

Transmission System Operational Capability Framework (TSOCF)

Stakeholder Reference Group – Session 1 : Briefing

28 May 2026

PROBLEM STATEMENT

Recent NEM assessments provide a clear and consistent picture of emerging risks to power system security as the NEM transitions to a high renewables, high uncertainty operating environment.

- Strengthening transmission system operational capability is no longer optional or incremental - it is a prerequisite for maintaining power system security and reliability as the energy transition accelerates.

OBJECTIVE

Develop an industry co-designed framework to strengthen transmission system operational capability.

- Provide a coordinated, consistent and transparent view of the transmission system operational capabilities needed to support the energy transition.
- Support AEMO and TNSPs to assess, prioritise and progressively improve operational coordination, capability and maturity.



AGENDA & PURPOSE

Align on the “what and why” of the TSO CF

THIS SESSION WILL RUN AS FOLLOWS

- 30-mins overview and 30-mins Q&A
- We will cover:
 - Why the change is needed Matt Wikman (AEMO)
 - What the TSO CF is Matt Wikman (AEMO)
 - What it consists of Ryan Dudley (CutlerMerz)
 - Who does what Ryan Dudley (CutlerMerz)
 - Where we are Ryan Dudley (CutlerMerz)
 - What is next Ryan Dudley (CutlerMerz)
 - What we need from this group Ryan Dudley (CutlerMerz)

SESSION OUTCOMES

- ✓ The group is familiarised with the TSO CF.
- ✓ The group can envision where its inputs matter and how.
- ✓ The group can support this initiative.

WHY CHANGE IS NEEDED

A shared framework enables operational capability to be developed early, consistently, and through deliberate, planned approaches rather than reactive, ad-hoc responses.

PROBLEM

- ▶ Transition to a high-renewables, high-uncertainty system is materially increasing operational complexity and risk.
- ▶ AEMO assessments confirm that maintaining system security and reliability will require enhanced operational capabilities and control tools, not just new physical assets.
- ▶ Strengthening operational capability is therefore a core prerequisite for secure, reliable and efficient system operation as the energy transition accelerates.

PROPOSED APPROACH

An industry-aligned capability framework:

- ▶ Provides a coordinated, consistent and transparent view of the transmission system operational capabilities needed to support the energy transition.
- ▶ Supports AEMO and TNSPs to assess, prioritise and progressively improve operational coordination, capability and maturity.
- ▶ Enhances operational efficiency and coordination, leading to improved outcomes and value to consumers.

WHAT THE TSOCF IS

PURPOSE: A voluntary framework providing a shared guide for transmission system operations capability & planning

► **CONSISTS OF:**

- Overarching explanatory document covering intent, scope and structure of framework and how to use it
- Capability-based framework (operational capabilities)

► **FOUNDATIONS:**

- Capabilities grounded in the NER obligations
- Power system evolution informed by the ISP, GPSRR, TPSS and the AESCSF
- Does not inherently create new obligations or pre-empt regulatory outcomes.

► **ONGOING REFINEMENT:** Expected to be reviewed as other workstreams incl. Industry Capability, Tx/Dx coordination and other relevant work packages mature.



WHAT IT IS

- An outcomes-focused guide.
- A common language reference.
- A description of capabilities and maturity levels required to support evolving system operating conditions.



WHAT IT IS NOT

- New obligations.
- A technology program.
- A set of prescriptive solutions.
- Inclusive of areas outside of operations e.g. asset management, cyber etc.

WHAT THE TSOCF IS

Provides a pathway from future system conditions → required maturity



Tiered structure:

Choose the **level of capability** to focus on

Start with the end:

Forecast the capability-specific future state using **operational data, ISP, GPSRR/TPSS**

Determine if the required capability maturity is **commensurate** to manage the forecast power system state

Assess maturity gaps:

Across People/Process/Technology

AER FOCUS

Test whether **future state forecast is credible** for the TNSP and **capability uplift pathway is prudent and efficient**.

WHAT IT CONSISTS OF

Scope is to define and structure capabilities and assessment logic, not prescribe solutions

In Scope

- Define the required operational capabilities, including supporting problem statements, capability categories and maturity tiers.
- Establish for each capability, the assessment process to evaluate maturity and determine necessary uplift.
- Map each capability to relevant regulatory obligations, including where responsibilities overlap or differ between AEMO and TNSPs.
- Provide a structured basis for stakeholder input and refinement through discussions and workshops.

Out of Scope

- Prescribing solutions in capability descriptions
- Replacing existing obligations or creating new obligations
- Scope areas / items addressed by related initiatives e.g. T-D coordination

**WHO DOES
WHAT**

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Layered engagement to keep delivery moving, ensuring regulatory and stakeholder input

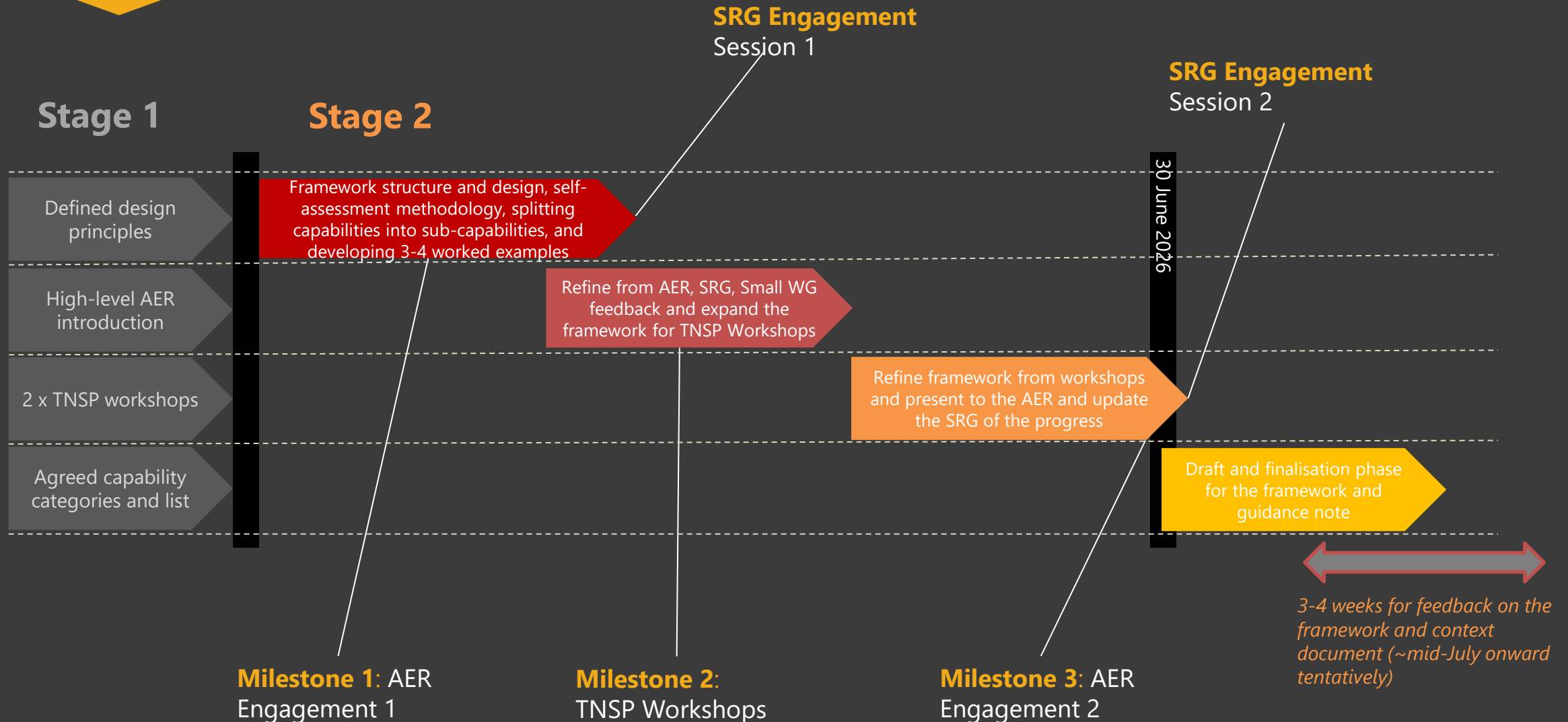
WHO?		WHAT
Project team	• AEMO • CutlerMerz	• Day-to-day development and coordination of the framework • Facilitate engagement sessions and workshops
Small project working group	• AEMO • Small set of TNSPs • CutlerMerz	• Guides technical development and logic test for framework development
Stakeholder reference group	• AEMO • AEMC • AER • ENA • TNSPs • DNSP representative • Consumer representatives	• Industry interface group providing feedback and perspectives on the framework's impact and direction • TNSPs in an observer role
Australian Energy Regulator		• Targeted consultation with the regulator to test the framework's scope and alignment with overarching regulatory frameworks.

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WHERE WE ARE

Completed Stage 1 and Milestone 1 and are now scaling the framework

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**WHAT IS
NEXT**

Guardrails keep the framework usable: outcomes language, maturity logic, and consistency

► Clarify the need / problem statement

Define a capability-specific problem statement that articulates the:

- Relevant system/operational context
- Limitation or gap in current capability
- Risk or consequence if not addressed (providing the basis for why the capability is required)
- Relevant consumer benefits.

► Capability descriptions

- **What** the organisation must be able to do (capability),
- **Why** - the problem statement or risk if a capability is not present
- **Reference points** - NER obligation mapping

► Capability maturity

Foundational → developing → advanced across people, process and technology dimensions

NEXT STEPS: We are seeking your feedback on the framing and usability of the TSOCF

Over the coming weeks we'd like to hear your views on the TSOCF so we can, where appropriate, incorporate your feedback into the framework.

Opportunities for engagement include:

- ▶ Q&A sessions at Stakeholder Reference Group meetings
- ▶ One-to-one discussions if requested
- ▶ 3 to 4 weeks for reviewing and providing feedback on the overarching document and capability spreadsheet (indicatively from mid-July TBC)

What are your impressions of the proposed TSOCF from what you've heard today?

- ▶ To what extent do you agree with the 'case for change'?
- ▶ What are your initial thoughts on the framework's indicative scope and structure?
- ▶ Do we have the right stakeholders involved?
- ▶ How suitable are the engagement opportunities?
- ▶ What else should we be considering?

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