



# INFORMATION

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## Operational security mechanism

### Our draft determination would help AEMO manage power system security

The AEMC has made a more preferable draft rule that would establish an ‘Operational security mechanism’ (OSM) to value, procure and schedule security services in the National Electricity Market (NEM) in the operational timeframe. This would provide a more efficient way to manage system security today and facilitate the transition to service-led management of the power system and encourage technological innovation.

### A new tool is required to manage power system security

The changing generation mix associated with the energy transition is pressing the limits of current system security and operational experience. Essential system services (ESS) were historically provided by synchronous generators (coal-fired, gas-fired and hydro-powered generators) in abundance as a by-product of energy. Because of this, there was little need in the original market design to explicitly value these services so that market participants had an incentive to provide them.

Inverter-based resources (IBR, typically solar, wind and batteries) can provide some of these services but there are few investment and operational signals to encourage new providers to provide these services. Without these incentives, the changing generation mix means we are not getting enough of some of these services.

A symptom of this is that AEMO is increasingly using directions to bring on generators that would otherwise be offline to ensure the system is secure. Over-reliance on directions, and AEMO’s other operational tools places increased risk on the security of the system and reduces transparency. The Commission considers this approach to managing system security is not an enduring solution, a view that has been widely shared by stakeholders.

### The draft rule would introduce an operational tool to value, procure and schedule security services

The OSM would value, procure and schedule “security services” not already procured through a market or other arrangements. The OSM has been designed to work alongside existing and proposed arrangements for system services. AEMO would define the security services to be procured through consultation and accredit eligible participants. The OSM would commence 1 October 2025, with:

- participants able to submit multi-part bids to provide security services in close to real-time;
- planning contracts, such as system strength, able to be scheduled through the OSM;
- security services procured alongside energy and frequency control ancillary services to get the best outcomes for consumers; and
- the current directions process unchanged and returned to a backstop arrangement.

This would be supported by arrangements to mitigate potential market power concerns and transparency arrangements to improve understanding of system security requirements

### The OSM would help facilitate the transition

The long-term vision for the NEM is an efficient, secure and reliable power system. [As set out in the ESB’s post-2025 advice](#), the market bodies - AEMC, AEMO and the AER - consider that the best way to achieve this, where possible, is to unbundle ESS so they can be individually and explicitly valued, priced and scheduled through market-based

mechanisms, acknowledging that such mechanisms may require a staged introduction.

However, current engineering knowledge does not allow a direct translation from a number of power system requirements to service definitions that meet those requirements. Instead, AEMO uses system configurations that represent a secure technical operating envelope to operate the power system. Markets require services to be individually specified, and so, engineering knowledge needs to develop further to fully unbundle security services.

The OSM would prepare the system for the future by providing a mechanism to facilitate the transition. The energy transition underway is inevitable and so the limitations of the current arrangements need to be addressed. Flexible and fit-for-purpose arrangements for system security need to be developed and implemented in time to help the system adapt, and to address security challenges as soon as they emerge.

The OSM would help transition to the long-term vision to manage power system security:

- more efficiently than directions (and other interventions) in the **near-term**
- use explicit signals to encourage investment and operational decisions in the **medium-term**
- encourage investment and innovation as our understanding improves in the **long-term**.

### The rule change requests and the ESB post-2025 market design

The draft rule is in response to two consolidated rule change requests from Hydro Tasmania and Delta Electricity proposing operational procurement mechanisms to value, procure and schedule ESS to help keep the system secure.

**Hydro Tasmania's rule change request**, received 19 November 2019, proposed an approach where system services would be procured within the spot market and the need for system services would be determined by binding constraints.

**Delta Electricity's rule change request**, received 4 June 2020, proposed an approach where system services would be scheduled ahead of time outside of the spot market, and with system needs identified through the short-term projected assessment of system adequacy and pre-dispatch schedule.

The draft rule would also progress **the Energy Security Board's (ESB) post-2025 ESS recommendations**. The ESB's long term vision is, where possible, to 'unbundle' ESS from one another so that they can be individually and explicitly valued, priced and scheduled through market-based mechanisms.

### The Commission is seeking stakeholder feedback

The Commission welcomes stakeholder feedback on the draft determination and rule. Collaboration through submissions, technical working groups (TWGs) and with other market bodies has been critical to developing the draft rule. To continue this collaboration we are holding the following online conversations before submissions to the draft determination and rule close:

- Public forum to provide an overview of the draft rule: **6 October 2022**
- Deep dive on market power issues: **20 October 2022**
- Deep dive on technical elements of the draft rule: **3 November 2022**

Written submissions must be lodged with the Commission **by 17 November 2022**. Visit [www.aemc.gov.au](http://www.aemc.gov.au) to lodge a submission.

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