



Clean Energy Council submission to the Draft Report of the IPART Review of the Distribution Reliability Standards

The Clean Energy Council (CEC) welcomes the opportunity to provide feedback on the Draft Report of the review by the Independent Pricing and Regulatory Tribunal (IPART) of electricity distribution reliability standards in New South Wales (NSW).

The Clean Energy Council is the peak body for the clean energy industry in Australia. We represent and work with Australia's leading renewable energy and energy storage businesses, as well as rooftop solar installers, to further the development of clean energy in Australia. We are committed to accelerating the transformation of Australia's energy system to one that is smarter and cleaner.

The CEC welcomes IPART's recommendation of a new distributed energy resources (DER) reporting standard that would require distribution network service providers (DNSPs) to disclose information relevant to the quality of service provided to DER customers.

Victoria has set the 'gold standard' for regulation of voltage management, and we encourage the NSW Government to aspire to a comparable level of excellence. However, we understand that IPART does not have complete regulatory oversight of voltage management in NSW and that this might be a barrier to improving regulation. Even though the Electricity Supply Act 1995 stipulates that "...regulations may be made for or with respect to... standards for the voltages to be maintained at the terminals of consumers of electricity", no regulations have yet been made. We understand that the regulator is currently the Department of Planning, Industry and Environment and that voltage is regulated through the NSW Service Installation Rules. This is not a best practice regulatory approach. Regulations should be made to give IPART the powers needed to regulate voltage management by NSW DNSPs.

Moreover, we acknowledge that ESC's regulatory framework is enabled by the Victorian DNSPs' access to voltage data from smart meters whereas in NSW, where *Power of Choice* reforms were adopted, access to voltage data by networks is much more challenging. The NSW DNSPs do not currently have a right to metering data, and this was recognised by the Energy Security Board (ESB) in its *Data Strategy Consultation Paper*, which recommended that DNSPs be given "minimum meter data access rights". We recommend that IPART supports moves to enable access by NSW DNSPs to smart meter voltage data (eg. in submissions it might make to the ESB or the Australian Energy Market Commission (AEMC)) as a step toward improving regulation of voltage management by NSW DNSPs.

The CEC welcomes IPART's recommendation that customers of distributor-led stand-alone power systems (SAPS) should receive the same customer protections as other residential and business customers of distributors. We welcome IPART's proposal to apply individual feeder standards to SAPS and application of guaranteed service level (GSL) payments for SAPS customers on a deemed standard contract. However, there is more to customer protection than reliability standards and GSL payments. We also urge IPART to support universal access to dispute resolution processes to SAPS customers.

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

DER Reporting Standards

The CEC agrees with IPART's observation that "the current regulatory framework does not create an incentive for distributors to efficiently invest in DER hosting capacity to allow greater DER exports, and this is having negative impacts on customers".

We welcome IPART's recommendation of a new DER reporting standard that would require DNSPs to disclose information relevant to the quality of service provided to DER customers. However, we question whether this is sufficient to fulfil IPART's responsibility for regulation of voltage management in NSW.

We recommend that as part of setting these new reporting standards, IPART uses consistent reporting definitions and terminology that is common in the solar / inverter / DER industry. The proposed definitions do not do this. For example, the definition of DER generation captures the largest registered generators connected to distribution networks at the 33 kV and 66 kV level, all the way down to the low voltage (LV) network. Some of the proposed definitions also need clarification. For example, what is the definition of 'static limit'? Is it the total Inverter Energy System rated capacity per phase? Is "partial static limit" the same? Does this refer to an export limit on a site?

The CEC welcomes the growing recognition of the importance of voltage management on low voltage (LV) networks. Voltage management is a key component of the provision of 'export services' and 'hosting capacity' and to this end, access to voltage data by DNSPs will assist in voltage management and IPART's ability to regulate.

The AEMC review of metering services, which is currently under way, should consider metering data access rights for networks and we urge IPART to support this approach in its submission to the AEMC review.

Even though the Electricity Supply Act 1995 stipulates (s191 (1A)(d)) that "...regulations may be made for or with respect to... standards for the voltages to be maintained at the terminals of consumers of electricity", we understand that no regulations have yet been made, leaving IPART without the Head of Power it would need to do this job. We understand that the regulator is currently the Department of Planning, Industry and Environment and that voltage is regulated through the NSW Service Installation Rules.

A report commissioned by the ESBⁱ and undertaken by University of New South Walesⁱⁱ, found that "even in the absence of solar PV, there is a significant level of high voltage across all DNSPs in all NEM states" and "many sites experience higher voltages during the night when solar PV is not operational"ⁱⁱⁱ. The ESB notes that this "appears to point to a material level of technical non-compliance, but this may depend on how the data is viewed and how the respective standards are applied in each jurisdiction". The report also noted that "periods of higher maximum voltage of the most impacted consumers are associated with daylight hours, and particularly the peak PV hours (generally 10am-4pm)". Figures 1 and 2 (below) are taken from the UNSW report and illustrate the extent of the voltage management issues in NSW.

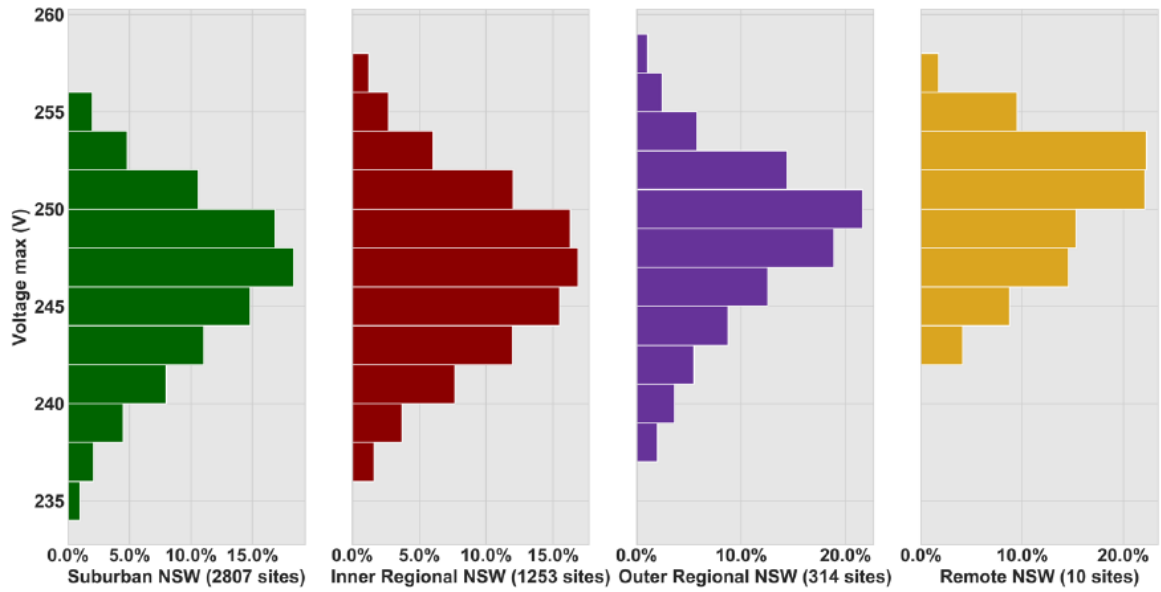


Figure 1 – Distribution of maximum voltages across NSW regions

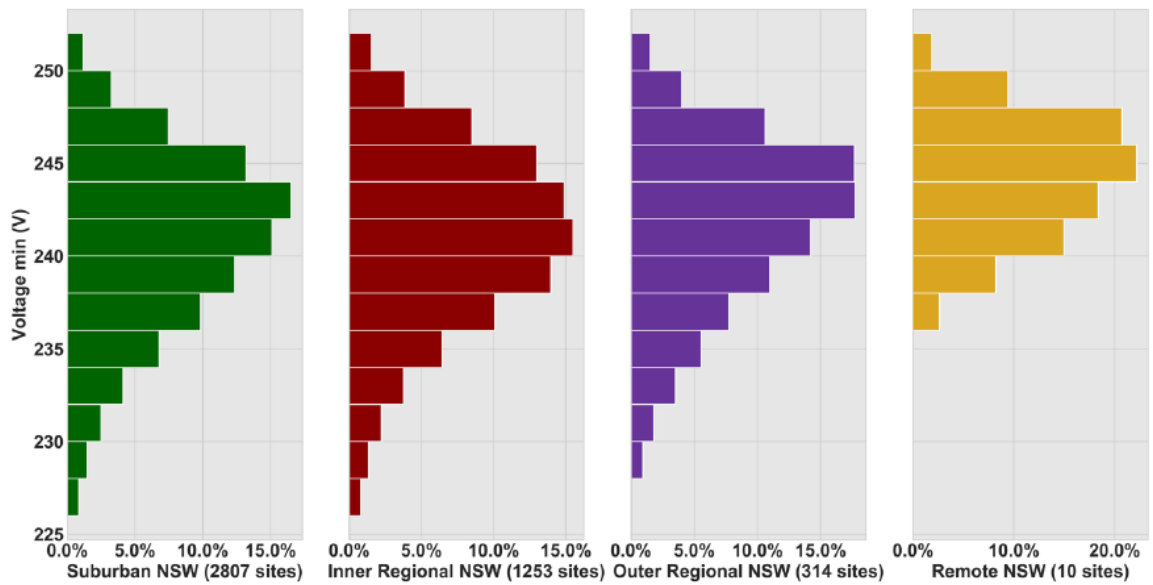


Figure 2 – Distribution of minimum voltages across NSW regions

Stand-Alone Power Systems

The CEC welcomes IPART's recommendation that customers of distributor-led SAPS should receive the same customer protections as other residential and business customers of distributors and specifically the recommendations that:

- The individual feeder standards apply to microgrids with high voltage distribution lines,
- The individual feeder standards with default length of 200km apply for all other SAPS, and
- The GSLs and GSL payments apply to all SAPS customers on a deemed standard connection contract.

As noted in the Draft Report, it is unclear whether SAPS customers will, in future, be covered by a deemed contract or if they will be expected to enter negotiated contracts. Given that DNSPs will have the option of moving customers to a SAPS supply without seeking their consent, it would seem unreasonable to require those customers to enter negotiated contracts. All customers moved onto SAPS supply should, at least, have the option of a deemed contract, with minimum standards governed by regulators. However, if a SAPS customer such as a business with particular electricity needs chooses to enter a negotiated contract with their distributor and negotiate around price and reliability then it would be reasonable to allow guaranteed service levels (and therefore the compensation payments) to be part of the negotiated agreement. What is most important in this respect is that there should be an option of a deemed contract with minimum standards determined by regulators for all customers who are moved by the DNSP to a distributor-led SAPS supply.

We also urge IPART to support universal access to dispute resolution processes to SAPS customers. The Australian Energy Market Commission (AEMC) has observed that in NSW the National Energy Retail Law (NERL) and National Energy Retail Regulations (NERR) only apply to customers supplied via the interconnected national electricity system. Customers in NSW who move off-grid would lose their energy-specific consumer protections under the National Energy Customer Framework (NECF). We urge IPART to recommend that NSW regulations and legislation be amended to ensure that NSW customers supplied via a SAPS do not lose their energy-specific consumer protections under the NECF. We urge the NSW Government to consider an approach like that recently recommended by the Essential Services Commission of South Australia (ESCoSA). The Draft Inquiry Report for the ESCoSA Small-scale Networks Inquiry recommended that the Energy and Water Ombudsman SA (EWOSA) should be the independent dispute resolution body where a customer's complaint is not resolved by the microgrid licensee. This approach is consistent with the recommendations of the AEMC review of regulatory frameworks for stand-alone power systems. In NSW, the Energy and Water Ombudsman NSW (EWON) should be given a similar role.

ⁱ Energy Security Board, May 2020, *ESB cover note on the UNSW Voltage Report*, available [here](#)

ⁱⁱ Bruce, A., Heslop, S., Heywood, P., MacGill, I., Passey, R., Stringer, N. and Yidiz, B., May 2020, *Voltage Analysis of the LV Distribution Network in the Australian National Electricity Market*, available [here](#)

ⁱⁱⁱ NSW DNSPs have indicated that although the UNSW report is largely factual, it needs to be appropriately contextualised given the basis of the measurements in the report and noting the sensitivities about voltage management. NSW DNSPs have recommended that in future the UNSW research team could consider:

- Voltage standards have a set calculation methodology of 10-minute averages measured in a certain way at the Point of Connection to the network. The measurements UNSW collected are not necessarily collected in the exact way.
- Location of measurement device is important, in the study UNSW mentioned that it was mostly at the meter board, but even then, this is not the point of collection as the meter board and meter terminals for that matter is not necessarily the point of connection. There are often private wires between the point of connection to the network (customer pole) to the metering point or voltage measurement point. This leads to a potential of 1 to 2% voltage drop or rise, particularly at times of high customer load or high export to the grid. This means that in some cases the data may be close to the point of connection but in others it is not.
- The design and upgrade to the private wires and potentially also the service mains that connect from connection point to point of common coupling in some cases should be upgraded for larger micro-generators and if not designed well may exacerbate the voltage rise or drop issue. Consideration of phases and phase balancing that the solar is connected to may also need to be considered.