

23 July 2020

Mr Alex Oeser  
Senior Adviser  
Australian Energy Market Commission  
GPO Box 2603  
Sydney NSW 200

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Dear Mr Oeser,

### Consultation on Technical Standards for Distributed Energy Resources – Reference ERC0301

Energy Networks Australia are pleased to have the opportunity to make this submission in response to the Australian Energy Market Commission's (AEMC) Consultation on Technical Standards for Distributed Energy Resources being proposed by the Australian Energy Market Operator (AEMO).

Energy Networks Australia is the peak industry body representing Australia's electricity transmission and distribution and gas distribution networks. Our members provide more than 16 million electricity and gas connections to almost every home and business across Australia.

We and our members are supportive of efforts to improve energy security and technology standards for Distributed Energy Resources (DER) in the National Electricity Market (NEM) and by extension the Wholesale Electricity Market (WEM).

### Key Messages

- » A distinction between *urgent* (short-term, local impact and reactionary) and *important* (long-term, wide impact and considered). We believe the issues in SA are *urgent* and being addressed now by other work (i.e. SA Smarter Homes reforms), but the problems of the rest of the NEM are *important* and require further consideration.
- » There are three related processes in train that negate the need for a short-term rule change now. The SA Smarter Homes (addressing urgent SA issues), ESB DER Governance work (long term governance arrangements) and the draft AS4777.2 are all out for consultation now.
- » Many DER standards directly impact the LV and HV voltages of distribution networks, and DNSPs (not AEMO) are principally responsible for managing this voltage with required levels.
- » The compliance framework suggested in the rule change will be ineffective without a corresponding enforcement regime, which the rule does not address. We also caution against placing an enforcement obligation on DNSPs that are not funded to deliver it.
- » The rule change proposal has a section on costs and benefits, but only benefits are listed. There is a noticeable lack of discussion around the costs of

implementing a short-term rule change. This is a significant concern that has the potential to cause significant disruption and increased costs to consumers that outweigh the benefits.

- » The rule change should not proceed as it gives AEMO wide-ranging scope to implement and change standards that affect all stakeholders without an equivalent governance structure or cost-benefit process.
- » If a rule must be made, then we propose that the rule include a clear end date (perhaps September 2021) as well as implementing more comprehensive governance measures upon AEMO.

## Problem definition and related work

We would like to make a distinction between two concepts that we will refer to throughout our submission, urgent (short-term, local impact and reactionary) and important (long-term, wide impact and considered).

Urgent issues are ones where the nature of the problem is such that there is no time to think and therefore, we must react to address or overcome temporary conditions for a smaller number of stakeholders. Urgent solutions to urgent problems should only address the symptoms and be limited in scope because there is not enough time to fully consider the appropriateness and long-term consequences of short-term decisions. In the current circumstances there are very few urgent issues, voltage ride-through settings for South Australia (SA) being one of them.

Important solutions are considered, long-lasting and address the fundamental problems for all stakeholders. This includes how we develop a long-term approach for DER standards governance that makes sense socially and economically for the entire NEM and nationally.

Solutions developed to address urgent issues can rarely be successfully and appropriately applied to important issues. Any solution must be proportionate to the problem that it is trying to address. Simple, local and small adjustment may deliver appropriate benefits without the need for the development of complex or extensive NEM-wide changes. It is therefore important to categorise whether the issues raised in the AEMO proposal are urgent or important.

It is the opinion of Energy Networks Australia that the issues highlighted by the AEMO proposal are urgent only for SA and are already being addressed by the SA Government and SA Power Networks (SAPN) through the Smarter Homes consultation<sup>1</sup>.

The issues of cybersecurity and interoperability as highlighted by AEMO are important. We should take the time fully explore the problems and ensure potential solutions are robust and cost-effective in the long-term. The approach to this rule change doesn't allow for considered consultation, but other processes are already underway.

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[http://www.energymining.sa.gov.au/energy\\_and\\_technical\\_regulation/energy\\_resources\\_and\\_supply/consultation\\_on\\_regulatory\\_changes\\_for\\_smarter\\_homes](http://www.energymining.sa.gov.au/energy_and_technical_regulation/energy_resources_and_supply/consultation_on_regulatory_changes_for_smarter_homes)

The ESB is undertaking consultation on a long-term governance framework for DER technical standards now<sup>2</sup> with a consultation paper published on 15 July 2020 and deadline for responses of 28 July 2020. The ESB is due to report in August, which means this work will supersede the AEMO rule change in the very near future. There is a very real danger of taking pre-emptive action that may be contrary to the NEO.

Furthermore, AS4777.2 is now out for public consultation which will close in March, 2021.

Therefore, we believe that this rule change is unnecessary.

Energy Networks Australia suggests that the rule change does not proceed and that any changes to standards and standard governance await the outcomes of the current ESB process. If a rule must be made then a clearly defined end date and defined limit to the scope of the additional powers given to AEMO, is needed.

## Assessment Framework

Energy Networks Australia generally agrees with the assessment framework posed in the consultation paper, but would also stress the need to more closely consider the impact on customers. We would like to see an in-depth exploration of the consequences of this rule change to device manufacturers and the flow-on impacts to consumers.

We should also assess how consumers will be impacted in a practical sense. For example, large solar installers generally have a pipeline of more than 3-4 months' work at any given time (including the stock to complete that work as it is purchased in wholesale quantities). In industry briefings AEMO has indicated that there are increased costs associated with their smart meter solution, but this does not take into account the additional rewiring work that might be required.

Some of the questions we would like the AEMC to consider include:

- How will national implementation of this rule affect this/other supply chains and consumers?
- What happens to inverters that were compliant when manufactured, but are now deemed non-compliant? It is likely that consumers will bear these costs.
- What are the implications for warranty and consumer law for devices that become non-compliant?
- Would the rule change have a temporary impact, or would it have cascading consequences that cause more problems than it solves? The cost of any additional complexity will be borne by consumers.
- How long will inverter owners/manufacturers have to comply and what impact will this have on the effectiveness of the proposed rule?

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<http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/ESB%20-%20Governance%20of%20DER%20Standards%20-%20Consultation%20Paper.pdf>

## Definition of DER

Based on consultation with our members, we believe that the proposed definition for DER is far too broad. AEMO and other industry stakeholders by now should have a reasonably clear idea of the devices they are targeting. We believe this list of devices should be clearly defined and if any further devices are identified, then there should be a mechanism within the rule change to add them.

We understand the reasoning behind the broader definition, ostensibly to capture as many devices as possible. However, since the intent of this rule change is meant to be temporary, capturing more niche devices seems unlikely to make a significant difference to system stability. AEMO should specify the devices that must be addressed urgently, as other devices can be addressed with a longer-term approach.

According to the AEMO proposal and industry briefings, their short-term objective is specifically to implement elements of the new AS4777.2 standard, with work on cybersecurity and interoperability for the future. For this reason, we suggest that if this rule is made, it be limited only to voltage ride-through of inverter-based systems and exclude other issues such as cybersecurity and interoperability. Furthermore, since the new AS4777.2 will be published by March 2021 this rule change will become defunct very shortly.

The ESB is already well advanced with establishing a long-term governance framework for DER. We feel that this is a more appropriate vehicle for the long-term, and to progress better discourse on topics such as cybersecurity and interoperability.

## Scope of rule change

Energy Networks Australia understands that the short-term (urgent) problems are primarily in SA and the lack of capability/compliance of voltage ride-through functionality in inverters, but these issues are not yet widespread in the rest of the NEM.

The SA Government is already taking significant steps to addressing these challenges within its jurisdiction, so it is unclear what benefit (short or long-term) to the rest of the NEM is expected from what is essentially a temporary rule change (noting ESBs Governance of DER standards work).

Local problems, should in the first instance, have local solutions and there needs to be a reassessment of the scope and limits of the rule change currently proposed.

This rule change would place the sole responsibility for industry DER standards on just one of eleven stakeholders who are deeply involved. This may lead to a narrow focus on the problems from AEMO's perspective, without consideration of the DNSP's requirement for voltage compliance or the concerns and preferences of customers. This could lead to the premature implementation of NEM-sized solutions for SA-sized problems, resulting in negative consequences for all consumers.

Energy Network Australia is not convinced of the justification for this wide consequence, short-lived and disproportionate rule change since local solutions are already being progressed in the areas where they are most needed.

If a rule is deemed to be required, then the scope of this rule should be confined only to the implementation of voltage ride-through capability for inverters.

## Compliance and enforcement

DNSPs have a regulated responsibility to maintain network voltage and safety requirements. This involves providing connections and specifying the standards that those connections must meet. The current AS4777 is already incorporated into all connection requirements. It is highly likely that the revised AS4777.2 will be a required connection standard once published and additional relevant standards will be incorporated in connection agreements as needed. However, adherence to the current AS4777 is not assured and is currently a challenge for DNSPs in managing voltage. This proposed rule change will not result in any practical or significant uplift of DER minimum performance without enforcement, especially in the short-term.

Enforcement of compliance is the only practical way of ensuring that the rules are being followed and the objectives of the rule are being achieved. We therefore question the benefits of “light-touch monitoring and compliance ...primarily for transparency”. Ensuring compliance is complex as it encompasses manufacturers of inverters, installers and consumers.

Enforcement of DER standards is not the responsibility of the DNSP and therefore not one they are currently funded to undertake. The rule should not place additional risks and operational burdens on DNSPs as this role has not been incorporated into business plans and revenue determinations.

One approach may be to task local technical regulators with compliance (an option proposed in SA), but this would be subject to jurisdictional factors and may not be appropriate in all circumstances.

Without effective compliance measures the stated intent of the proposed rule change will not be delivered.

## Concurrent consultation

Consultation is a critical issue that will help ensure the adoption of standards. Unfortunately, consultation has been poorly executed in the past for major consumer-related approaches. Experience suggests that concurrent consultation has not been genuine and did not adequately address the concerns of stakeholders or inform better implementation.

This is compounded by the pressures of time, which further limit the opportunity for effective and credible consultation and fail to take into account long-term consequences of ad-hoc decisions.

In the proposal, AEMO cites the implementation of the DER Register as a good example of concurrent consultation. However the experience of DNSPs and many other stakeholders suggests that this is not the case. Due to a lack of time, allocated resources were left stranded for extended periods as DNSPs waited for technical specifications that were incomplete or had unknown, underlying issues. This resulted in significant amounts of lost/rework effort and wasted resources borne by DNSPs as new problems were discovered along the way and resolved on an ad-hoc basis.

Even in cases where all stakeholders genuinely want a good outcome, ambitious delivery timeframes always risk negative outcomes for customers. For this rule

change to be effective at delivering the stated outcome of increased power system security, a practical and realistic timeframe for adoption is required.

## Duration of the initial standard

Given the current ESB work on standards governance, the resolutions to manage minimum demand in South Australia and the revised AS4777.2 draft being out for review, this rule should not be made on the basis that this other work will deliver more comprehensive and enduring positive results.

The current work of the ESB on DER Standards Governance should be allowed to complete before any rule change in this area is considered.

If it is determined that this rule change is essential to deliver the long-term interests of consumers, then we suggest that it would no longer be required after September 2021, which allows for the adoption of the revised AS4777.2 into DNSP connection agreements.

## Costs and benefits

In AEMO's rule change proposal we noted that in Section 10 (Costs and Benefits) only benefits were listed. It is impossible to be sure this rule will be in the long-term interests of consumers if a robust analysis of costs is missing. Costs should be closely examined as all costs borne by AEMO and DNSPs will flow through to all consumers, who may or may not have DER.

Rigorous examination of the costs (for compliance, consultation and governance) should be balanced against a clear and demonstrated set of customer benefits to justify this rule change proceeding.

We thank the Commission for the opportunity to make a submission to this important work and look forward to working with them to ensure the energy future of Australia. Should you have any queries on this response please feel free to contact Dor Son Tan, Head of Distribution at [dstan@energynetworks.com.au](mailto:dstan@energynetworks.com.au).

Yours sincerely,



Andrew Dillon  
Chief Executive Officer