



## **Clean Energy Council submission to the AS/NZS 4777.2:2015 Proposed Changes**

The Clean Energy Council (CEC) welcomes the opportunity to provide further feedback on the Proposed Changes to AS/NZS 4777.2:2015, as proposed by the Australian Energy Market Operator (AEMO) to Standards Australia.

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. We are committed to accelerating the transformation of Australia's energy system to one that is smarter and cleaner.

The CEC has previously provided feedback to AEMO and members of the Standards Australia committee that is responsible for AS/NZS 4777.2. A copy of the CEC submission (dated 10 May 2019) is attached.

Since lodgement of the submission on 10 May 2019, CEC members have:

- Met on 21 May 2019 to discuss and endorse CEC's position and approach,
- Conducted a workshop with AEMO on 30 May 2019 to understand their approach and to share suggestions on how to improve AS 4777.2,
- Conducted a workshop with Energy Networks Australia (ENA) on 11 June 2019 to understand their approach and to share suggestions on how to improve AS 4777.2, and
- Met again on 13 June 2019 to consolidate views and agree on next steps.

Based on the discussions over the last month CEC wishes to provide additional feedback on the AS/NZS 4777.2 Proposed Changes, outlined in this submission. The additional feedback relates to:

- Proposed default settings (also known as 'country codes'),
- Incorporating the proposed revisions to AS 4755.2,
- Presentation of power factor data, and
- Real and reactive power priority.

We would be very pleased to discuss these matters with you or to arrange a workshop with CEC members where the issues could be explored in depth.

We understand that Standards Australia committees require submission to be provided in a standard format and we will follow up with a reformatted version of CEC's submission.

## **1. Default settings**

The CEC would prefer one default setting for all Australian distribution networks. Too much variation between networks is likely to contribute to problems with non-compliant installations.

Islanded networks need different inverter settings, compared to what is required on larger grids. The standard frequency and voltage windows are not optimal on islanded grids.

The CEC proposes three default settings under the revised AS/NZS AS 4777.2, comprising one setting for each of the following situations:

- Australian distribution networks,
- New Zealand distribution networks, and
- islanded networks.

## **2. AS 4755.2**

Most distribution network services providers (DNSPs) in Australia (with the exception of Horizon Power) have only utilised DRM0. Revisions to AS 4755.2 have recently been published for comment.

The scope for revisions to AS 4777.2 should be broad enough to enable improvements to AS 4755.2 to be incorporated into the revised AS 4777.2

## **3. Presentation of power factor data**

Presentation of power factor data should be consistent with international standards and should clarify whether the Volt-VAr response is in relation to the power output or the capacity of the inverter.

## **4. Real and reactive power priority**

Reactive compensation (Q priority) maintains reactive power output while curtailing real power output. P priority maintains real power output at the expense of reactive power.

AS 4777.2:2015 implies reactive power priority, but this is not clearly specified. It should be clarified.