

Dispatch limits for inverter-based resources

The Commission is seeking stakeholder feedback on a proposal to expressly enable dispatch instructions to include a limit on the number of inverters online at a connection point

The Commission has published a consultation paper in response to a rule change request by the Australian Energy Market Operator (AEMO). AEMO is seeking amendments to the National Electricity Rules (NER or rules) that would expressly enable dispatch instructions to include a limit on the number of inverters online at a connection point. AEMO is of the view that by formally introducing this mechanism in the NER, it would limit the number of inverters online in a direct and reliable way, reducing the risk of the power system operating outside of its security limits for an extended period of time.

We are seeking stakeholder submissions to the consultation paper by 24 September 2026.

We are seeking your views on whether AEMO's management of invert limits could be improved

A secure power system requires a minimum level of system strength in order to maintain a stable voltage waveform and to resist disturbances that may cause large voltage swings. A relevant determinant for the level of system strength is the number of inverters that are electrically connected to the power system. All else being equal, a greater number of inverters online can mean a weaker and less secure power system.

As part of its suite of tools that it uses to operate the system, AEMO currently enforces inverter limits through a series of escalating operational measures:

- **Invoking network constraints** - AEMO initially implements inverter-limits through outage constraints in the National Electricity Market Dispatch Engine (NEMDE). While plant operators may respond to the indirect signals of a constraint violation, they are not obligated to do so.
- **Manually engaging with participants** - if inverter numbers remain above the required limit, AEMO's real-time operations controllers may contact the affected participant and request that they block or disconnect inverters locally. AEMO notes that while these requests are generally successful, they are voluntary and not supported by an explicit enforcement mechanism under the NER.
- **Issuing clause 4.8.9 instructions to NSPs** - where the preceding measures do not reduce the number of inverters online in time to resecure the power system, AEMO may issue a clause 4.8.9 instruction to a Network Service Provider (NSP) to open circuit breakers to disconnect the generating system.

AEMO considers that these current arrangements to manage inverter-limits are not sufficiently timely, efficient or enforceable, which poses a risk to power system security.

AEMO is currently working to improve speed and efficiency by progressing the 'inverter dispatch initiative' – a mechanism to automate AEMO's communication of inverter-limits. However, AEMO notes that compliance with this initiative remains voluntary, and so a change to the NER is proposed to make these arrangements enforceable.

We are seeking your views on whether incorporating inverter limits into dispatch instructions addresses the issues raised by AEMO

AEMO considers that the inverter dispatch initiative should be formalised in the NER by introducing obligations that improve power system security. This includes amendments to

ensure:

- inverter-limit dispatch instructions are complied with
- transparency and certainty for participants around compliance obligations
- that the Australian Energy Regulator (AER) is able to monitor and enforce conformance
- there is faster, automated reconnection of offline inverters once conditions allow it.

To formalise inverter limits, AEMO has proposed several amendments to the NER, including:

- inserting a limit on the number of online inverters, where AEMO considers it necessary, to maintain power system security
- stating the desired outcome of the dispatch instruction (if applicable) such as active power, reactive power, transformer tap, maximum number of online inverters or other outcome
- inserting new definitions of “inverter” and “online inverter”.

The Commission understands that, while AEMO refers to inverter-based resources throughout the rule change, the proposal is intended to apply to scheduled generators, semi-scheduled generators, scheduled integrated resource providers, but not to non-scheduled generators or non-scheduled loads.

We are seeking your views on the implementation considerations

AEMO considers that the costs of having a dispatch limit for inverters could affect AEMO, participants, and the AER to varying degrees. For these respective stakeholders:

- **AEMO** anticipates updates to relevant procedures, such as the dispatch procedure and pre-dispatch procedure. However, it notes that certain procedures are already being updated as part of the inverter dispatch initiative’s implementation.
- **Participants** who have plant that require upgrades to meet the proposed requirements would incur costs. These costs may vary based on the size and age of the plant.
- **The AER** may be required to review and update its Rebidding and Technical Requirements Guideline.

AEMO therefore proposes a stage implementation timeframe to comply with dispatch instructions that include inverter limits:

- Immediate commencement: proposed chapter 5 changes and definitions commence upon making the rule.
- 18 month implementation period: proposed chapter 4 changes involving dispatching inverters commence 18 months following publication of the final rule to allow existing plant enough time to clarify, assess, and where required, update control systems.

Next steps

Submissions to the consultation paper close on 24 September 2026. We will publish a draft determination for the rule change on 3 December 2026.

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