



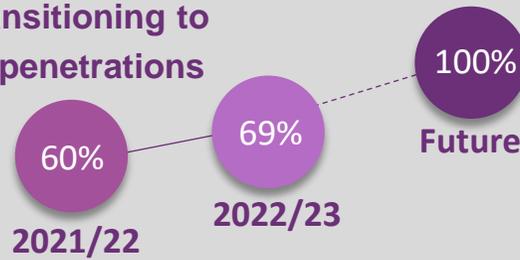
Engineering Roadmap to 100% Renewables

FY2024 Priority Actions Report

The Australian Energy Market Operator (AEMO) has published the *Engineering Roadmap FY2024 priority action report* to provide an overview of the actions that AEMO will undertake this financial year to progress readiness efforts for the first periods of 100% instantaneous renewables in the National Electricity Market (NEM).

A concerted industry effort is needed to ready the NEM for a high renewable future, and efforts are progressing on many fronts. This report highlights the additional priorities for FY2024.

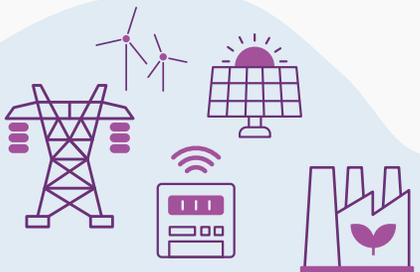
The NEM is rapidly transitioning to higher instantaneous penetrations of renewables.



In FY2023, AEMO improved its readiness to enable the transition, by:

- ✓ Uplifting operational capabilities via the Operational Technology Program
- ✓ Defining qualitative specifications for grid-forming inverters.
- ✓ New system strength standards that facilitate new connections.
- ✓ Exploratory studies of future 100% instantaneous renewable conditions
- ✓ Understanding DER compliance to technical settings, to guide future frameworks

AEMO is committed to enabling higher penetrations of renewables. The objectives for FY2024 are outlined below:

Enabling high penetrations of distributed energy resources (DER)	Enabling new technologies to address system needs	Conducting future power system studies	Building operational readiness
<p>Ensuring sufficient visibility, predictability, and controllability across the power system to enable continued uptake of DER, allowing consumers to optimise for their own circumstances and to harness DER flexibility in an increasingly two-way power system.</p> 	<p>Accelerating efforts to prove the capabilities of new technologies to support stable power system operation at times when coal and gas generators aren't running.</p> 	<p>Additional efforts towards simulating the dynamic behaviour of the future power system, expanding our understanding of emerging issues and designing proactive solutions as we progress into operating conditions uncharted anywhere in the world.</p> 	<p>Enhancing operational capabilities to adapt to a changing power system, including improved modelling approaches and tools, and increasing readiness efforts to securely operate the power system in new configurations for the first time.</p> 

Transitioning the NEM rapidly away from coal relies on 4 key pillars

1. Low-cost renewable energy, from abundant wind and solar.
2. Firming technology like batteries to smooth out peaks and troughs.
3. New transmission and modernised distribution networks to connect new renewables to loads.
4. Power systems capable of running at times, entirely on renewable energy (primary objective of this report).

