Government
of South Australia

Department for
Energy and Mining

Our Ref: 2023D036340

Ms Anna Collyer
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Anna

Dear Ms Collyer

Draft Report Review into Consumer Energy Resources Technical Standards

The Energy and Technical Regulation Division (the Division) of the South Australian Department for Energy and Mining thanks the Australian Energy Market Commission (AEMC) for the opportunity to comment on its Draft Report of the Review into Consumer Energy Resources (CER) Technical Standards (AEMC Draft Report).

Recommendations 1 to 3

The Division is supportive of Recommendations 1 - 3. However, the Division considers that a range of implementation issues would need to be resolved for these recommendations to help improve compliance with the technical standards for CER devices.

Extensive cooperation and coordination with a range of solar inverter original equipment manufacturers (OEMs) would be required. In the Division's experience, these OEMs have generally taken time and engagement over the last few years to undertake mandatory work related to AS4777.2:2020 and CSIP-AUS development.

The Division would like to highlight that most manufacturing of inverters happens on a common production line where the devices may end up in one of several countries – who might not support Australia A being the default setting.

An Australia specific production line for each OEM is not likely to be achievable and would come at significant cost to OEMs. Further, the Division questions how an inverter sold in Australia would 'know' where it is to default to Region A settings.

The Division's DER Compliance Officer role has already investigated, negotiated, and been involved in implementation of remote updating for compliance.

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The Division notes that a major issue for OEMs is the significant time required to remotely update CER devices where possible to remedy non-compliance with technical standards. There are different nuances in each device that need addressing. For example, some devices require a full firmware update. If the firmware update isn't applied properly, the question becomes whose responsibility is it if the customer's inverter is left not operating correctly.

The Division also notes that voluntary compliance by OEMs can be problematic. Some OEMs have been willing to participate in in rectifying settings where others are not even willing to provide data.

Recommendation 1

Whilst the Division is supportive of this recommendation, it considers that there are implementation considerations to address. The Division seeks clarification about whether there any cases, such as off-grid installations or commercial projects, where legacy settings are still required or preferential and would restrict implementation of this recommendation. The Division notes that these settings can be configured manually in these cases.

The Division also flags for consideration whether is it viable for OEMs to remove legacy settings, including whether there are there any technical challenges for this to happen.

Additionally, the Division questions what time lag would exist between OEM implementation and product availability. Lead times of 3-12 months from production to availability in market are common, with firmware fixes often occurring after commissioning of inverters. This means that legacy stock may not be able to access these 'immediate' solutions.

Recommendation 2

The Division is supportive of this recommendation, and this would likely improve many outcomes. However, there are some practical considerations to address.

OEMs have provided feedback to the Division that it is unreasonable to be effectively asked to create a separate production chain to comply with Australia's regulatory requirements. This could end up being a very expensive option for OEMs, and it is likely that a significant benefit would need to be demonstrated.

As such, default settings are difficult because OEMs would likely have to agree to region A worldwide for their CER devices, not just for Australia.

Additionally, the incidence of installers deliberately selecting different region settings may persist without improved communications and education for them about the intent or the potential benefit of regulatory changes.

The Division has focussed on requesting the OEM to provide a document that is specific to their CER device, that guides installers through the correct commissioning of the product so

that it meets AS 4777.2:2020. This is important as the instruction and options vary greatly between OEMs. The Division then circulates this document to installers. These efforts have shown some progress with individual installers/companies. They could be supported nation-wide given the technology and settings access do not vary between jurisdictions.

The Division notes that customers don't generally understand the importance of these settings, or they think that these requirements will negatively impact their inverter. Given this, education of consumers about the underlying intent and potential benefits is key.

Recommendation 3

The Division is supportive of this recommendation, and this would likely improve many outcomes. However, there are some practical considerations to address.

This type of recommendation has already been developed and implemented within South Australia for specific OEMs but required significant engagement to implement.

The Division notes that a major issue for OEMs is the significant time required to remotely update CER devices where possible to remedy non-compliance. The Division understands that the OEMs don't have the software to be able to do this at scale, in a way that they can test to ensure that they don't negatively impact any customers' CER devices. There are different nuances in each device that need addressing. For example, some devices require a full firmware update. If the firmware update isn't applied properly, it is critical that there is a party responsible for resolving the issue if a customer's inverter is left not operational or not operating correctly.

The Division seeks to clarify whether implementing this recommendation would require changes to OEM/installer agreements with customers, or if this is already covered by existing end user licence agreements or similar.

To enforce or inform this recommendation, improved detection of sites that are non-compliant would need to be developed. The Division is interested in how this compliance detection could operate in jurisdictions.

CSIP-AUS and implementation of dynamic/flexible export arrangements may offer methods to test volt-var response on modern/compliant inverters, but other means would be necessary for legacy models without centralised communications pathways.

The Division submits that communication to consumers of why maintaining reliable internet connections to enable firmware/cloud-based changes to inverters would need to be developed or prioritised. This can help mitigate the risk of consumers viewing such updates with suspicion and not reconnecting an inverter that loses internet connection.

Recommendation 4

The Division is supportive of this recommendation. However, the Division submits that the Clean Energy Council's (CEC) methods for tracking installer non-compliance will need to be robust.

The Division seeks to clarify how many repeated reports of non-CER-compliant installation practices it would take for a 'approved seller' to lose their accreditation. The Division also seeks an indication of how many installers have lost accreditation for existing non-compliance breaches in the past. The Division emphasises that there needs to be a strong framework for detecting and reflecting non-compliance and approved installers in a way that consumers can understand.

Recommendation 5

The Division supports Recommendation 5, including specific training on recent developments in compliance, device settings and benefits of these systems to consumers and the power system. Mandatory training for already-accredited installers would likely be necessary to see full benefits.

The Division seeks clarity about who will provide these training modules. Additionally, the Division suggests increasing the scope of the training to TAFE and other registered training organisation courses, including regularly updating and incorporate new compliance measures and installation methods into these courses.

Recommendation 6

The Division is supportive of this recommendation. Further, the Division wonders whether this recommendation could be joined with Recommendation 5 unless there is a funding distinction between these recommendations.

The Division seeks clarity on funding for training. Who would ultimately pay the costs, to whom would funding be distributed, and would this include funding TAFE courses for apprentices.

Additionally, the Division seeks clarity on whether refresher courses and training would be made available for existing/established installers. They are seeing major changes in technical compliance in recent years and their training may not be relevant into the future.

Recommendation 7

The Division is supportive of this recommendation. CECs materials for distribution might be able to draw from South Australia and the Division's experience as well as SA Power Networks (SAPN) engagement and webinar material. These resources are already developed and in the field.

Additionally, the Division suggests that it is worth investigating whether there are any other trusted bodies/communications channels in the solar installation space that might direct people to CEC materials or disseminate the same. For example, podcasts, online forums, industry bodies.

Recommendation 8

The Division is supportive of this recommendation. The Division notes that in South Australia, SAPN have largely already built in this function electronically through its SmartApply system for embedded generation applications and through its commissioning tests of CSIP-AUS systems. However, the Division is unsure if the CSIP-AUS commissioning test would capture CER technical standards information as well.

The following is a useful SAPN resource on CER compliance for embedded generation:

https://www.sapowernetworks.com.au/connections/connect-solar-and-ev-chargers/small-embedded-generation/der-compliance/

The Division suggests that electronic forms and online responses would be preferable as this makes processing received information simpler and reduces time for customer to receive copies (emailed documents).

Recommendation 9

South Australia is committed to an orderly transition of our electricity supply to net 100 per cent renewable. For an orderly transition, reliability outcomes must be preserved, and competitive prices delivered. Achieving an orderly transition will require changes in the both the supply side and demand side of the market.

Smart meters are a critical enabling tool for this transition:

- The data provided by a smart meter is essential for informed consumer choice about their electricity use and technology.
- The data provided by a smart meter can assist distribution network businesses to better integrate distributed energy resources and increase their ability to host such resources.
- Smart meter functionality can dynamically optimise customer electricity use with household generation and incentives.

The Division supports regulatory intervention to accelerate the smart meter roll out where there are clear benefits to the consumer.

As you would be aware, the national energy crisis over the past 12 months has led to increases in the retail price of electricity in the National Electricity Market, with further large increases forecast in the upcoming Default Market Offer.

Price increases of the scale being discussed are completely unacceptable to the community and will have significant adverse impacts on households and businesses, worsening pressure on the cost-of-living crisis, reducing real disposable income, and impacting economic growth.

While the Division supports improved data access to assist with detecting non-compliance with NER CERTS, the Division submits that it is through the lens of customer benefit that the proposed acceleration of smart meter deployment should be ultimately assessed.

Further, the Division has some practical issues with this recommendation. The Division questions how smart meter deployment can be accelerated when stock shortages are being reported in industry.

The Division wonders whether there need to be national standards around what meter functionality and features are required for future compliance needs.

The Division also flags some issues with data access. Improved data access often comes down to cost for most parties who are interested and able to use this data. The Division questions whether costs can be reduced if the data's value is increased to more parties.

Additionally, the Division flags a risk that meter providers may object to the provision of improved data access for DNSPs. Meter providers could argue that they want to protect their customer's sensitive data. Further, they could argue that this data provision would negatively impact one of their income streams – the collection and collation of meter data.

The Division also notes that smart meter contestability within South Australia has meant that there are reports of delays of up to 3 months between solar install and smart meter installation - which delays early detection of incorrectly commissioned solar systems.

Recommendation 10

The Division supports in principle this recommendation. However, access to OEM compliance data might need to be multi-faceted for a complete picture, with OEM cloud platform more common and visibility of site settings in real-time more possible. The Division notes that comparisons to connection applications made by solar retailers, and compliance certificates made by solar installers are alternative sources of compliance data. They can help identify where system installation is non-compliant from already established systems with OEM live data offering ongoing compliance information.

The Division notes that some OEMs already provide data to DNSPs and AEMO voluntarily, so this recommendation doesn't seem to add anything to this.

The Division also notes some OEMs have refused to engage with the Division. Therefore, with no regulatory pathway to compel this data-sharing, it will be problematic to get these OEMs to implement this recommendation.

Recommendation 11

The Division supports this recommendation in principle. SAPN has indicated that they are investigating such a process for dynamic export and flexible export requirements and CSIP-AUS compliance. However, it's targeting installers rather than consumers, which is probably going to be more effective.

Most consumers will not know when an inverter drops offline unless they engage with it regularly for data and generation observations. Even if a DNSP contacts a customer, most of these issues would potentially be beyond the ability for a consumer to rectify and would require installer/electrician site visits and costs.

The Division suggests that it may be worthwhile requesting or requiring OEMs to provide customer guides regarding communication connection and reconnection to central servers for inverters.

Recommendation 12

The Division notes subsidisation would likely give consumers incentive to bring non-compliant devices into compliance in cases where installers haven't commissioned or provided sufficient technology to meet the technical standard requirements. However, in cases where there is consumer suspicion regarding the intent and outcomes of modern technical standards, educating and engaging them may be necessary to increase sign-up for these types of work.

The Division notes that dynamic export-style requirements could be successful in solving some of these issues. The South Australian Government has announced new regulations that require all new exporting generation systems to be dynamic export capable from 1 July 2023. This capability will contribute to the ability of the distribution network to host new CER. Dynamic export limits can avoid scenarios where the energy exported under existing static export limits may exceed the capacity of the local network, or where there is insufficient demand for that energy in other parts of South Australia.

This is aligned with SAPNs plans to introduce Flexible Exports as a standard connection option once their trial is complete. Customers signed up in the Flexible Exports trial will be assigned up to 10kW dynamic export limit and this will be communicated to their compatible smart inverters as part of the connection option.

Dynamic export requirements especially through CSIP-AUS pathways provide economic incentives to customers to ensure that their solar PV system is commissioned correctly for dynamic export connection and technical standard compliance. This is because a customer can export more solar overall when operating under such an arrangement, while allowing for safer management of those resources at a distribution level.

Draft recommendation to progress regulatory reform

The Division is supportive of national consistency. However, the Division submits that any reform of national regulation would need to be able to keep pace with jurisdiction specific energy issues and rapidly changing modern energy technology and services.

Illustrative of this point is that South Australia has decided to introduce its own regulation of distributed energy resources to urgently manage its specific challenges arising from the increasing and unmanaged supply of electricity to the grid from rooftop solar.

Should you have any questions in relation to this submission, please contact Mr Justin Ward, Senior Policy Officer, Energy and Technical Regulation Division, on (08) 8429 0707.

Yours sincerely

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