



Clean Energy Council submission to the Energy Queensland draft Standard for Micro-Embedded and Low Voltage Connections

Executive Summary

The Clean Energy Council (CEC) welcomes the opportunity to provide feedback to the Energy Queensland draft standards for micro embedded generation (EG) and low voltage (LV) connections. The CEC is the peak body for the clean energy industry in Australia. We represent and work with hundreds of leading businesses operating in solar, wind, hydro, bioenergy, marine and geothermal energy, energy storage and energy efficiency along with more than 6,200 solar installers. We are committed to accelerating the transformation of Australia's energy system to one that is smarter and cleaner.

The CEC has supported and will continue to support changes to grid connection rules that improve the customer value proposition, safety and/or the DER hosting capacity of the distribution network. The CEC has for several years supported ENA's intention to establish National Distributed Energy Resources (DER) Grid Connection Guidelines. We understand that the Grid Connection Guidelines are not proceeding due to the difficulties encountered with reaching agreement among distribution network service providers (DNSPs) on a common set of rules. This is a very disappointing development.

The CEC supports grid connection rules that:

- Improve the customer value proposition, including the work underway to allow for increased use and market participation from DER assets,
- Support improved product capability and service quality,
- Improve safety, and
- Improve the DER hosting capacity of the distribution network.

We have advocated the following principles for DNSPs developing or reviewing their grid connection rules:

- Recognise the value of a formal consultation process,
- Transparency and accessibility of grid connection rules should be the highest priority,
- Allow flexibility for technology providers to solve for required outcomes, rather than simply comply with prescriptive requirements
- Draw upon Australian and international standards wherever possible,
- Avoid mandating capabilities that cannot be tested against a standard, and
- The aim for more consistency should not stifle innovation.

In addition to these broad principles, the CEC strongly supports the following approaches for grid connection rules:

- Static export limitations should be avoided,
- Move toward dynamic export limitations,
- The inverter capacity of a battery energy storage system (BESS) or battery system should be excluded from the calculation applied to inverter limitations per phase, and
- Avoid mandating capabilities that cannot be tested against a standard

These approaches are outlined in more detail in this submission.

We would be very happy to discuss these issues in further detail with Energy Queensland. We look forward to contributing further to this important area for policy development.

1. Static export limitations should be avoided

The report of the 2019 Economic Regulatory Framework Review by the Australian Energy Market Commission (AEMC) makes the following observation¹:

The Commission maintains that static export limits on export are a blunt approach to addressing the impact of DER on the network. Restricting export is unlikely to be efficient or meet consumers' expectations. Where this restriction applies only to consumers who are connecting to the network at a later time, this raises issues of equity and is likely to be inconsistent with the 'open access' nature of the regulatory regime. Blunt approach

The CEC's supports this view.

We urge Energy Queensland to adopt dynamic export limits instead of the "blunt approach" of static export limits.

2. Move toward dynamic export limitations

Moves toward dynamic management of DERs will enable improvement of the customer value proposition, while assisting with grid management and improving hosting capacity.

The CEC supports the work being undertaken by the Australian Energy Market Operator (AEMO), SA Power Networks and others to move toward the use of dynamic export limitation and the adoption of international standards such as IEEE 2030.5. We strongly urge Energy Queensland to work closely with SA Power Networks to replicate the work being undertaken to enable dynamic export limitation.

3. Inverter limitations per phase

The inverter capacity of a battery energy storage system (BESS) or battery system should be excluded from the calculation applied to inverter limitations per phase. The Energy Networks Australia (ENA) *National Distributed Energy Resources Grid Connection Guidelines* released in March 2019 recommended that the capacity of a BESS inverter should not be included in the calculation for the maximum allowable capacity per phase. We urge Energy Queensland to clarify that this is the approach that will be taken for the purposes of calculating the capacity of single-phase basic micro EG connections.

¹ AEMC, Integrating distributed energy resources for the grid of the future, Economic regulatory framework review, 26 September 2019

4. Avoid mandating capabilities that cannot be tested against a standard

The CEC maintains and publishes records of the capability of solar products. We also manage an independent program that tests products for the capabilities claimed by the manufacturer. We encourage regulators, policy makers and DNSPs to draw upon widely adopted Australian and international standards, wherever possible. It is problematic when DNSPs or policy makers specify equipment capabilities for which there is no recognised Australian or international standard against which the capability can be tested. The CEC database on the capabilities of solar equipment is based on standards against which the capabilities can be tested. When capabilities are required and there is no standard against which they can be independently tested, demonstrating compliance becomes unnecessarily costly and complicated.

The CEC is concerned that the proposal to mandate static export limitations cannot be tested against a widely used Australian or international standard. This will add an unnecessary administrative burden to the work of DNSPs, manufacturers of solar products, solar installers and organisations such as the CEC.

If Energy Queensland proposes to mandate export limitations for future connections it should explain how product manufacturers will be expected to demonstrate compliance with this requirement. The CEC would also appreciate advice on which standards to use to test claims of compliance with the proposed export limitation provisions.