



Improving the NEM access standards – Package 1

The Commission has made a final rule to improve the NEM access standards

The Commission has made a more preferable final rule (final rule) to improve the National Electricity Market (NEM) technical access standards. This is in response to a rule change request submitted by the Australian Energy Market Operator (AEMO) to give effect to the final recommendations in its [review of technical requirements for connection](#), which AEMO is required to conduct at least once every five years, pursuant to clause 5.2.6A of the National Electricity Rules (NER). In light of AEMO's extensive consultation, the Commission fast-tracked this rule change request, bypassing the consultation paper stage, and published a draft determination and draft rule on 5 December 2024.

The NEM access standards contained in Chapter 5 of the NER and its accompanying schedules define the permissible range of technical performance that connection applicants need to meet before connecting to the NEM. However, some existing access standards are no longer fit for purpose in a NEM with an increasingly large number of inverter-based resources. For example, some existing standards:

- unintentionally disincentivise beneficial grid-forming responses
- do not account for increasing connections at a sub-transmission or distribution level
- do not fully utilise available plant performance
- refer to defunct or out of date standards.

The final rule will make the NEM access standards fit for purpose in a world where inverter-based resources are more prevalent. It will also add more prescription and clarity to the access standards, which will help to reduce costs and time for connecting parties, NSPs and AEMO in negotiations undertaken when connecting plant.

The final rule will promote the National Electricity Objective by lowering connection costs and promoting faster connections

With the energy transition underway, the NEM is growing and changing to continue to deliver secure, reliable and affordable electricity to millions of Australians whilst achieving governments' emissions reduction targets. AEMO's 2024 Integrated System Plan (ISP) sets out that on the optimal development path, AEMO considers that grid-scale variable renewable energy would triple by 2030 and increase by six-fold by 2050. Utility scale batteries would increase by five-fold by 2030 and six-fold by 2040.

This means that, compared to a decade ago when NSPs only had a handful of connection applications to process, NSPs are currently handling hundreds of connection applications from a broad range of plant types. The increase in application volume, combined with more complex system security interactions between plants and a shortage of power engineers across the industry, has resulted in a longer connections queue. To support this current and future growth and deliver the energy transition in accordance with the NEO, new NEM connections need to be approved at a much faster rate than at present to keep up with the pace of the transition. At the same time, it is also important that there is a continued focus on keeping the whole system stable and secure throughout the transition. The final rule will positively contribute to all these challenges.

The Commission received 23 submissions on its draft determination and draft rule. While these submissions were all broadly supportive of the draft rule, some submissions sought additional clarifications, suggested alternative approaches or raised concerns with particular aspects of the draft rule. After considering all feedback and undertaking further analysis, including holding a stakeholder workshop, the Commission's final rule largely maintains the draft rule. It does however make several additional clarifications and

revisions to address stakeholder concerns (including not making some changes proposed in the draft rule), as relevant, and minimise the risk of any unintended consequences. These changes ensure that the final rule best achieves the intended policy outcomes and advances the National Electricity Objective (NEO). Note that the Commission made a differential rule to not apply the final rule in the Northern Territory.

The final rule is in the long-term interests of energy consumers

The Commission assessed the final rule against the criteria outlined below and considers it will contribute to advancing the NEO by:

- **Supporting safety, security and reliability** — The improved access standards will increase power system resilience by better utilising already available plant capability to withstand disturbances, including for HVDC links, and broadening application to synchronous condensers needed for system security.
- **Contributing to emissions reduction** — The improved access standards will accelerate the connections process and support new investment required to meet Australia's emissions reduction targets by making the access standards more prescriptive to minimise ambiguity and clarify their application to different technologies.
- **Promoting innovation and flexibility** — The improved access standards will promote innovation and flexibility in the power system by removing impediments for connecting grid-forming inverters and increase investment efficiency by broadening the options available for connection applicants under different circumstances.
- **Reducing connection process costs and complexity** — The improved access standards will contribute to lowering overall connection costs for most applicants. They will also reduce the burden on network service providers (NSPs) and AEMO and simplify their function by streamlining the connections process, providing clarity and reducing the need for negotiations.

The final rule will amend the access standards for generators, integrated resource systems, synchronous condensers and HVDC links

The final rule will amend the NEM access standards to apply them by plant type rather than by the registration category, which relates to the owner or operator of the plant, as is the case currently. This will ensure a consistent approach to managing system security for similar types of connecting plant, irrespective of the persons connecting, especially considering the increasing variety of persons and plant connecting to the power system.

- Schedule 5.2 will apply to all generating systems, integrated resource systems and synchronous condenser systems (collectively known as schedule 5.2 plant).
- Schedule 5.3 will apply to all plant that consume electricity from a network, including a distribution network or a source of load within an integrated resource system (collectively known as schedule 5.3 plant).
- Schedule 5.3a will apply to any HVDC system with a power transfer capability of 5 MW or more (known as schedule 5.3a plant).
- The persons to which the obligations apply will be captured by new definitions of Schedule 5.2 Participant, Schedule 5.3 Participant and Schedule 5.3a Participant.

The final rule will introduce a suite of reforms to the access standards for generators, integrated resource systems and synchronous condensers to align with best power system performance, streamline the connection process, improve power system resilience and support efficient investment. The final rule will align the access standards for HVDC links with those applicable to inverter-based generation and integrated resource systems, as they have similar power system impacts and capabilities as modern HVDC links.

The final rule includes transitional provisions to allow choosing a mix of old and new standards and minimise disruption to ongoing connections

The final rule will commence on **21 August 2025**. New access standards will apply by default for connection enquiries that have not received an NSP response by the commencement date. Otherwise, the old access standards will continue to apply. Connections that have received an enquiry response but have not received an offer to

connect by the commencement date may choose to apply some or all of the new access standards for their connection (with any selection of a mix of access standards subject to approval by the NSP and AEMO).

The final rule does not affect any existing connection agreements or modify any performance standards of existing plant. However, the final rule requires NSPs to document the performance standards of their existing synchronous condensers or HVDC links (including any *considered projects*) with respect to the new access standards. The performance standards do not have to meet the new minimum access standards. If, at the commencement date, an application to amend existing performance standards was already submitted, then the old access standards will apply by default (unless otherwise agreed by all parties). All future amendments to performance standards will be subject to the new access standards, excluding any technical requirements that are not present in existing connection agreements.

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