

23 July 2020



Mr Alex Oeser
Australian Energy Market Commission (AEMC)
GPO Box 2603
Sydney NSW 2000

Dear Mr Oeser

RULE CHANGE PROPOSAL: TECHNICAL STANDARDS FOR DISTRIBUTED ENERGY RESOURCES (ERC0301)

Endeavour Energy appreciates the opportunity to respond to the AEMC's consultation paper on AEMO's rule change proposal; *National Electricity Amendment (Technical Standards for Distributed Energy Resources (DER)) Rule 2020*. This request follows AEMO's exploration of the potential impacts of DER to impact the power system¹.

We understand AEMO's desire to set minimum technical standards to provide clarity to market participants and facilitate the continued integration of DER uptake across the NEM in a manner that supports system security, stability and system frequency. However, we do question whether this proposed rules-based solution is practicable and the preferred short-term action plan.

1. Is this rule change complementary to other DER related reviews and industry work?

We note this rule change will precede the following DER related initiatives which are in progress:

- The Energy Security Board's (ESB) DER integration workplan and post-2025 review of energy markets (including its two-sided markets review). Of particular relevance is the ESB's Governance of DER Technical Standards consultation paper which was recently [released](#);
- Standards Australia who are in the process of reviewing Australian Standards (AS) 4777 and 4755 which relate to inverter requirements and standardisation of dispatch response; and
- An ARENA endorsed DER API industry working group who are working actively with the DER industry, other DNSPs and AEMO on development of a common DER interface protocol.

The ESB has noted this proposed rule change and indicated that it may need to be replaced if a longer-term governance framework is made in the future². The ESB review follows on from recommendations from a Sapere and CutlerMerz report that distinguished short and longer-term actions to address gaps in the existing regulatory framework³. The report did acknowledge AEMO's concerns about the need to manage near-term DER related system

¹ See AEMO 2020 Renewable Integration Study and AEMO 2019 Technical Integration of DER

² Ibid, p. 2.

³ Sapere and Cutler Merz, Review of governance of DER technical standards, March 2020, p. 89

security risks⁴. To address this risk, the report outlined three options including a rule change (of this nature), an ESB fast-tracked rule change and a voluntary industry guideline⁵.

Ideally, this rule change would follow (or form part of) the processes outlined above. However, we accept the need for AEMO to address existing and emerging system security issues in the short-term related to DER.

2. Who should be responsible for setting DER standards?

The proposed rule would allocate the responsibility of setting technical DER standards to AEMO. This will promote national harmonisation and allow AEMO to address system security and frequency concerns and a finding from the Sapere and CutlerMerz report regarding the⁶:

“lack of an adaptive regulation system where good (enough for now) is not blocked by the perfect, and practical and enacted standards evolve at a pace similar to technology and industry.”

We consider a consultative and considered process is the ideal method for establishing DER standards. However, we also appreciate AEMO’s need to establish a standard (in advance of the Standards Australia process) to address emergent inverter voltage and frequency ride-through issues.

It is important to acknowledge that, if this rule is made, the resultant AEMO standard would represent an industry starting point. Any future iterations, AEMO led or otherwise (subject to the ESB DER governance review), should account for the views of networks who are particularly well placed to establish (or identify) minimum standards related to power quality (for example inverter volt-watt and volt-var modes) and to account for locational issues across low voltage networks.

3. How should DER standards be administered?

The proposed rule change suggests that AEMO’s DER standards could be given effect to via networks updating their connection agreements. Whilst the benefits of the proposed rule are outlined in detail, the costs (and practicalities) of a network led compliance regime, have not been understood or considered.

Whilst network connection agreements can be updated, it is not clear to what extent they would bind DER manufacturers and installers. As a connection agreement is between a network and customer, the DER conditions would need to be enforced against the customer.

Network led enforcement is particularly an issue in NSW due to the Accredited Service Provider (ASP) scheme. ASPs provide connection services in NSW direct to customers with oversight and monitoring from networks. However, ASPs may not necessarily be involved in DER device installation. Endeavour Energy does not have the necessary relationships or authority to practically monitor or enforce compliance by DER installers or manufacturers with an AEMO DER standard.

⁴ Ibid, p. 10

⁵ Ibid, p. 107

⁶ Ibid, p. 11

However, under the proposed rule change networks appear to be responsible for altering their connection agreements from the implementation date and monitoring compliance thereafter. There are several issues the rule change would need to address in order for this to be feasible, including:

- Identifying defects or non-compliance: It is unclear how NSW networks can ensure DER devices connected to their networks comply with the technical standards. This may require an audit regime against the connection application and/or rely on a notification of installation.
- Remedial actions: It is unclear what action a network could take if it identifies a DER defect or non-compliance with the technical standards. It would presumably involve issuing a defect notice with a follow up process with the potential to levy fines and/or disconnect the customer or device, noting the latter is located behind-the-meter.
- Authority: It may not be optimal for networks to set out varying compliance requirements and processes in their connection agreements. It is also unclear to what extent these requirements would be supported by the regulatory framework. Further, whilst a connection agreement is between the network and customer there may be a need to impose obligations on other participants in the Rules (for instance DER installation notification requirements on DER installers).

We do not consider the compliance framework associated with the rule as proposed is practical. We consider networks are ill-suited to be responsible for DER compliance with; connection agreements between the network and customer, DER devices being behind-the-meter and the absence of a relationship (at least in NSW) between the DER installer and network.

Whilst the ESB DER governance review will consider this issue in more detail, we note the Clean Energy Regulator (CER) and CEC have existing processes to certify products and installers of PV systems, inverters and batteries. The CER also undertakes extensive inspection of systems which claim Renewable Energy Certificates (RECs). However, we also accept that the CEC currently lacks appropriate authority to prevent non-compliance with AEMO based DER technical standards. In considering a compliance framework, it would be appropriate to involve jurisdictional safety regulators (e.g. NSW Fair Trading) who have better DER installation oversight and monitoring capabilities and an existing infringement framework.

Whilst we accept the need for AEMO to specify DER standards in the short-term to address emergent system security and frequency issues a rules-based solution requires these compliance issues to also be addressed. For this reason, we suggest further consideration be given to a short-term action plan that involves AEMO developing an Australian Technical Specification and potentially an AEMO-led fast-track adoption of priority technical standards with the Clean Energy Council (CEC) (like inverter disturbance ride through; AS 4777).

This approach is one of the three recommended options outlined by Sapere and CutlerMerz. An AEMO guideline/technical specification outside of the Rules can achieve the desired objectives in a timely fashion while allowing for the other processes outlined above to consult more broadly and consider more thoroughly the optimal DER standards and integration framework.

If you have any queries or wish to discuss our submission further please contact Patrick Duffy, Regulatory Strategy Manager at Endeavour Energy on (02) 9853 4375 or via email at patrick.duffy@endeavourenergy.com.au.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Rod Howard", with a large, stylized flourish at the end.

Rod Howard
Deputy Chief Executive Officer