Connections Reform Initiative
Webinar Series

Commissioning Guideline and Toolkit

Industry Webinar

10 February 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 is proud to have launched 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

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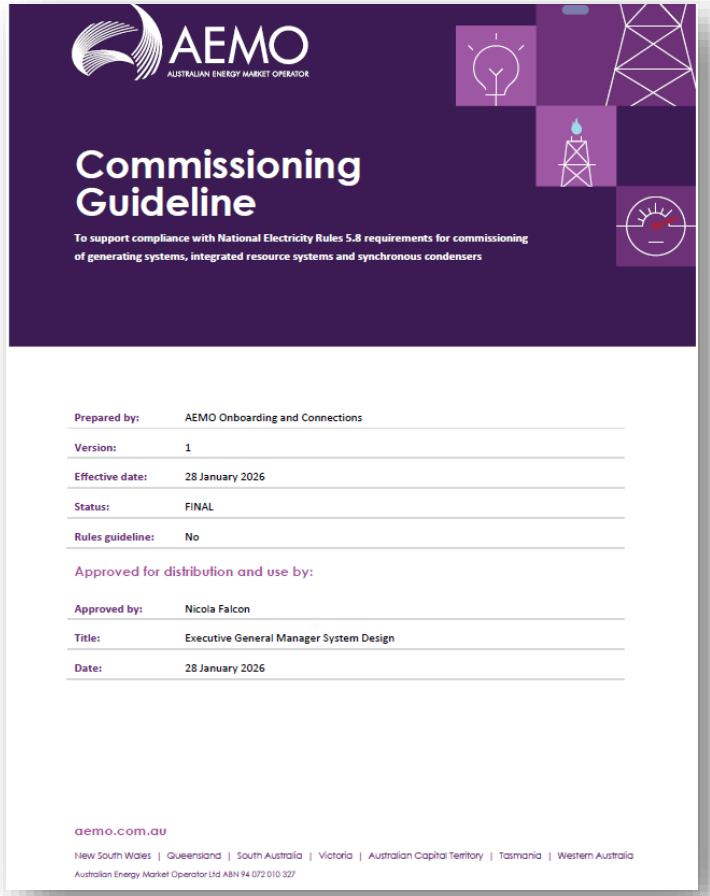
Agenda

1. Welcome and objectives
2. Introduction, guideline and principles
3. Commissioning process, framework and toolkit
4. Q&A

Today's objectives

Present overview of the *Commissioning Guideline and Toolkit*

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



Read the Guideline here

Introduction, guideline and principles

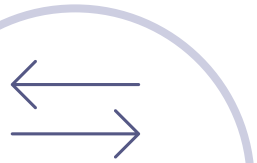
Erika Twining

Connections Reform Manager

Commissioning background

As the power system transforms and technologies diversify, commissioning processes need to adapt to support timely, secure integration

Industry feedback highlighted several challenges with the current commissioning process:



Inconsistency

Time consuming

Lack of flexibility & transparency

Roles & responsibilities

Learning from errors

Resourcing

Consultation phases

An iterative approach to test, trial and consult was taken to ensure the commissioning process is fit-for-purpose and reflective of industry's needs.

Phase 1: Concept

2023 - 2024

- Workshops were held to streamline the commissioning process.
- Independent commissioning review
- Ongoing engagement with NSPs and commissioning trials

Phase 2: Co-design & testing

2024 - 2025

- Commissioning Focus Group
- Commissioning trial learnings
- Development of the process flow diagram, draft guideline and draft toolkit

Phase 3: Implementation

2025 - 2026

- AEMO reviews
- NSP engagement
- Industry engagement
- Final Guideline & Toolkit published **28 January 2026**
- Industry webinar 10 February 2026

Actions taken to address challenges

Challenges

- Inconsistency
- Time consuming
- Lack of flexibility & transparency
- Roles & responsibilities
- Learning from errors
- Resourcing

Actions

- Review and consolidation of tests into a single guideline and toolkit
- Introduced flexible, collaborative, fit-for-purpose based approach to commissioning
- Clarified roles and responsibilities across stakeholders
- Establishment of an AEMO Commissioning team
- Learnings integrated into resources and embedded continuous improvement across staff

Guideline objectives

Guideline purpose - *To help Registered Participants (Proponents) connecting new or replaced equipment to the NEM to meet applicable requirements for commissioning under NER 5.8.*

Plant commissioning objectives:

Demonstrate compatibility with operation in the power system

Demonstrate compliance with performance standards

Obtain data for validation of plant models

The intended audience is proponents planning and undertaking the commissioning of generating systems, integrated resource systems, or synchronous condensers (Schedule 5.2 plant) in the NEM.

Principles for developing a commissioning program

The commissioning guideline seeks to facilitate the development of commissioning programs that:

- Are fit-for-purpose (i.e. testing requirements commensurate with plant impact)
- Enable efficient progression to full output
- Promote timely and efficient monitoring and reporting
- Demonstrate operational readiness

Commissioning process, framework and toolkit

Akhil Goswami

Manager – Commissioning

Replacement of previous guidance

Previous guidelines and support documents

- Guidance Note – Network Conditions and Requirements
- Commissioning Requirements for Generating Systems
- Generating System Test Template for Non-Synchronous Generation (IBR Template)
- Generating System Test Plan Template for Conventional Synchronous Machines (GPS Template)

Commissioning Guideline

+

Commissioning Toolkit

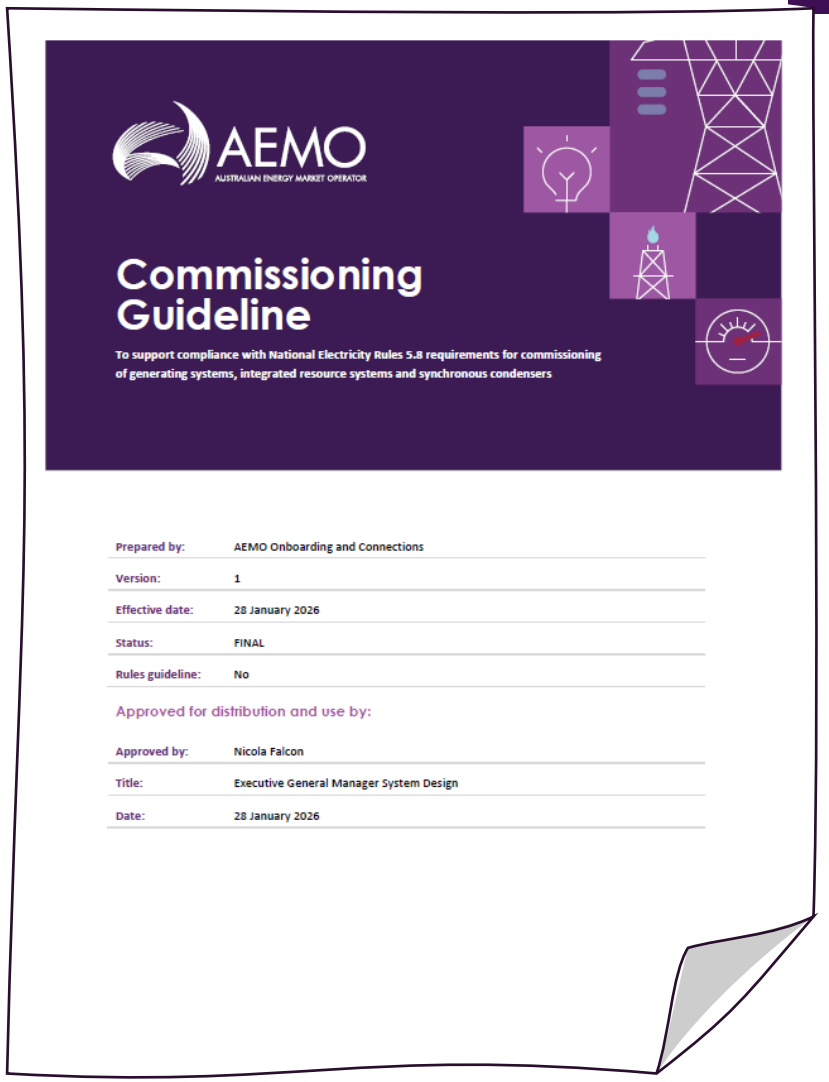
Effective date 28 January 2026
Published on the AEMO website:
AEMO | Completion

Commissioning Guideline

The Commissioning Guideline outlines clear requirements for commissioning generating systems, integrated resource systems, and synchronous condensers (Schedule 5.2 plant) in the NEM.

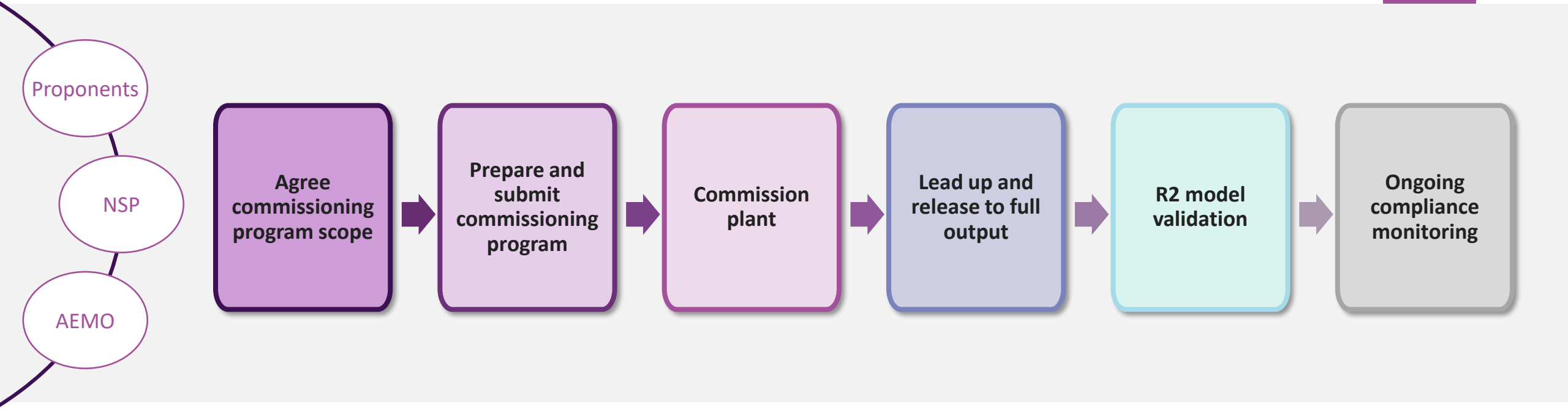
1. Introduction
2. Commissioning framework
3. Test categorisation
4. Developing a commissioning program
5. Undertaking commissioning

Appendix: Supporting examples (including default test categorisation)



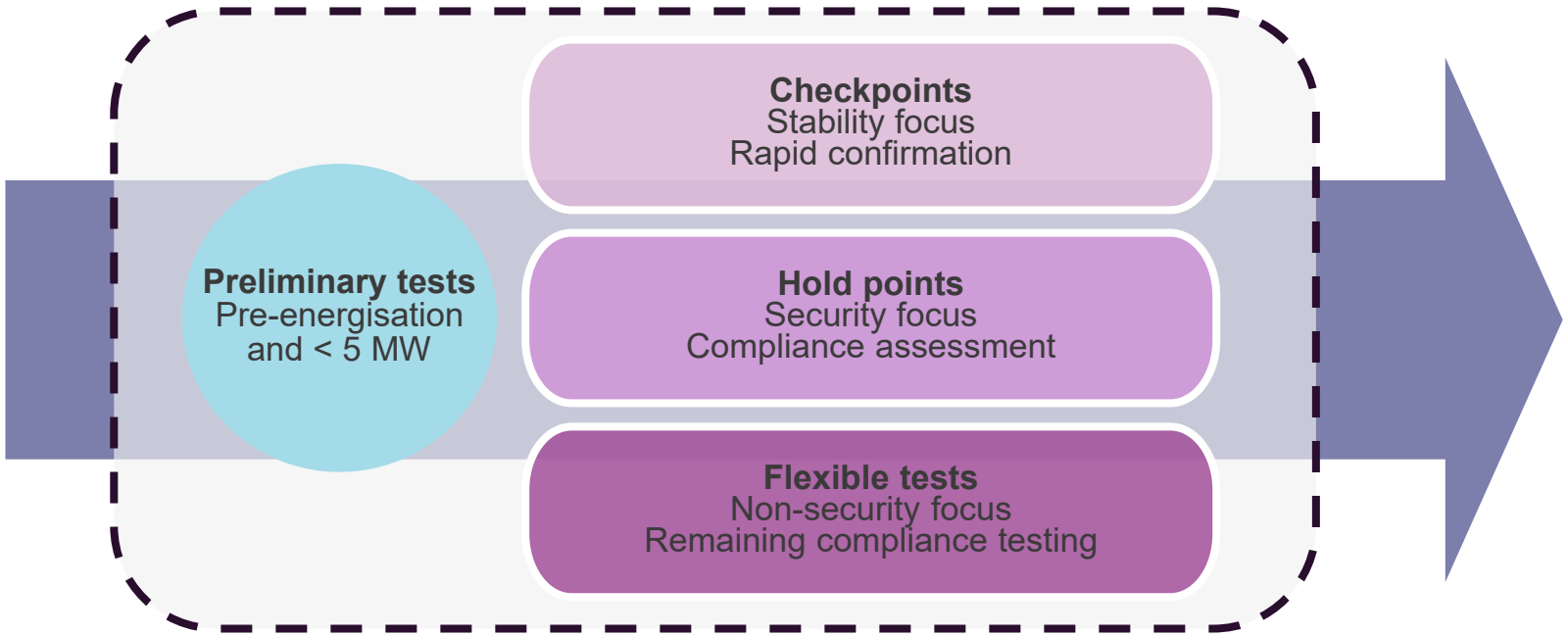
Commissioning process

A project will progress through several phases during the commissioning process:

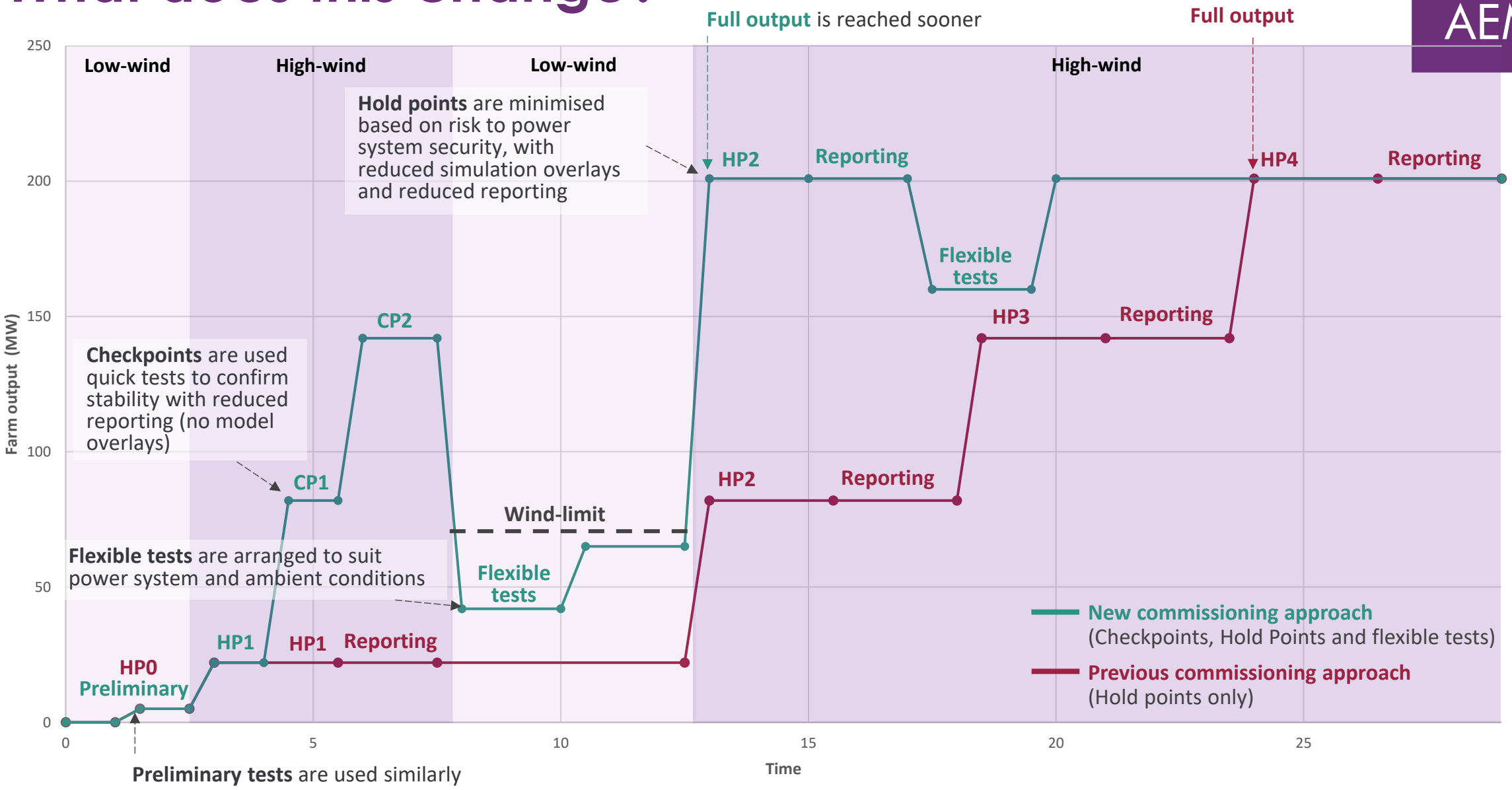


Principles for categorising tests

Commissioning tests are grouped by time criticality and impact on the power system.



What does this change?



Assessing plant impact

Low impact plant

Plant that does not materially impact power system security or quality of supply if it becomes unstable or trips.

High impact plant

Plant that could adversely affect power system security and potentially many other Network Users.

The impact may be determined by assessing the:

1. **Voltage impact of instability**
2. **Voltage impact of tripping**
3. **Frequency impact from trip**
4. **Other local factors**

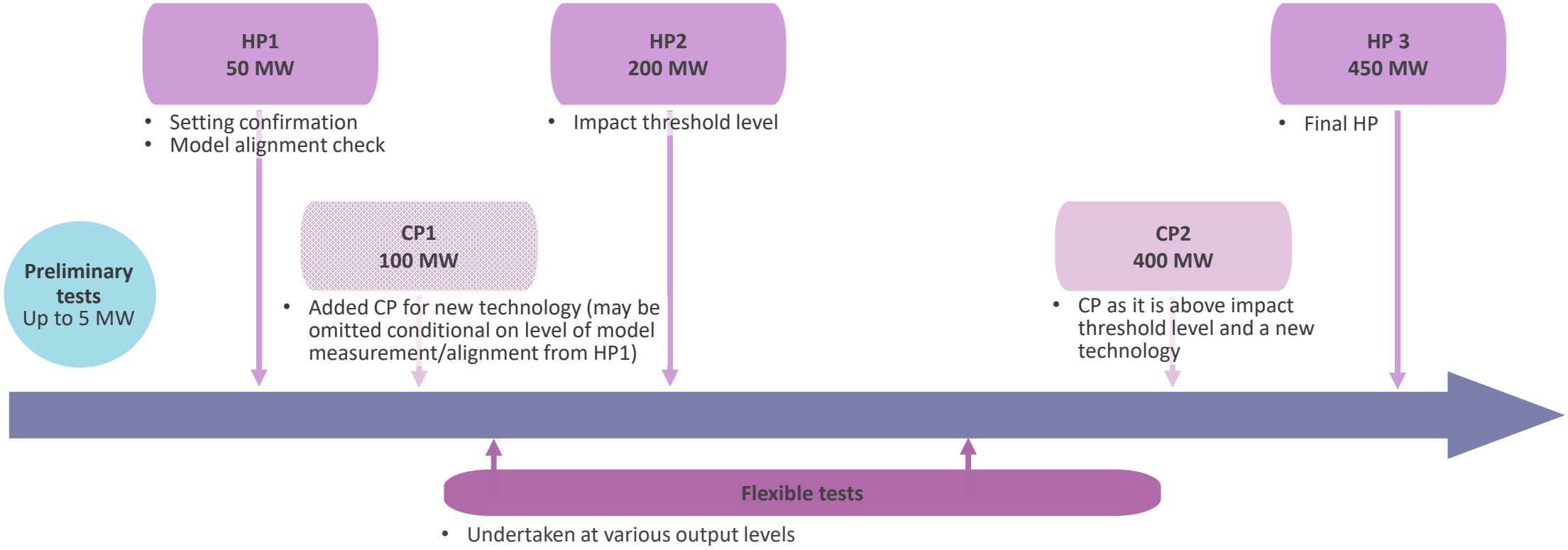
Suggested thresholds are:

- 3% on transmission or sub-transmission voltage
- 5% on distribution voltage
- Frequency impact threshold of 0.15 Hz deviation (NOFB) for mainland regions and 0.5 Hz for Tasmania

High impact plant example

Solar farm 450 MW

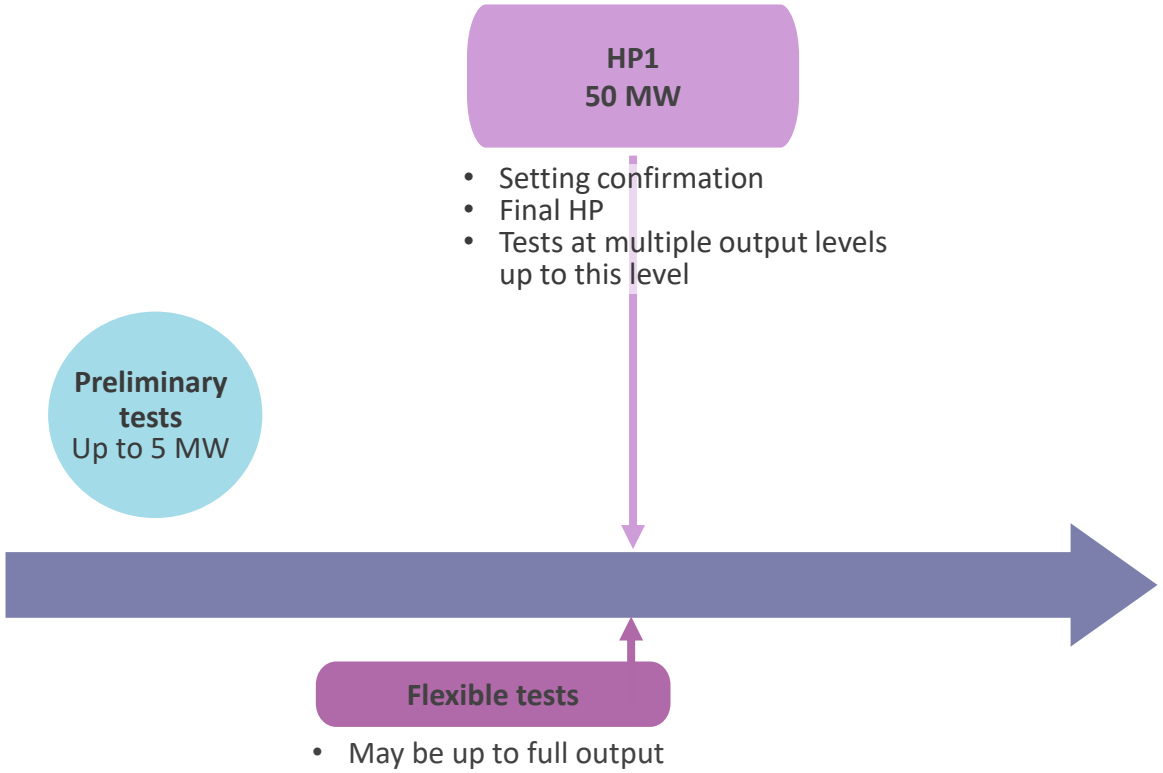
- 3% voltage change would occur at the connection point if the plant was operating at 200 MW and maximum reactive power supply tripped.
- Threshold of 200 MW is required.



Low impact plant example

Plant 50 MW

- This plant does not exceed the thresholds for requiring an additional hold point.
- A single hold point capping export at full output level would be required.



Streamlined requirements:

- Screenshots from primary mode step tests to confirm stability (CSF) on the day of testing.
- Single final commissioning report
  - All compliance reporting
  - Model overlays to confirm settings.

Commissioning Toolkit Resources

The Commissioning Toolkit creates a clear, transparent reference point and streamlines efforts by proponents, NSPs and AEMO.

- **Summary of Tests Template**
- **Communication and Test Schedule Template**
- **Commissioning Program Template**
- **Test Log Template**
- **Test Library**
- **Hold Point Report Template**

Next steps

This presentation has been a high-level summary of the Commissioning Guideline & Toolkit.

AEMO encourages you to review the guideline and toolkit 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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