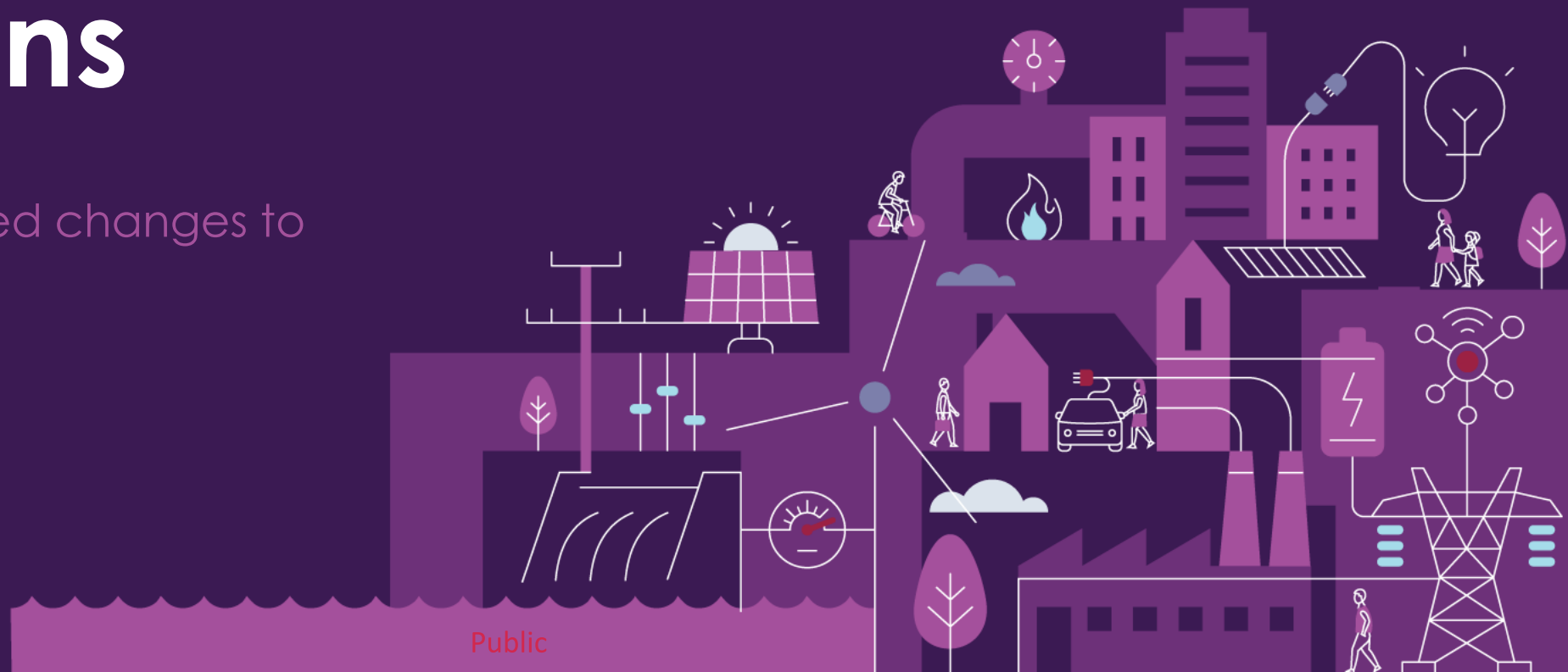


MSL procedures and directions

Overview of proposed changes to
procedures - BESS

July 2026





Public

We acknowledge the Traditional Custodians of the land, seas and waters across Australia. We honour the wisdom of Aboriginal and Torres Strait Islander Elders past and present and embrace future generations.

We acknowledge that, wherever we work, we do so on Aboriginal and Torres Strait Islander lands. We pay respect to the world's oldest continuing culture and First Nations peoples' deep and continuing connection to Country; and hope that our work can benefit both people and Country.

'Journey of unity: AEMO's Reconciliation Path' by Lani Balzan

AEMO is proud to have delivered its first Reconciliation Action Plan in May 2024. 'Journey of unity: AEMO's Reconciliation Path' was created by Wiradjuri artist Lani Balzan to visually narrate our ongoing journey towards reconciliation - a collaborative endeavour that honours First Nations cultures, fosters mutual understanding, and paves the way for a brighter, more inclusive future.



Read our
RAP



Public

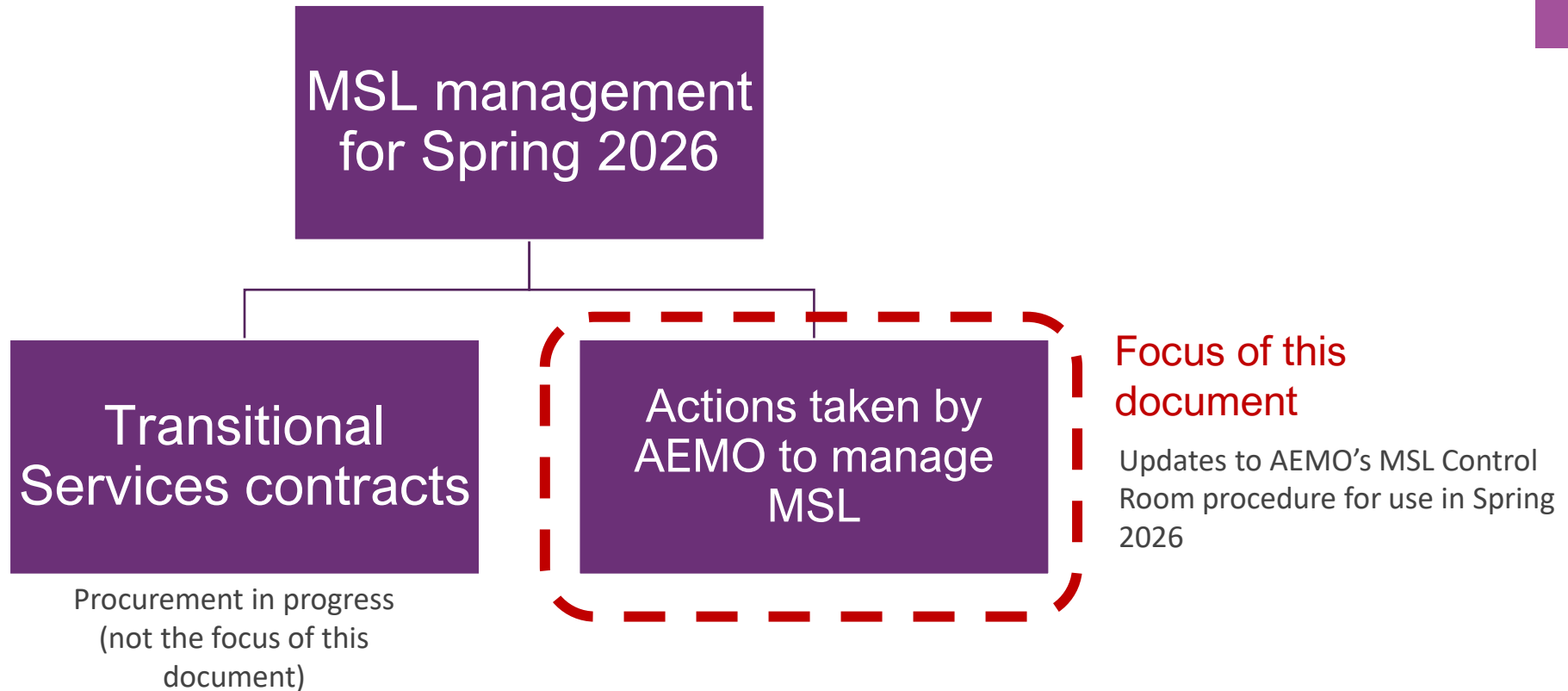
Disclaimer

- This document or the content in it may be subsequently updated or otherwise changed.
- AEMO has made reasonable efforts to ensure the quality of the information in this document but cannot guarantee its accuracy or completeness.
- The relevant provisions of the NER and AEMO's intervention settlement timetable prevail in the case of any inconsistency.
- This document does not constitute legal or business advice. Participants should obtain independent expert advice.

Overview of MSL procedure & updates: BESS



Overview



Updates in incoming procedure

Mainland NEM MSL Procedure

Single mainland-wide procedure for managing System Normal MSL events.

Aiming for a consistent approach.

Updates to BESS approach

Since spring 2025, large increase in BESS capacity.

Procedure aims to reflect typical BESS market behaviour in MSL thresholds.

Introducing monitoring of aggregate SoC headroom in each region to ensure system security while delaying intervention.

Co-incident low demand

Better reflect real power system conditions.

MSL thresholds calculated for each region considering demand of every mainland NEM region.

Battery capacity by region



- More accurate thresholds
- Aim to minimise directions

Minimum System Load framework (unchanged)

MSL framework is similar to the Lack of Reserve (LOR) framework.

- LOR framework manages sufficient supply to meet demand.
- MSL framework manages sufficient demand to support the minimum loading of units providing essential system services.

MSL1 
2 credible contingencies from MSL3

MSL2 
1 credible contingency from MSL3

MSL3 
Security violations anticipated

Management actions during MSL conditions (unchanged)

KEY ACTIONS:

Based on National Electricity Rules (NER) security framework, and SO_OP_3715 Power System Security Guidelines

MSL1	2 credible contingencies from MSL3	Monitor, issue market notice 1. Participants may take actions in response to MSL1 market notice
MSL2	1 credible contingency from MSL3	Clear MSL2 if possible, and take actions necessary to land satisfactory and return to secure within 30min following a credible contingency: 1. Recall network outages 2. Enable providers of MSL Type 1 Transitional Services 3. Directions to market participants (including non-scheduled generators, pumps, inflexible generators, BESS)
MSL3	Security violations anticipated	Actions to manage MSL3: 1. Any residual MSL2 management actions available 2. Instruction to NSPs to maintain demand at MSL3 3. If real time security violations are observed, instruct NSPs to increase demand to MSL3, including shedding of reverse flow feeders.

Updated approach for BESS (proposed)

Procedure update	Impacts for BESS
MSL thresholds during the day now adjusted aiming to reflect typical BESS market behaviour	No intervention – BESS are free to operate in the market
AEMO Control Room will be monitoring real-time dashboards tracking aggregate SOC headroom on the BESS fleet in each region	Direction is expected to be undertaken only in the following two situations: 1. If MSL2/MSL3 and real-time aggregate BESS SOC headroom in a region is insufficient, OR 2. ≤ 90 minutes to an MSL3.

Updated approach aims to minimise likelihood of directions

BESS directions approach (proposed)

- Direction: Remain synchronised and follow dispatch targets
- All BESS in the region directed
 - (If >50MWh installed capacity, and available)
 - Verbal directions to each BESS, constraint set invoked, market notice issued
- Constraint set:
 - ‘Cap’ on aggregate charge rate to steady charging
 - Limits regional BESS charging to an amount that ensures sufficient SOC headroom to continue steady charging throughout the trough, and to resecure the power system if a load contingency occurs
 - Limit LREG participation to 0 MW
 - Prevent discharge
- Directions cancelled at the earliest of:
 - When the **MSL2** and **MSL3** condition is cleared, or
 - 1600h, unless in **MSL3**

MSL Direction Market Notice

AEMO ELECTRICITY MARKET NOTICE.

Direction – in {{REGION}} region to {{UNIT.ParticipantName}} - {{UNIT.DUIDName}}

Refer to Market Notice {{MNOTICE.NoticeID}}

In accordance with section 116 of the National Electricity Law, AEMO is issuing a direction to {{UNIT.ParticipantName}}. For the purposes of the National Electricity Rules this is a direction under clause 4.8.9(a1)(1).

Direction issued to: {{UNIT.ParticipantName}} - {{UNIT.DUIDName}} at {{Hrs[2]}} hrs {{DATE:TODAY}}

Type of resource: [bi-directional unit]

Required actions: synchronise and follow dispatch targets or remain synchronised and follow dispatch targets at {{HRS[1]}} hrs {{DATE[1]}}

Services provided: [Minimum System Load Management]

Circumstances necessitating the direction: [Minimum System Load Management]

Circumstances necessitating the direction additional detail: [AEMO has detected that there is an elevated risk of insufficient demand to maintain a secure operating state]

Expected duration: {{Hrs[3]}} hrs {{DATE[3]}} / further notice.

{{UNIT.ParticipantName}} does not incur any civil monetary liability for a relevant action taken in accordance with this direction unless the action is taken in bad faith.

Manager NEM Real Time Operations

Cancellation of MSL Direction

AEMO ELECTRICITY MARKET NOTICE

Cancellation: Direction issued to: {{UNIT.ParticipantName}} - {{UNIT.DUIDName}}

Refer to Market Notice {{MNOTICE.NoticeID}}

Direction is cancelled from: {{Hrs[3]}} hrs {{DATE[3]}}

Manager NEM Real Time Operations

What is changing for BESS in incoming procedure (proposed)

- BESS expected to be directed later in the day
 - In previous MSL procedure, directions were at 0700h
 - Incoming procedure: AEMO expects to issue BESS directions when:
 1. If **MSL2/MSL3** and real-time BESS SoC headroom becomes insufficient, or
 2. If ≤ 90 minutes to an **MSL3**.
- Directed BESS will no longer be constrained to discharge down to minimum SoC, then held at 0 MW
 - Instead, for the entire direction duration, constraints will now:
 - Permit charging up to a steady (limited) rate
 - Prevent discharge and lower regulation FCAS dispatch
- All BESS in the region directed (if >50MWh installed capacity, and available)

Timeline of actions: BESS units

	AEMO actions	BESS unit actions
Up to a week ahead	Publish MSL1/ MSL2/MSL3 forecast notice	- No actions needed - Bidding available is helpful
Day before forecast MSL2 / MSL3	Issue Enablement Instructions to MSL Transitional Service Providers (if present)	- Service Providers commit to provide response on forecast day of MSL2/MSL3 - No actions needed from other BESS, bidding available is helpful
Morning of MSL2 / MSL3	- Actions to clear MSL2 (recall outages, enable Transitional Services, directions to participants), accounting for anticipated market participant behaviour - Monitor aggregate BESS SOC headroom	Be ready for direction
1. If MSL2 / MSL3 AND real-time SOC headroom is insufficient, OR 2. If ≤90 minutes to MSL3	- Issue directions to all BESS in region (installed capacity >50MWh) - Constraints applied as described in previous slides	Respond to direction: remain synchronised and follow targets
At the earliest of: End of MSL2 & MSL3 , or 1600h unless in MSL3	AEMO direction ends	Participants resume market behaviour

Directions to BESS and compensation

- AEMO may direct BESS when a region is in MSL2 or MSL3
 - Synchronise/remain synchronised and follow dispatch targets
 - No provision of energy during this period (only charging)
- AEMO may determine you are eligible to claim under NER Clause 3.15.7A –fair payment compensation for an *other compensable service*
- Refer to Intervention Settlement Timetable (“Timetable – Other direction” tab) for timelines (as per NER 3.15.7A)
 - AEMO has 10 business days from issuing the direction to notify eligibility for compensation for an other compensable service
 - Submit claim within 15 business days after being notified of eligibility by AEMO

Improving compensation frameworks



Rule Change: Open

Overview

On 9 July 2026, the Australian Energy Market Commission (AEMC) published a draft determination and more preferable draft rule to improve compensation frameworks in the National Electricity Market (NEM).

[View more](#)

Documentation

Draft

Initiation

AEMC documents



[Draft determination](#)



[Information Sheet](#)



[Draft rule](#)



[Draft rule markup](#)



[Statutory notice - s 99](#)

Project Details

Reference:	ERC0425
Proponent(s):	AEMO, Tilt Renewables
Stage:	Consultation on Draft Determination
Date initiated:	19-Mar-2026
Submissions Close:	3-Sep-2026
Consultation Paper:	19-Mar-2026
Draft Determination:	9-Jul-2026

Key Dates

15 Oct	Improving compensation frameworks - Expected Completion	ERC0425
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Key Links

Draft determination	[713.47 KB]
Information Sheet	[106.27 KB]
Draft rule	[299.87 KB]
Draft rule markup	[2.05 MB]

Make a submission

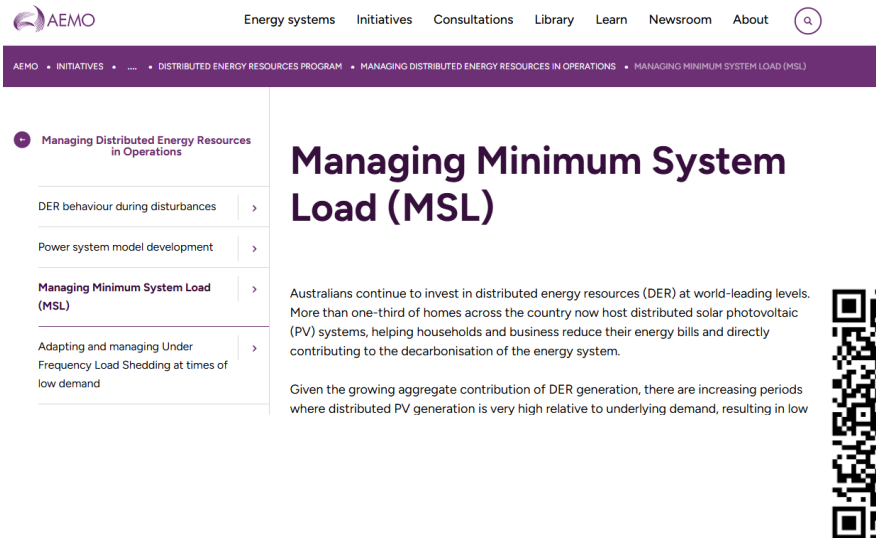
Make a submission

- Draft determination published 9 July
- Submissions close 3 Sept



Further information

- All-industry Spring Readiness briefing (August)
- AEMO will publish a range of short fact sheets as supporting material in Q3:
 - MSL framework and procedure
 - Compensation
- New procedure targeting go-live from 1 September



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AEMO • INITIATIVES • ... • DISTRIBUTED ENERGY RESOURCES PROGRAM • MANAGING DISTRIBUTED ENERGY RESOURCES IN OPERATIONS • MANAGING MINIMUM SYSTEM LOAD (MSL)

Managing Distributed Energy Resources in Operations

- DER behaviour during disturbances
- Power system model development
- Managing Minimum System Load (MSL)**
- Adapting and managing Under Frequency Load Shedding at times of low demand

Managing Minimum System Load (MSL)

Australians continue to invest in distributed energy resources (DER) at world-leading levels. More than one-third of homes across the country now host distributed solar photovoltaic (PV) systems, helping households and business reduce their energy bills and directly contributing to the decarbonisation of the energy system.

Given the growing aggregate contribution of DER generation, there are increasing periods where distributed PV generation is very high relative to underlying demand, resulting in low




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NEM events and reports

- Effectiveness of MII Procedures
- Market audit reports
- Market event reports**

Market event reports

AEMO's power system operating incident reports can be found here





For any further questions, contact the project team at
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For more information visit
aemo.com.au