



Anna Collyer  
Chair, Australian Energy Market Commission  
GPO Box 2603  
Sydney NSW 2000

Submitted electronically via [aemc.gov.au](http://aemc.gov.au)

29 May 2023

Dear Ms Collyer

### **Review into Consumer Energy Resources Technical Standards (EMO0045)**

The Clean Energy Council (CEC) welcomes the opportunity to provide feedback to the Australian Energy Market Commission (the Commission) Draft Report: *Review into Consumer Energy Resources Technical Standards*.

The CEC 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 a range of stakeholders in the National Electricity Market (NEM), 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 is pleased that the Commission is undertaking a review of the technical standards for consumer energy resources (CER) and outlining recommendations (for the review of industry stakeholders) that aim at improving compliance of CER devices. Our response to the draft report is based on feedback from our members and are aimed at ensuring the proposed recommendations mitigate any unintended and negative consequences.

The CEC supports the Commission's recognition that the regulation of CER technical standards requires reform. A robust governance framework with clear roles and responsibilities for market participants will provide consumers with confidence when deciding to invest in CER. CER governance needs to address all standards associated with CER installation, safety, communication, functionality and security. Importantly, any proposed arrangement must be national in application.

The 12 recommendations for immediate action aim to improve compliance of CER devices with a specific CER standard, mainly 4777.2:2020. While this is important and the CEC provides further details on these proposed recommendations later in this submission, we also believe there is an opportunity for the AEMC to take the lead on the future design of governance arrangements for all CER technical standards. To this end, the CEC supports recommendation 13, which proposes that jurisdictions, with the AEMC, AEMO and AER, progress work to consider the options and viability of reforming the national regulation of CER technical standards.

Currently there is no coordinated or central approach to developing new CER technical requirements and industry has little engagement in the development of CER technical requirements. The current status of CER technical standards regulation is not satisfactory and is neither serving the industry nor consumers. It is clear that a national technical regulatory framework for CER is needed.

An improved national governance structure will help to ensure ongoing compliance issues raised by the AEMC are prevented or managed better in the future. We encourage the AEMC to further expand on recommendation 13 in the final report by setting out clear principles to drive the development of a governance framework for CER technical requirements. Principles should promote a structure that supports industry to innovate and unlock CER revenue streams for consumers, acknowledge consumers are the investors and owners of these devices, and therefore should have control over the functionality of the devices as well as being rewarded for consenting that their devices provide grid support services.

Finally, while the draft report outlines that: 'The lifecycle for CER devices can be split into three stages: manufacture and supply, installation, and ongoing operations', a critical stage of the lifecycle for CER devices is in fact *end of life*. While noting the draft report is focused on compliance in relation to the functioning of CER devices, the CEC implores the AEMC to recognise and ensure inclusion of how to manage the impending deluge of CER devices/systems coming to their end of life in discussions moving forward.

Thank you for the opportunity to respond, we would be very happy to discuss these issues in further detail with AEMC and to facilitate engagement with CEC members as part of the Review. If you would like to discuss any of the issues raised in this submission, please contact Emily Perrin on [eperrin@cleanenergycouncil.org.au](mailto:eperrin@cleanenergycouncil.org.au).

We look forward to contributing further to this important area.

Yours Sincerely

A handwritten signature in black ink that reads "Perrin". The signature is written in a cursive, flowing style.

Emily Perrin  
Acting Senior Policy Officer Distributed Energy  
Clean Energy Council

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## Draft Recommendations

### Stage one: simplify devices at manufacture and supply

#### » Draft recommendation 1: OEMs remove historical device settings

The CEC supports this recommendation in its pursuit to prevent confusion for installers and streamline installation of CER devices. We note that industry has already initiated action items to address this issue. A proposal has been submitted to address this issue for AS/NZS 4777.2:2020 amendment, noting the amendment drafting process is still in its initial stages. Further, various OEMs have voluntarily accepted the need to revise their product menus to remove legacy grid codes or have already implemented the removal of legacy grid codes.

It should be noted that New Zealand and Pacific Islands (such as Fiji and Vanuatu) still allow for installations that are compliant with historical versions of AS/NZS 4777.2. Historical versions of AS/NZS 4777.2 are also necessary for warranty replacement. As such, any push for voluntary updates should be managed in a way to not disadvantage either customer warranties, or the uptake of solar in Pacific Island nations. A way in which to achieve this may be to require previous versions of AS/NZS 4777.2 at the very end of the selectable options, i.e., putting 4777.2:2005/2015 at the bottom of the dropdown list whilst 4777.2:2020 is the first available option.

The CEC and its members ask that the Commission outline in its final report how progress of implementation will be reported and what has also been achieved by industry voluntarily.

#### » Draft recommendation 2: OEMs make 'Region A' the default setting

The CEC supports the recommendation. We believe this recommendation will assist with easing the burden and possible confusion for installers and should assist with streamlining the installation of CER devices.

CEC members have raised complexities with a requirement for products to be pre-set to Region A, an Australian specific setting. This is because areas outside the NEM (such as Western Australia), remote areas of Australia, Tasmania and anywhere outside of Australia, do not use Region A. If Region A was made the default setting for Australian products, it could create the need for an Australia specific product range being manufactured, that would not only not accommodate the whole of Australia but also other countries.

To avoid this problem, when an inverter is being set, within the commissioning process, the 'Region A' code should be selected to become the first option for an Australian system. Many OEMs have already implemented this as per the requirements of DNSPs.

#### » Draft recommendation 3: OEMs update devices remotely to support compliance

The CEC supports this recommendation, however, there are various factors that will impact the successful implementation.

AEMO has noted that many OEMs have the ability to remotely access the majority of their devices in the field and can change technical settings and control the inverter,<sup>1</sup> however, some OEMs have raised concerns with their authority to make changes on behalf of the customer. Victorian DNSPs have updated their Model Standing Offers (MSOs) to require customers to

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<sup>1</sup> AEMO (2023), Technical Report: *Compliance of Distributed Energy Resources with Technical Settings*, available [here](#).

provide explicit informed consent for the DNSP to make changes to inverter settings (via the OEM, where remote communication is available).

To ensure that this recommendation is achieved, national consistency is necessary. As such, the CEC urge the Commission to include in its Final Report that all DNSPs need to update their MSOs to allow for OEMs to change inverter settings to the regions' required setting.

CEC member OEMs note that many OEMs have begun to implement a process to have all non-compliant inverters reset to the correct regional setting.

In order for this to occur, OEMs need to retain remote access to the installed product base. Some instances, when a third party monitoring system or Home Energy Management Systems (HEMS) device is installed alongside an inverter system, the remote communication connection is diverted to the third party device which ultimately locks out the OEM's access to the inverter thereby blocking any change to settings the OEM could make to implement this recommendation.

Finally, remote updates also need to consider broader cybersecurity, consumer data access and internet connectivity issues.

## **Stage two: promote compliant installation**

### **» Draft recommendation 4: Make CER technical standards mandatory for New Energy Tech Consumer Code (NETCC) Approved Sellers**

CEC does not believe this recommendation is necessary nor will it improve compliance. CER Technical Standards already exist in other regulatory frameworks.

The New Energy Tech Consumer Code (NETCC) is a voluntary code that applies to businesses selling CER systems and requires these sellers to meet consumer protection standards. The CEC has other programs, namely Product Listing and Installer Accreditation, that set mandatory technical standards.

Sellers of CER systems employ/contract installers to undertake the installation and therefore the installers are responsible for compliance with technical standards at point of installation. Accredited Installers are required to install modules, inverters and batteries that are contained in the CEC Approved Product List. As such, a focus should be placed on the programs directly relevant to technical standards to ensure they capture technical standards as part of their educative/, information or guidance processes.

Further, the application of all state electrical wiring rules also requires compliance with AS3000 which includes reference to standards, such as AS/NZS4777.2:2020. These standards require any solar or battery inverter installed to be compliant with relevant CER technical standards.

The CEC recommends that new CER technical standards should be embedded into the existing processes that relate directly to the installation of these devices. As such, this requires coordination between DNSPs and the different regions on creating national consistency for rules and regulations, and putting more resources into the training, education and updating of installers.



» **Draft recommendation 5: Mandate CER technical standards training for Small-scale Renewable Energy Scheme (SRES) accreditation**

The CEC supports this recommendation noting that it is already being implemented. However, we note the limitations that exist, mainly:

- 1) The SRES training and accreditation requirements are limited to CER that is captured within the SRES scheme – specifically solar panels and inverters. The regulatory authority of the Clean Energy Regulator does not allow for further extension to battery storage or any new forms of CER unless they are captured under the SRES scheme. This naturally creates a very narrow remit for installer training.
- 2) The current SRES remit also does not include training on the connection or set-up of devices for technical requirements such as flexible exports – which are based in communications, and not linked to the creation of STCs.
- 3) The maturity of the SRES may hinder the drive for improved compliance. Given the RET scheme is coming to its conclusion in 2030, and Small-scale technology certificates (STCs) are reducing in value every year, using the SRES as a means of motivating installers to comply with CER technical standards is losing its motivation given the reducing monetary value associated with the scheme.

There are potential other solutions for addressing these issues within the existing regulatory framework, such as the consequences of the proposed *Cheaper Home Batteries Bill* being passed, which could capture the inclusion of battery storage in the SRES. This would partially

address the current limitations of the SRES. Furthermore, extending the RET and SRES would have a significant impact on motivating installer compliance.

We urge the Commission's Final Report also outline the Clean Energy Regulator's implementation plans and how progress will be reported.

» **Draft recommendation 6: Funded training on CER technical standards for installers**

The CEC supports this recommendation. Given the speed and frequency of additional or new technical requirements for installers mandatory funded annual training should be implemented to ensure an ongoing minimum threshold of knowledge.

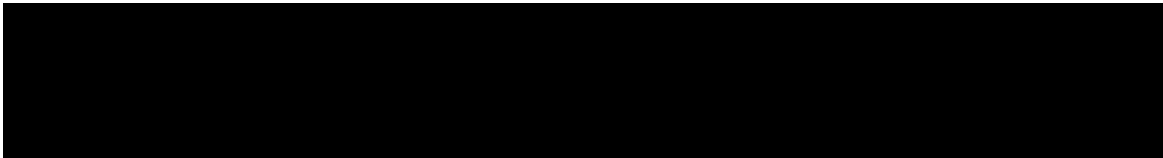
Since 2007 the CEC has been supporting installers, designers and retailers with expert technical advice and resources to help them comply with standards and regulations in small-scale renewables. Our experts have worked with Standards Australia, governments and product manufacturers to help shape and refine these standards and regulations.

Currently through the CEC accreditation program installers and designers can access resources and tools that go beyond simple accreditation. Tools like our advice documents with deep dives on key standards and discounts on insurance. Given the CEC did not tender a submission to continue as the Installer Accrediting body, the CEC has been finalising work on a subscription that will offer the wider industry (such as apprentices, inspectors and trainers) access to our technical experts to help raise standards across the industry.<sup>2</sup>

» **Draft recommendation 7: Guidance on CER technical standards for installers**

The CEC introduced an elective online training course on CER technical standards (specifically, inverter settings and AS/NZS 4777.2:2020) called "Applying AS/NZS 4777.2:2020" on 7 June 2020. It was renewed 12 months later and is current until 7 June 2023. The course content is available via the CEC 'Learning Hub'. It is currently available free of charge to accredited installers.

The Clean Energy Regulator is currently undertaking a competitive tender for provision of installer accreditation services. The CEC has stated publicly that it has not lodged a tender. The role of providing freely available guidance material for installers will, presumably, become the responsibility of the successful tenderer(s) and be included in contracts between the Clean Energy Regulator and its new service provider(s). The CEC will however be continuing its role in supporting installers through education, training and support services.



A major gap that exists in the governance of CER technical standards is the lack of an adjudicating body for Australian Standards. No agency is tasked with interpreting Technical Standards set by Standards Australia and ensuring that there is consistent interpretation or can provide guidance to installer or OEMs who have questions on "grey" areas. As part of the broader roles and responsibilities review, we would like to see an agency given authority to

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<sup>2</sup> See more information here: [Introducing my CEC | Clean Energy Council](#)

provide this role. Having a national body to oversee CER technical standards is likely the best approach as is explored further under recommendation 13.



» **Draft recommendation 8: Introduce commissioning sheets for CER devices**

The CEC supports this recommendation in principle, but we note that the practicality of it requires further consideration and development.

This recommendation suggests a way in which installers can confirm they are undertaking the installations correctly and it will also support monitoring of non-compliance. However, the following factors must be considered in the realisation of this recommendation:

- There will need to be different commissioning sheets to accommodate for the specific requirements of different DNSPs. Mandating and successfully implementing the completion of such a sheet will be necessary to ensure it is not a wasted voluntary requirement that installers fail to utilise.
- Increasing administrative burden on installers must also be avoided, and therefore the commissioning sheets must be practical, straightforward and useful.

At present, OEMs already have different commissioning processes. The contents of the commissioning sheets will require collaboration with installers, OEMs and DNSPs to ascertain the required information and to achieve a functional document.

- Conflict could also arise if the guidance contained in the commissioning sheet provided by the DNSP does not align with the information contained within the OEMs instruction manual. AS/NZS 3000 dictates that the installation shall conform to the instructions contained within the manufacturers manual/s. Under the current regulation framework this requirement would therefore override the DNSPs documentation.

In addition to product specific installation manuals, there is already general installer training material as referenced above in respect of accreditation programs. Many OEMs also run training programs and their own accreditation modules specifically on new product standards when released. Therefore, implementing the commissioning sheet must avoid creating confusion for installers or being so high level that it does not provide any additional benefits.

**Stage three: support ongoing compliance**

» **Draft recommendation 9: Accelerated smart meter deployment with improved data access**

The CEC supports this recommendation. More timely access to basic power quality data would be useful for DNSPs in the investigation of specific issues related to safety (neutral fault detection) and allow analysis to understand and track network performance and inverter compliance. Having regular access to this data will enable DNSPs to react to these faults sooner.

» **Draft recommendation 10: Access to OEM compliance data**

The CEC supports this recommendation.

In its Final Report for the review, the Commission should clarify the governance framework to assist DNSPs with their compliance and enforcement roles. As AEMO has noted, 'Some DNSPs are already implementing significant programs or work to monitor and actively improve compliance in their networks. However various DNSPs have raised concerns as, whilst they recognise this issue as significant, they may not have sufficiently comprehensive governance frameworks to support and efficiently coordinate the required rectification actions to achieve and maintain high rates of compliance.'<sup>3</sup> The CEC recommends the adoption of a national approach to compliance data by DNSPs and preferably through a common remote/digital verification communication process. This is something that can be further developed through a centralised national technical standards governance framework.

As previously mentioned with regards to draft recommendation 3, there should be a requirement that OEMs have remote access to the installed product base to address the issue created when remote communication connection is diverted to third party devices locking out the OEMs ability to access the inverter and make any change to settings as required to implement compliance requirements or access and analyse compliance data.

» **Draft recommendation 11: Defined process for contacting consumers**

The CEC supports this recommendation noting that the onus should not be on the customer to rectify the defect.

Ideally where compliance breaches are detected, they should be able to be rectified by the OEM remotely rather than by the customer. However, we note this is another area a national and central governance body for technical standards can take an active role to clearly outline the role and responsibilities for notifying consumers and correcting defects.

» **Draft recommendation 12: Subsidized re-configuration of non-compliant devices.**

The CEC supports this recommendation but notes the complexity associated with requiring each jurisdiction to agree to their own state based program.

As previously stated, many OEMs have already implemented a process to have non-compliant installations re-set to the correct grid code settings. For some, this was a manual remote process that has been rolled out over tens of thousands of systems at the cost of the OEM. Hence, any jurisdictional support to 'fill the gap' for remaining non-complaint systems would be a positive initiative and would ensure the costs of existing non-compliance is more fairly shared.

Some CEC members have suggested exploring further what this recommendation will look like and whether there is a possibility to introduce a moratorium on subsidising existing non-compliant devices yet to be rectified, to avoid any unintended consequences of increasing risks of non-compliance for new installations. This approach also potentially limits government funding costs.

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<sup>3</sup> AEMO (2023), Technical Report: *Compliance of Distributed Energy Resources with Technical Settings*, available [here](#).



» **Draft recommendation 13: Progress reform of national regulation**

The CEC welcomes the Commission's recommendation to progress regulatory reform, however, the CEC encourages the Commission to take immediate action in commencing such progress.

We encourage the AEMC to further expand on recommendation 13 in the final report by setting out clear principles to drive the development of a governance framework for CER technical requirements. Principles should promote a structure that supports industry to innovate and unlock CER revenue streams for consumers, acknowledge consumers are the investors and owners of these devices, and therefore should have control over the functionality of the devices as well as being rewarded for consenting that their devices provide grid support services.

As is outlined above, a major gap that exists in the governance of CER technical standards is the lack of an adjudicating body for Australian Standards. The establishment of a national body to oversee CER technical standards should be included in the reform of the national regulation of CER technical standards. We recommend a National Technical Standards Body to have a coordinating and facilitation role, rather than a compliance role to:

- Maintain watching brief on relevant standards internationally, liaising with Standards Australia
- Strategic oversight of standards likely to be required, development and revisions (develop a roadmap)
- Standard revisions would progress through routine Standards Australia process, with handbooks as more responsive guides to technical requirements
- Ensure nationally consistent application and interpretation of standards and key technical approaches (e.g. flexible exports/imports, minimum demand management)
- Facilitate national testing days to support interoperability

Establishment of a new national CER technical standards body would be complex and take time (years) given that it would require federal endorsement as well as by each jurisdiction (perhaps via the National Energy Transition Partnership) to ensure that state regulators and national bodies could be coordinated and funded appropriately. A proposed interim approach would see the Clean Energy Regulator hold compliance data, which would be provided by the DNSP and entities managing electrical inspections. The DNSP would require the installer to provide evidence (an image of settings) prior to connection being completed and this evidence would be provided to the Clean Energy Regulator to support issue of STCs.