NEM Engineering Framework
Frequently Asked Questions

This document provides answers to the most common questions and themes that arose from the NEM Engineering Framework industry workshop and engagements from November 2020 to April 2021.

The Engineering Framework takes a holistic view of the changing characteristics of the energy system to help facilitate an orderly operational transition of the National Electricity Market (NEM). More information is on the AEMO website, including the March 2021 report and how to get involved.

General

1. What are the aims of the Engineering Framework?

The Engineering Framework aims to:

- Facilitate a discussion to identify possible future operational conditions for the NEM power system.
- Consolidate a common view of the current work underway to adapt the system and existing avenues for engagement.
- Collaborate on identifying where increased industry focus is needed to bridge the gap between current work and future operational conditions.

2. What are the focus areas of the Engineering Framework?

The focus areas in the Engineering Framework help frame current work and avenues for engagement. There are 10 focus areas which are spread across three broad themes: attributes, operability, and integration.

- **Resource Adequacy**
- **Frequency Management**
- **Voltage Control**
- **System Strength**
- **System Restoration**
- **Control Room and Support**
- **System Analysis**

- **Resilience**
- **Performance Standards**
- **Distributed Energy Resources**

3. Why is DER a stand-alone section in the Engineering Framework?

Consumer uptake of DER is already rapidly defining power system operation. DER is included as a stand-alone section as it presents a unique integration challenge relevant to all other focus areas of the framework. DER will continue under the Engineering Framework umbrella as it progresses.

Interaction with other work

4. How will the Engineering Framework interact with the Integrated System Plan (ISP)?

The NEM Engineering Framework complements the ISP, providing a coordinated approach to planning for system operability during the transition to the futures envisaged in the ISP. This will inform future priority projects for AEMO and the other market bodies.

Relevant learnings and outcomes from Engineering Framework activities will then feed into the thinking of future ISPs.

5. How will the Engineering Framework interact with market and regulatory change?

There is two-way feedback between the Engineering Framework and market and regulatory change. As part of the Engineering Framework, AEMO has been informing relevant market and regulatory bodies of the latest thinking, which then feeds into work such as the ESB post 2025 options paper.

In addition, the March 2021 report captures the current work in the markets and regulatory spaces. The next focus of the Engineering Framework is to determine what needs to be done in addition to the regulatory and market reforms that are currently underway.

6. How will the Engineering Framework manage differing government approaches to energy policy?

Despite differences in approach, governments are all pointing in the same direction with regards to increasing levels of renewables and distributed energy. The framework and its focus areas can be applied to different government policies to inform actions and enablers needed to support the desired policy outcomes.

7. Will there be a Renewable Integration Study (RIS) stage 2?

No, there will not be a RIS stage 2, as this workstream has evolved into the Engineering Framework. Progress on the 15 recommended actions of the RIS will continue to be tracked and made available through the engineering Framework.

For further information on the RIS, please see the AEMO website, or visit the December 2020 RIS action update.

8. How does the Engineering Framework differ from the RIS?

The RIS addressed a set of specific study questions and was the first step of a multi-year plan to maintain system security in the future NEM.

The Engineering Framework utilises feedback from the RIS and considers a broader perspective of what is required to facilitate an orderly transition to an operable future NEM.

Operational conditions

9. What are operational conditions?

Operational conditions are a tool to help us, as an industry, map a pathway to an operable future. They are future circumstances or periods which will necessitate new approaches to managing the secure and efficient operation of the power system.

Operational conditions consist of a particular generator mix and/or loading. Key operational risks can then be applied to the operational conditions to help determine any gaps or opportunities over the energy transition.

10. How far ahead do operational conditions look?

Operational conditions nominally look out 5-10 years to consider boundary operational conditions that could be expected to occur.

11. Will a methodology be developed to set out how operational conditions should be identified and selected?

The level of structure and methodology given for workshopping operational conditions is dependent on stakeholder feedback from ongoing engagements. At this stage, a light touch methodology is being considered to identify operational conditions, allowing the Engineering Framework to move faster in identifying the gaps and opportunities during the energy transition.

12. Who will prioritise the work to achieve the operational conditions?

There will be a lot of actions required to prepare for these operational conditions, requiring prioritisation decisions by many affected parties. AEMO is not seeking to dictate priorities to others. Instead, AEMO will be focused on prioritising its own efforts. The Engineering Framework process will involve ongoing industry collaboration to prevent duplication and ensure continuation of important bodies of work.

Engagement

13. Where to from here?

AEMO is setting up targeted stakeholder discussions in June to help identify operational conditions and any early priorities that need attention across all Engineering Framework focus areas.

Information on outcomes and next steps will be communicated following the June discussions.

14. How do I stay informed or get involved in the Engineering Framework?

AEMO is in the process of contacting interested parties for the June operational conditions workshop. If you would like to help shape these operational conditions, or keep informed of the latest developments, please get in touch at FutureEnergy@aemo.com.au.

Section 4 onwards of the March 2021 report includes links to existing opportunities to get involved in activities grouped under each focus area.

For more information, please visit the Get Involved section of AEMO's website, listen to the industry workshop recording or read the industry workshop presentation.