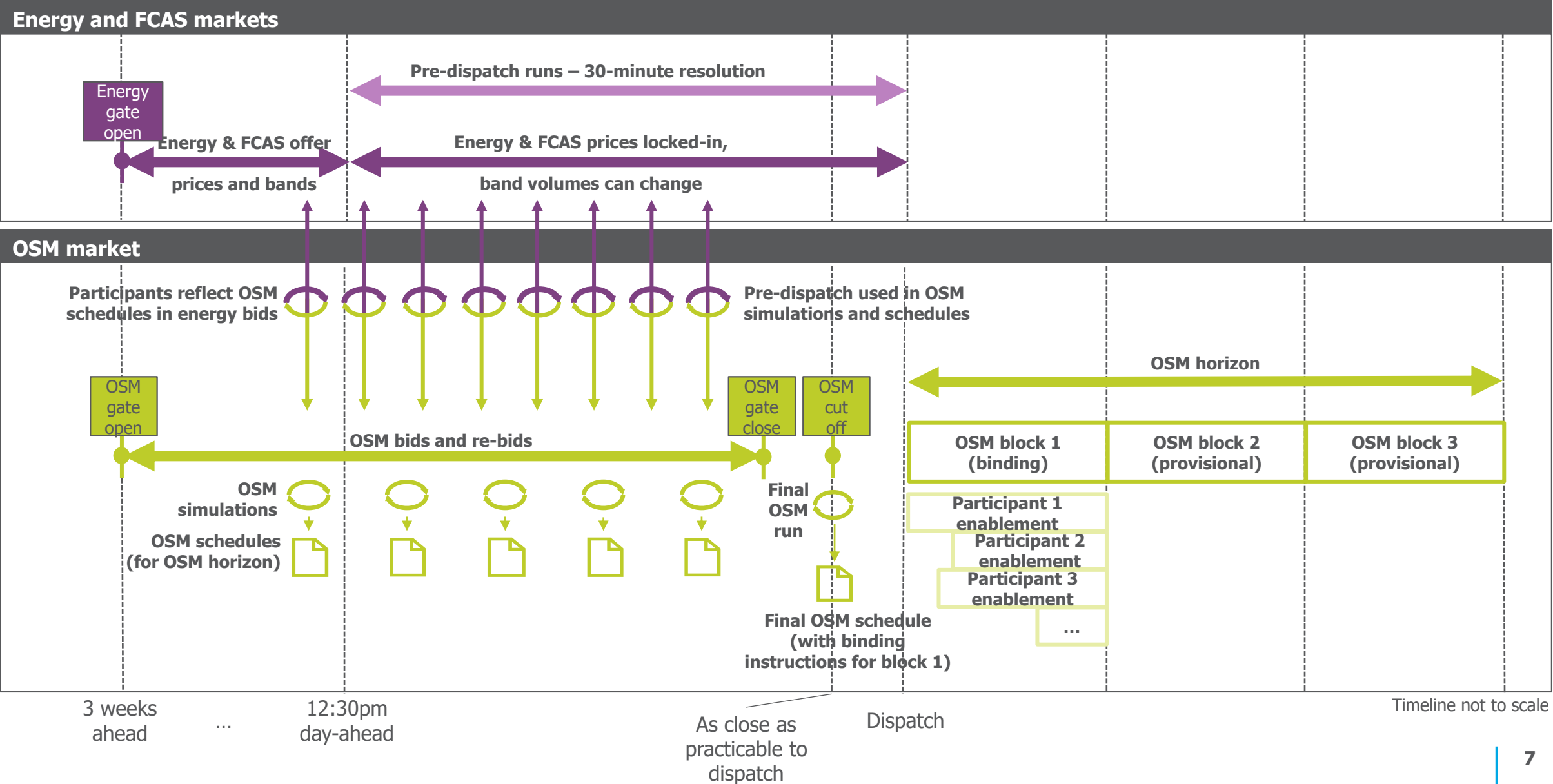


Ideally spot markets combined with co-optimisation should be used, and the market should move progressively towards spot market provision. There are some services that may be better suited to structured procurement where spot market arrangements may not be appropriate

Recap: How the OSM would work



Recap: OSM timing and scheduling arrangements



The problem we are trying to solve

Current engineering knowledge does not allow a direct translation from a number of power system requirements to the specific security service definitions to meet those requirements. AEMO uses system configurations that represent a secure technical operating envelope to indicate the power system requirements.



Participants would bid to provide security services through the OSM, which may potentially result in concerns about market power, particularly at the start of the mechanism:

- There may initially be a limited number of participants, owners of units, etc that are capable of providing security services
- The use of system configurations – if these are still prevalent at OSM start – may exacerbate concerns e.g. there may be a limited number of system configurations in some NEM regions



The Commission accepts there are potential circumstances in which market power could exist and be exercised

- The exercise of market power can undermine the efficiency of economic markets as participants are able to influence prices through the supply or demand of a good or service.
- This is because when system configurations are used for security services - which may be limited in number - and new and existing technologies are yet to have signals to inform investment and operation decisions (or time to respond to signals) for new participants.
- It may also be possible that the level of specificity and locational nature of some security services could create the potential for the exercise of market power in the future though we have sought to design the mechanism to minimise the likelihood of this.
- Cost of procuring security services are ultimately passed through to consumers so it's important they reflect efficient supply
- The OSM has been designed in such a way to encourage entry so concerns should decrease over time



In the context of the OSM, if market power exists, then it may compromise the efficient delivery of security services to the market and increase costs for consumers.

Market power in the context of the OSM

1

Transient market power involves the ability to increase prices for short periods of time.

2

Sustained market power involves sustained pricing above the level that would prevail in a workably competitive market.

3

Substantial market power is a relative concept and does not require absolute freedom from competitive constraints but will generally require market power of a considerable or large degree.

Transient market power can be a feature of competitive markets that incentivises new entry and increased competition. But this may not hold in the market for security services, particularly at the OSM's start:

- Where there are few providers there may be no option but to accept inefficient bids to ensure the power system remains secure.
- Given the complexity of security services, it may be difficult to distinguish between transient and sustained market power.
 - The Commission has utilised 'substantial market power' as a term that encompasses both.
- The OSM has been designed to increase competition which should reduce the risk that transient market power is sustained over time which would undermine the potential efficiency of the mechanism into the future.

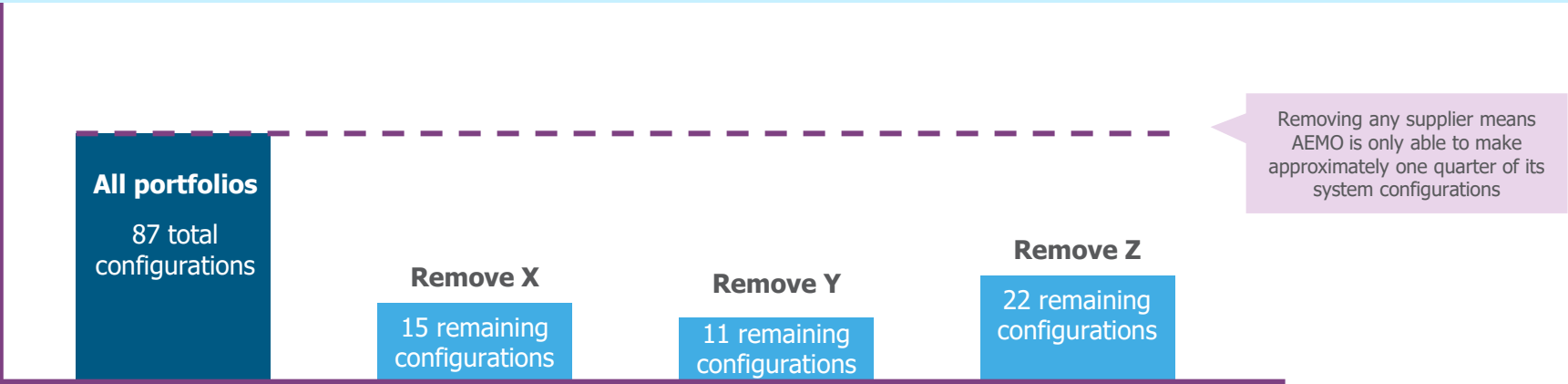
Market power case study 1: A NEM region

There are three portfolios that currently provide security services for minimum system configurations in a region of the NEM: X, Y & Z – contributing to 87 possible system configurations. A simplified pivotal supplier test shows that there is no pivotal supplier. While we haven't extended the analysis to a two-pivotal supplier test:

- removing X leaves 15 configurations available
- removing Y leaves 11 configurations available
- removing Z leaves 22 configurations available.

This basic analysis indicates that there may be some situations where suppliers of security services for minimum system configurations in this region may be important to secure operation of the system. In these instances they may have market power, particularly if there are changes to the availability of units, for example, through planned or unplanned outages.

This indicates that suppliers of security services for minimum system configurations in this region may potentially have market power if the OSM were in place now.



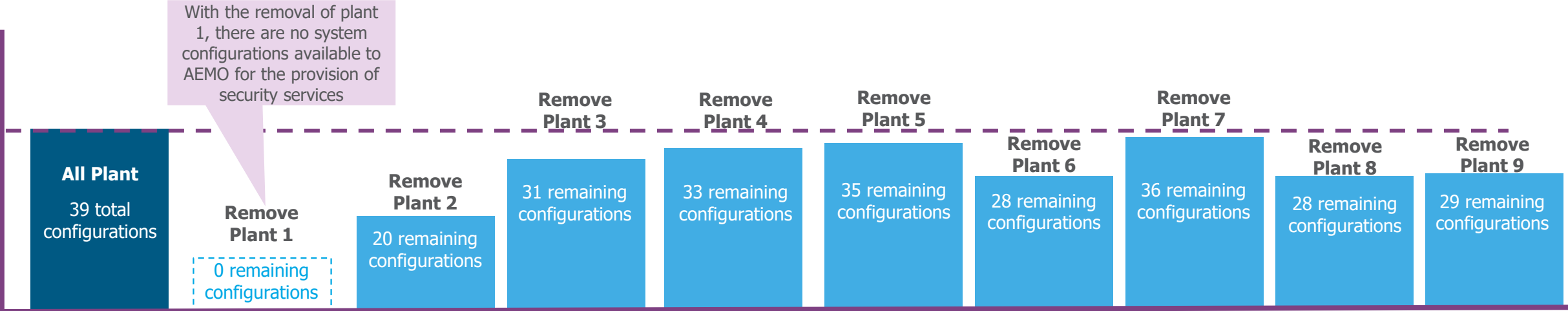
Market power case study 2: Another NEM region

In another NEM region there are currently 39 possible configurations involving 9 different plants. The removal of the majority of these plants does not significantly reduce configurations available to AEMO.

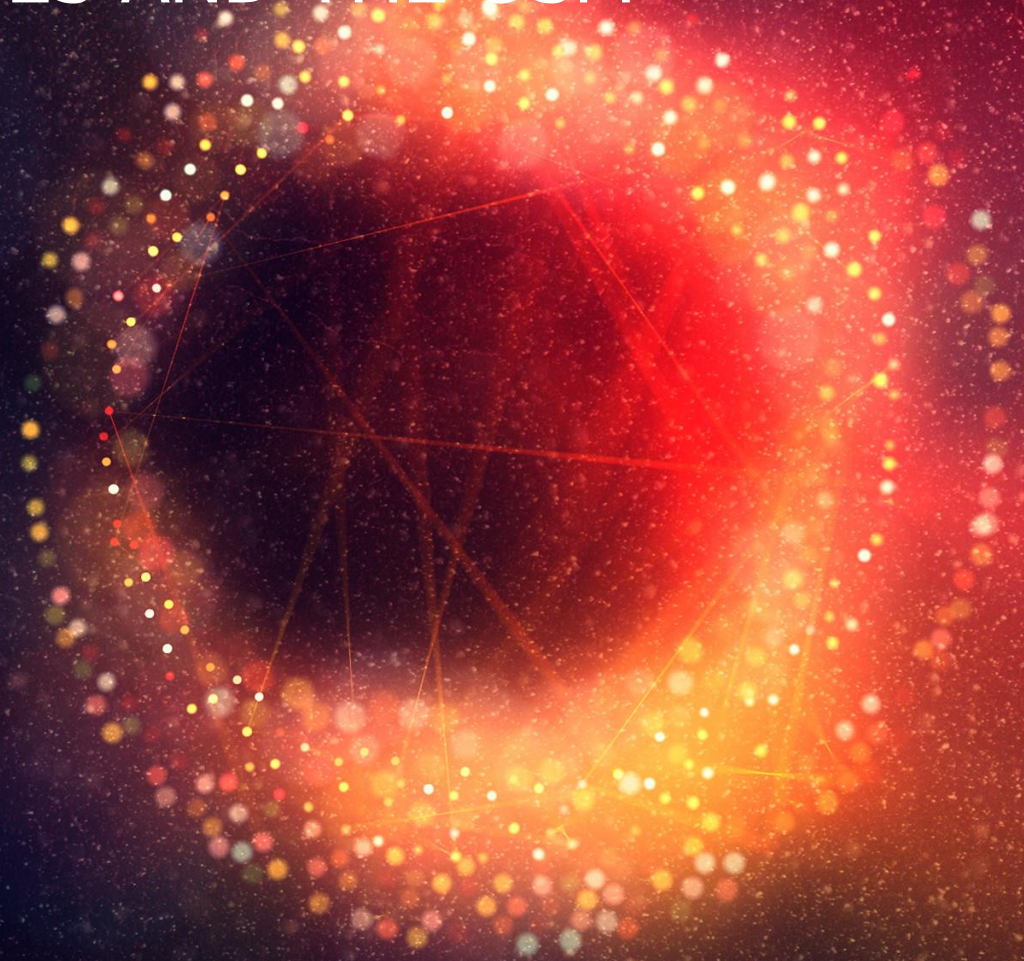
The exception is Plant 1 - the removal of Plant 1 reduces the available system configurations to zero which indicates it is a pivotal supplier of security services in this region. So Plant 1 may have market power in this region as it is essential to all configurations available to AEMO.

This basic analysis indicates market power may also arise at the plant level.

This indicates that minimum system configurations may result in market power at the plant level in this region if the OSM were in place now



THEME 1: NATURE AND MATERIALITY OF THE POTENTIAL MARKET POWER ISSUES AND THE OSM



Where does market power come from?

There are four key characteristics of workable competition. When any of these characteristics are not present, it can give rise to opportunities for firms to exercise market power.

We aim for workably competitive markets as, in practice, no market is perfectly competitive and market failures are near universal.

1

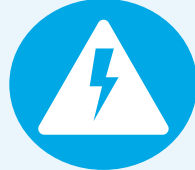
Many buyers and sellers



Workably competitive markets are composed of many buyers and sellers, where no one has control over the market to unduly influence prices.

2

Homogeneous products



Goods or services sold are as identical as possible, so no producer is in a position to charge a different price for the good or service it produces.

3

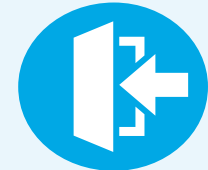
Transparent information



All consumers and producers in a market have equal access to all available information with which to make decisions.

4

Ease of entry



There are no major barriers to entry or exit in the market. Firms can enter if there is a potential for profit, and are also able to exit in the event of losses.

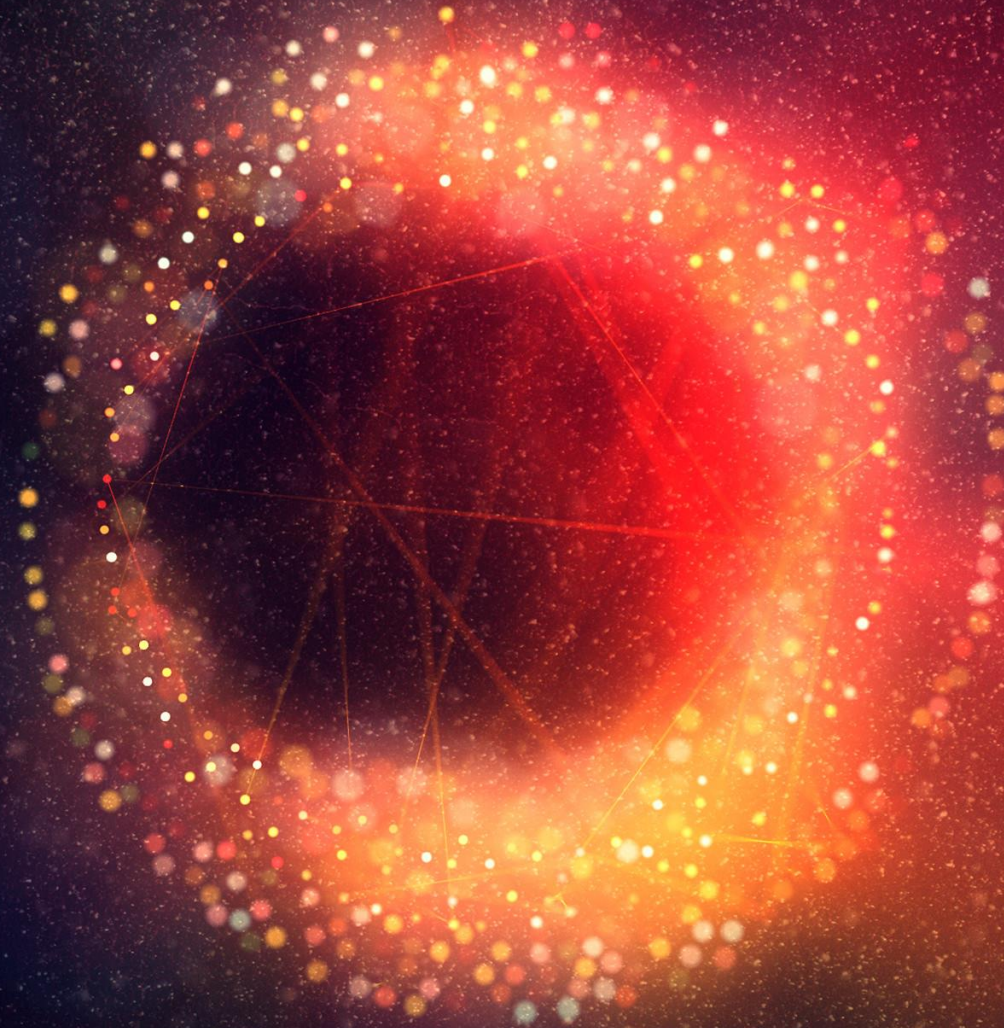
Potential market characteristics of the OSM

| Characteristics | Relevant OSM design features and potential market characteristics | Key considerations |
|-------------------------|---|---|
| Many buyers and sellers | <ul style="list-style-type: none"> At market start, there may be a limited number of available configurations This may reduce the number of potential participants able to provide security services Defining and valuing these services (as the potential design is intended to deliver) will provide a signal to incentivise new entrants over time | <ul style="list-style-type: none"> Does the design of the OSM allow for many providers of security services? |
| Homogeneous products | <ul style="list-style-type: none"> Defining the products through characteristics of assets, rather than services, could mean a less homogeneous product Location based requirements for some services may make them less homogeneous Unbundled services are likely to result in markets with more homogeneous products in the future as we move from assets to services (as the potential design is intended to deliver) | <ul style="list-style-type: none"> Will engineering knowledge allow new services to be defined homogenously? Do locational factors of services create the risk of market power? |
| Transparent information | <ul style="list-style-type: none"> Information requirements have been designed to inform investment and operational decisions: <ul style="list-style-type: none"> Security services guideline and Security services list communicate the security services, their characteristics, and the needs they are meeting AEMO will report annually on the operation and evolution of the OSM OSM scheduler will iterate to inform commercial decisions to bid | <ul style="list-style-type: none"> What do participants need to see to inform investment and operational decisions? |
| Ease of entry | <ul style="list-style-type: none"> Entry of new participants will be according to the description of services, their eligibility to provide these services, and engagement with AEMO's accreditation process Accreditation has been designed to be similar to existing registration processes to avoid the expected transaction costs creating a barrier to entry | <ul style="list-style-type: none"> Does the design of the OSM incentivise entry over time? |

DISCUSSION

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THEME 2: THE PROPOSED APPROACH TO ADDRESS MARKET POWER ISSUES



What's the right approach?

| Lighter-handed | | Heavier-handed |
|--|---|---|
| General AER market monitoring | On-going price monitoring | Ex-ante price control |
| <p>The AER annually monitors the wholesale and retail energy markets to ensure compliance with the national electricity rules and relevant legislation.</p> <ul style="list-style-type: none">Extending this to the OSM would leverage its existing functions to observe the annual price outcomes of the OSM and general conduct of participants in this mechanism. <p>Benefits:</p> <ul style="list-style-type: none">Minimises additional regulatory burden for AER and participants by using existing arrangements. <p>Drawbacks:</p> <ul style="list-style-type: none">Regular market monitoring does not specifically target potentially problematic regions or configurations and does not prevent anti-competitive behaviour from occurring. | <p>On-going price monitoring would allow for targeted observation and scrutiny of the conduct of suppliers.</p> <ul style="list-style-type: none">could be published regularly (e.g. quarterly or 6-monthly) on an on-going basis to provide more updated pricing outcomescould focus on specific services, regions or portfolios of units <p>Benefits:</p> <ul style="list-style-type: none">Should high prices be identified, it would provide the AER with the power to investigate potential market power issues.Targeted monitoring may constrain behaviour. <p>Drawbacks:</p> <ul style="list-style-type: none">Price monitoring happens <u>after</u> the market power has been exercised, and may not prevent anti-competitive behaviour from occurring in the first instance.Increased regulatory burden | <p>Prices for security services would be determined ahead of time on a regional, unit or generation-type basis and could be set as:</p> <ul style="list-style-type: none">a ceiling under which competition can still occura provider earns revenue according to a regulated rate of returnestimated costs of providing the service <p>Benefits:</p> <ul style="list-style-type: none">Works to allay market power where the risk of market power is material enough to require preventative actions to protect consumers. <p>Drawbacks:</p> <ul style="list-style-type: none">May disincentivise efficient investment and operational decisionsCost-based pricing may not compensate other technologies with opportunity cost-based inputs (e.g. hydro, batteries)Further increase regulatory burden |

Whether controls are lighter or heavier handed depends on the level of risk the potential market power poses.

Our proposed approach

Under the Commission's proposed approach to managing potential market power, the AER would undertake annual reviews of potential market power in the OSM across regions of the NEM. These reviews would involve two steps:

1 The AER would annually assess whether it has identified the potential for the exercise of a substantial degree of market power in a market for security services in the next financial year.

Under the draft rule, the AER would be required to consider several factors in identifying potential market power:

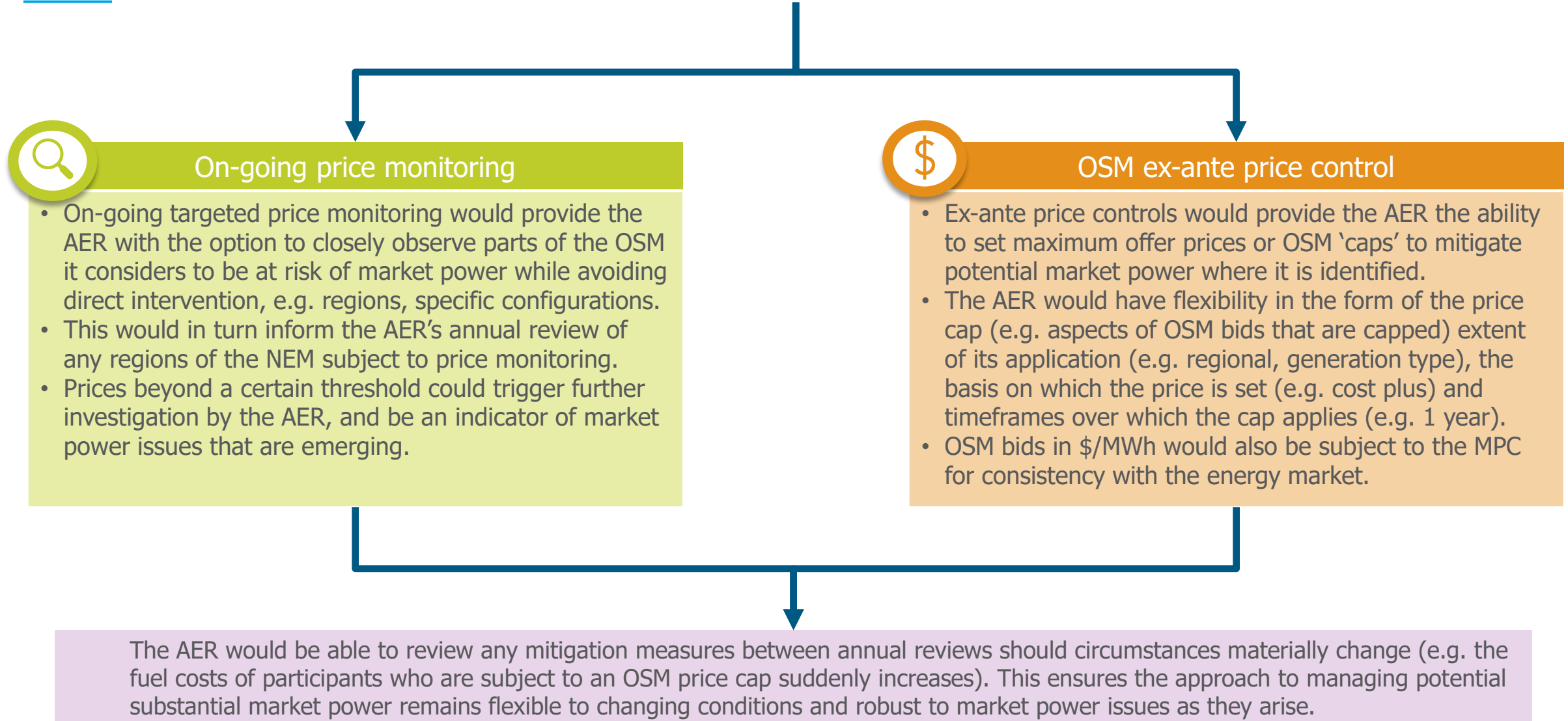
- market concentration (for example, number of participants, market share observations)
- substitutes and contestability of participants that can provide system configurations and other security services through the OSM barriers to entry (for example, technical limitations)
- demand elasticity of the services (for example, system security requires and is dependent on a certain amount of security services, making the demand for these services relatively inelastic)
- any other factors the AER considers appropriate.

Our proposed approach

2 If the AER has identified the potential for the exercise of a substantial degree of market power in a market for security services in the next financial year it would recommend mitigation measures to be implemented by AEMO.

- In recommending mitigation measures the AER would be required to:
 - be proportionate to the extent of the potential market power identified,
 - be consistent with the OSM objective, Security services guidelines and OSM procedures,
 - minimise the effect of OSM participants' potential market power and their ability to influence OSM prices,
 - reflect the value of providing security services to the power system,
 - preserve incentives for participants to engage in the OSM and enter into system strength contracts,
 - give participants a reasonable opportunity to recover efficient costs of providing a security service,
 - allow price caps or price monitoring to vary based on changing market conditions if there is benefit in doing so,
 - incentivise investment in and participation of new technologies,
 - minimise administrative burden for AEMO; and
 - any other matters the AER considers appropriate.
- Measures would be set ahead of time to mitigate potential financial harm, and could take the form of price monitoring or a maximum offer price or 'cap'.

The AER could recommend two potential mitigation measures



Examples of approaches to the OSM price cap

| Aspect of OSM price cap | Examples of how the AER could approach this aspect |
|---|---|
| Form in which the price cap is expressed | <p>The AER could set caps for each of the OSM bid parameters – so, for example, a cap could apply for variable costs measured in \$/MWh or \$/hour and a separate cap could apply for enablement costs.</p> <p>Regardless of the approach to determining the price caps, the Commission envisages that maximum prices would be set in the same format as OSM bids for consistency and transparency.</p> |
| Extent of application of the price cap | <p>The AER could, for example, set:</p> <ul style="list-style-type: none"> • a region-wide offer cap, • a participant-specific cap, or • a NEM-wide price cap. |
| The basis on which the maximum price is set | <p>The AER could use various factors or approaches to set the value of the cap – for example, it could set a cap:</p> <ul style="list-style-type: none"> • based on the costs of the most expensive provider plus a % margin • based on price regulation where an OSM participant earns revenue commensurate with a regulated per unit return • based on the estimated costs of a new OSM entrant. |
| Timeframe over which the cap applies | <p>The AER could set caps based on different timeframes, for example:</p> <ul style="list-style-type: none"> • caps that apply per bid for each parameter • a cumulative price cap over time – for example, per day or per month – to cap participants' total OSM revenue. This would be a similar approach to the current cumulative market price threshold (CPT) in the NEM's energy only market. |
| The ability of the maximum price to adapt to changing market conditions | <p>The AER could choose to explicitly reference indexation to input costs in a methodology for maximum offer prices.</p> <p>For example, fuel or other input costs can vary and this may affect appropriate price caps. This would help ensure that maximum bid caps can adjust as needed to appropriate levels, and do not prevent the supply of security services if the market materially changes.</p> |

DISCUSSION

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How you can stay involved



- 3 November 2022 - deep dive on the technical elements such as bidding and scheduling, as well as AEMO's prototype initiative.



- 17 November 2022 - submissions close.

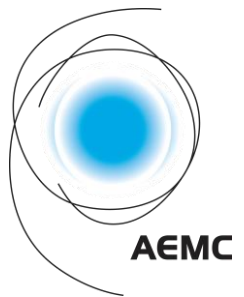
Visit the project page to register for the deep dive. Submissions can also be provided here. We are also happy to meet individually with stakeholders – reach out to the Project Leader Clare – clare.stark@aemc.gov.au



THANK YOU FOR YOUR TIME



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