

Connections Reform Initiative Webinar Series



NER 5.3.9 Process Guideline and Supporting Documents

Industry Webinar
30 January 2026

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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 Group 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.

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Agenda

1. Welcome & objectives
2. Introducing the NER 5.3.9
3. NER 5.3.9 process guideline & supporting documents
4. Questions

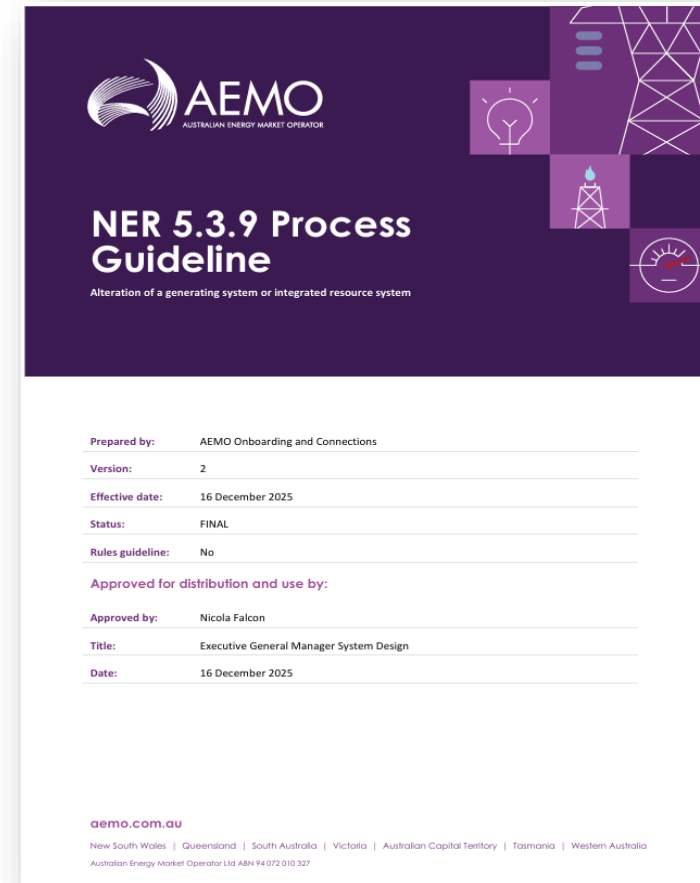
Today's objectives



Present overview of the *NER 5.3.9 Process Guideline and supporting documents i.e. fact sheets*



After the presentation, you will have the opportunity to ask AEMO questions.



Read the Guideline [here](#)



Introduction

Erika Twining

Connections Reform Manager

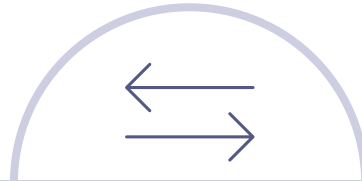
NER 5.3.9 background

Rapid changes in technology and the evolving needs of the energy sector, alterations to plant are becoming more frequent and necessary.

Industry feedback highlighted several challenges with the current NER 5.3.9 process:



**Complex and
difficult to navigate**



**Lack of consistency
and transparency**



**Unclear roles and
responsibilities**



The NER 5.3.9 workstream was created under the Connections Reform Initiative (CRI) to co-design resources to better support industry through this process.

What is NER 5.3.9?

NER 5.3.9 is a clause in the Rules detailing the process that needs to be followed when alterations to a schedule 5.2 plant are required. This could be when:

- Replacing equipment,
- A BESS is being added to an existing plant, or
- Altering a BESS control scheme from grid following to grid forming.

Why NER 5.3.9 is necessary?

1

Manage System Changes

Provides a framework for proposed changes to generation, control settings, or equipment.

2

Assess Impacts

Determines if alterations affect technical requirements, system strength, or network capability.

3

Maintain Standards

Ensure performance standards (GPS) remain met or are renegotiated.

4

Provide Certainty

Offers investment certainty by clarifying the regulatory path for modifications.

Process guideline and supporting documents

Guidance Series

NER 5.3.9 requirements and process to assist stakeholders with planning alterations.

NER Change Mechanism Fact Sheet

GS or IRS Change Form

NER 5.3.9 Process Guideline



Scenario Fact Sheets

Setting out guidance for specific scenarios requested by the industry.

Firmware Update Fact Sheet

Like for Like Replacement Fact Sheet

BESS Connection Fact Sheet

NER 5.3.9 process guideline and supporting documents

Vinodini Dissanayake

Principal Engineer, Technical Solutions


NER change mechanisms

	NER 5.3.9	NER S5.2.2	NER 4.14(p)
Application	Proposed <i>alteration</i> to a system with potential to meet any of the NER 5.3.9 criteria (see slide 14).	Proposed <i>application of settings</i> to a control/protection system required to: <ul style="list-style-type: none"> • Comply with relevant PS • Maintain or restore inter/intra regional power transfer capability. 	If NER 5.3.9 does not apply, NER 4.14(p) can be used <i>to amend</i> the PS at any time by agreement
Impact	May or may not result in changes to the existing performance standards (PS).	No changes to the existing PS (unless the settings are explicitly specified).	Changes to the existing PS.
Examples	<ul style="list-style-type: none"> • Change in inverter model or OEM. • Firmware updates that impact system performance. • Altering system from grid following to grid forming. 	<ul style="list-style-type: none"> • Changes to protection relay settings. • Setting changes requested by the NSP to restore network transfers. 	Amendments to: <ul style="list-style-type: none"> • remove ambiguity in wording or errors in technical requirements. • capture performance degraded over time (e.g. reactive capability of a legacy plant).

GS or IRS change form

To be completed by a Proponent proposing changes to a GS or IRS under:

- NER 5.3.9
- NER S5.2.2
- NER 4.14(p)
- Or where the change mechanism is unclear to the Proponent.

Generating system or integrated resource system change form


Use of this form

- This form is to be completed by a Proponent¹ proposing change to a generating system or integrated resource system under either National Electricity Rules (NER) 5.3.9, or NER S5.2.2, or 4.14(p), or where the change mechanism is unknown.
- This form is intended as a prompt to support Proponents to provide information that may be relevant to the Network Service Provider (NSP) and the Australian Energy Market Operator (AEMO) in scoping and assessing proposed changes. If unsure what supporting information should be provided, please liaise with the relevant NSP and AEMO. Fields that are not relevant to the proposed change or are unknown at the time of submission may be left blank.

Generator or Integrated Resource Provider details

Registered participant details	[Specify Company Name, ABN, Participant ID]
Power station details	[Specify Power Station Name, Power Station ID]
Production unit(s) details	[Specify Production Unit(s) Name; Production Unit(s) Dispatchable Unit Identifier (DUID):]
Contact person details	[Specify name, title, telephone number, email address]
Notice of change submitted to:	[Specify NSP contact and AEMO Onboarding & Connections contact]
Date of change request	

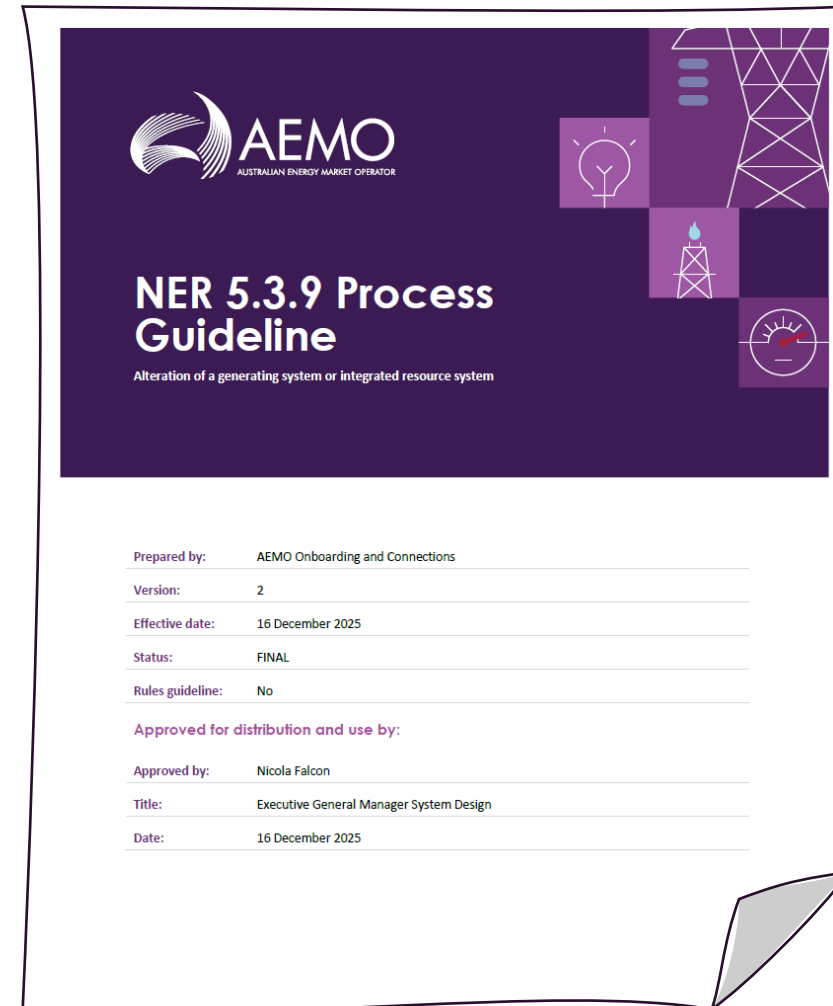


The Form is intended as a **prompt** to support Proponents to provide information that may be relevant to the NSP and AEMO to scope and assess proposed changes.

NER 5.3.9 process guideline

The Guideline outlines the process to be followed when proposing alterations to a generating system or integrated resource system under NER 5.3.9.




- 1 Application of NER 5.3.9
- 2 NER 5.3.9 process
- 3 Performance assessment
- 4 Negotiation of performance standards
- 5 Model and data requirements
- 6 Frequently Asked Questions



Application of NER 5.3.9



The **NER 5.3.9** criteria require assessment of whether the proposed alteration will:

- 
 affect performance of the system against NER Schedule 5.2 technical requirements.
- 
 have a general system strength impact.
- 
 adversely impact network capability, power system security, quality or reliability of supply, inter-regional power transfer capability or the use of the network by another user.

NER 5.3.9 process

Key steps



1. Notification:

- Proponent submits a request (via Change form) to the NSP and AEMO.



2. Scoping:

- Proponent to discuss with the NSP and AEMO the proposed alteration and its expected impact.



3. Assessment:

- AEMO and NSP review the proposed changes.
- Affected performance standards may be renegotiated.



4. Approval:

- When the assessment is completed a NER 5.3.10 notification will be issued.

What performance is subject to assessment and negotiation?

Only those performance standards **impacted by the alteration** will be renegotiated.



Unaffected performance standards

- Accepted performance standard remains
- Compliance is not reassessed.



'New' technical requirements

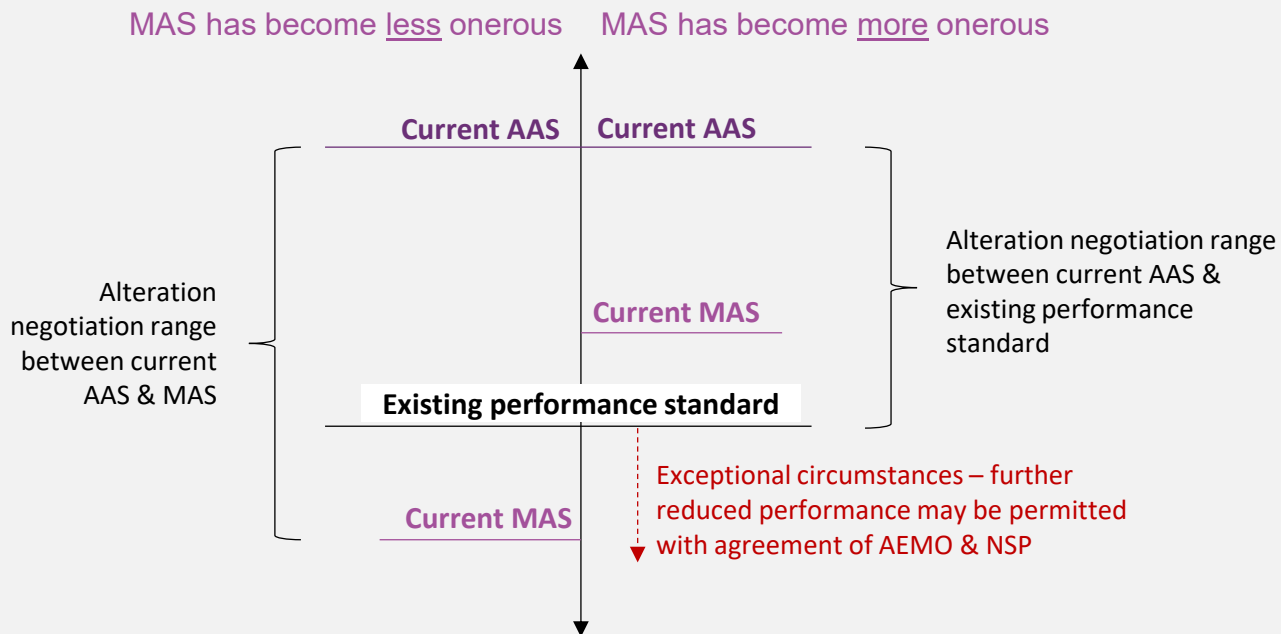
- Transitional rules typically provide direction on how any 'new' technical requirements apply in specified circumstances.



Changed technical requirements

- Impacted performance assessed against 'current' technical requirements.

What are the boundaries of negotiation for alterations?



Automatic Access Standard (AAS) requirement

- Altered standards should be as close as practicable to the AAS having, regard to:
 - need to protect plant from damage
 - local power system conditions
 - commercial and technical feasibility
- Benefits of higher performance will be weighed against:
 - assessment time and cost
 - capital expenditure
 - materiality of impact on power system

Legacy plant modelling requirements

***Legacy plant** - performance standards were established under superseded modelling requirements and model does not meet current Power System Model Guidelines (PSMG) requirements.*

Models used to validate performance of legacy plant should be **in accordance with PSMG**, to the extent reasonably practicable.

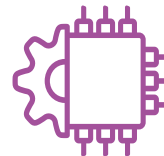
Model development options include:



Generic models with parameters validated through R2 process



Vendor-specific model for similar type of equipment.



Models of similar equipment, adapted through similar parameter reconfiguration.

Proponents are encouraged to discuss options with NSP and AEMO to agree most appropriate methodology

Next steps

This presentation has been a high-level summary of the **NER 5.3.9 Process Guideline & Fact Sheets**.



BESS connection fact sheet is currently under development and will be published by Q2 2026.



AEMO encourages you to [review the guideline and fact sheets](#) in more detail.



An email will be sent following this webinar with a link to the guidance documents.



If you have any further questions we were unable to address today, please contact us on contact.connections@aemo.com.au

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Questions





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