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Energy Security Board

Department of Industry, Science, Energy and Resources
GPO Box 2013
Canberra ACT 2601

Re: ESB – Governance of DER Technical Standard

Sonnen Australia sonnen is one of the global market leaders in smart solar energy storage with more than 50,000 residential sonnenBatterie systems installed worldwide. sonnen is driving forward the move towards decentralized and digitalized electricity supply through the sonnenCommunity – a pioneering energy sharing platform which enables sonnenBatterie owners to achieve 100% independence from the grid.

The sonnenBatterie is an intelligent energy storage system which allows its owners to use solar electricity day and night, whilst also enabling users to change the way that they manage and control their energy. It saves money by storing the surplus energy generated by solar panels when not needed and makes it available at times when it is needed.

At sonnen Australia, we believe in clean, affordable energy for everyone. We are passionate and driven to have a positive impact on our environment, and on the people within it. We are customer focused, inventive, audacious, inclusive, clear thinkers who make learning a habit and always maintain a winning attitude.

Sonnen Australia in principle welcomes and supports the proposal to establish a DER Standards Governance Committee under the National Electricity Rules (NER). We recommend consideration of a hybrid model that combines advisory and determining roles, taking advantages of the strengths of the key institutions. In this model, the DER Standards Governance Committee would recommend technical standards and the Australian Energy Market Commission (AEMC) would make a final determination. The AEMC would not reconsider technical aspects of the proposed standard, only issues of economics, customer impacts and impacts on businesses.

To support the growth of the DER industry the primary requirements with respect to governance are as follows:

1. Creating the best customer experience – reducing green tape, minimizing risks to consumers (in respect of safety and any reduction in system efficacy), and ensuring consumers are compensated for their contribution to the market.
2. Clear industry roadmap – timelines, industry participation etc.
3. Appropriate compliance timeframes –
4. Coordination with all current and planned / associated DER market reform work

What is critical for sustained growth is taking these priorities into account. It is important that the remit of the DER Governance Committee goes further than developing new standards alone as all this will do is add further levels of confusion and duplicity within the industry. Any governance must focus on addressing the current governance issues and should recommend a series of critical reforms for the way all relevant regulatory bodies work in this space, as such three key areas that sonnen would like to recommend be addressed are as follows:

1. Addressing key underlying issues in the DER Standards Setting process that currently exist, and, will not necessarily be able to be resolved by a coordinating body.
2. Establishing clear roles and responsibilities for all DER regulatory bodies, and;
3. Establishing the DER Standards Governance Committee to manage a streamlined future process.

These processes may be considered as a slightly lesser version of Option 4 presented in the ESB consultation paper; however, we believe that doing these three things are critical to making the establishment of a new DER Standards Governance Committee a success. There is work that can be done in each of these three areas without requiring wholesale legislative change

The scope of the DER Standards Governance Committee should include all matters relevant to DER integration. This should include governance of DER technical standards, governance of DNSP regulation and governance of compliance and enforcement more broadly. An important role for the DER Standards Governance Committee will be to ensure that rules and standards are transparent and accessible and that the processes to develop them are transparent and accountable.

Overall, there is a need for a wholistic review of the compliance and enforcement framework, particularly as it relates to DER installers and product standards, within the next few years. The DER Standards Governance Committee should aim to have in place a new compliance and enforcement framework that is independent of the Small-scale Renewable Energy Scheme (SRES) by no later than 2025.

Specific Responses to Questions Raised by the Consultation Paper:

1. Do you support the proposal to establish a DER Standards Governance Committee under the National Electricity Rules?

Sonnen Australia in principle welcomes and supports the proposal to establish a DER Standards Governance Committee under the NER. We agree with the findings of the Sapere/CutlerMerz review, that the governance of DER technical standards is fragmented and lacks clarity of roles and coordination. We agree that there are inadequate resources dedicated to the setting of DER standards and consequently the pace of change is slower than is needed given the rapid deployment of DER. The proposed DER Standards Governance Committee would greatly assist with the resourcing and coordination of DER technical standards.

2. Do you support the DER Standards Governance Committee being advisory or determining?

In determining the role for the DER Standards Governance Committee, it will be important to strike a balance between competing objectives, including:

- The need for technical industry and vendor expertise versus the need to take account of broader considerations, such as the long-term interests of consumers, impacts on industry and overall costs, benefits, and risks of proposals, and;
- The need for speed versus the need for accountability, good process and appropriate consideration of important issues that might be overlooked by a committee comprised of members selected for their technical expertise.
- As a means of balancing the competing objectives, sonnen recommends consideration of a hybrid model that takes advantages of the strengths of the key institutions involved in the proposed structure.
- This could involve:
 - Low level technical committees (possibly convened by Standards Australia, or by the DER Standards Governance Committee or possibly working independently) to continue the usual work of detailed standards development,
 - The DER Standards Governance Committee making recommendations for adoption of a standard, which is referred to the AEMC for a final determination, and
 - The AEMC approving (or rejecting) recommendations made by the DER Standards Governance Committee.

Under this model it is proposed that the AEMC would not reject recommendations on technical grounds. The role for the AEMC would be to analyse costs, benefits and risks of proposals, the likely impact on industry and whether the proposal is in the long-term interests of energy consumers.

3. Do you have any feedback on the proposed functions of the DER Standards Governance Committee?

Recently, some policy makers have seemed to assume that 'DER integration' means coming up with new standards for inverters or battery storage system as well as their function and then thinking about how to enforce them as rapidly as possible. Device standards are just one aspect of DER integration. Equally important, is the governance of rules and regulations for distribution network service providers (DNSPs) and governance of compliance and enforcement across devices, DNSPs, installers and across jurisdictions.

In some important matters related to DER integration, regulation of DNSPs is just as fragmented, if not more fragmented, than governance of device standards. For example, the ESB review of voltage management in the low voltage networks found that "even in the absence of solar PV, there is a significant level of high voltage across all DNSPs in all NEM states". Voltage management is a crucial part of DER integration and is the regulatory responsibility of state and territories. We urge the ESB to explicitly include all matters of importance for DER integration (such as governance of voltage regulation by DNSPs) within the scope of the DER Standards Governance Committee.

An important role for the DER Standards Governance Committee will be to ensure that rules and standards are transparent and accessible and that the processes to develop them are transparent and accountable. A limitation of the Standards Australia process is its reliance on Non-Disclosure Agreements as a standard practice for its committees and procedures. Representatives appointed to the DER Standards Governance Committee must be free to share information with the people they are meant to represent.

4. Do you have any feedback about the Committee determining standards in a subsidiary instrument under the rules?

Transparency and accessibility of rules and standards is of utmost importance and if the use of a subsidiary instrument makes rules and standards opaque then this approach should be rejected.

For example, the DER Technical Standard rule change proposed by AEMO (and currently under review by the AEMC) proposed a subsidiary instrument that would insert minimum DER technical standards into DNSP connection contracts. This would be a major backward step for transparency and accessibility. Sonnen Australia understands from past experience the difficulty of understanding grid connection rules based on information available from connection contracts or direct contact with DNSPs. We spent more than a year collecting information from DNSPs to piece together a comprehensive set of advice on power quality requirements for grid connection of inverters. And that is just one of many requirements included in grid connection agreements.

It would be preferable for DER technical standards to be published in the NER because that is the 'gold standard' for transparency and accountability. We understand that changes to the NER can take months, however that should not be an insurmountable barrier given that device manufacturers generally require 12 months for implementation of new technical standards and DNSPs generally require at least a year for new standards.

5. Do you have any feedback on the development of new compliance and enforcement arrangements for DER technical standards?

Much of the regulatory framework for compliance and enforcement of DER technical standards relies on the existence of the SRES for its effectiveness. The SRES is scheduled to be phased out by 2030 and the value of incentives under the scheme is progressively reduced each year. It is anticipated that as 2030 approaches and the value of the rebate is reduced closer to zero, some businesses will cease taking the rebate to avoid the compliance obligations under the SRES. There is a need for a wholistic review of the compliance and enforcement framework, particularly as it relates to DER installers and product standards, within the next few years. The DER Standards Governance Committee should aim to have in place a new compliance and enforcement framework that is independent of the SRES by no later than 2025.

Fundamentally compliance and enforcement arrangements for DER falls upon the framework of existing rules and standards applicable to retailers and most importantly installers which are expensive to purchase and change very rapidly. There is little to no enforcement upon installers to have a copy of standards or to have been informed as to any changes other than their own commitment to safety and best practice. We would urge the ESB as part of the governance framework to look to implement a cost-effective method to ensure that installers have access to rules and standard applicable to them without high levels of expenditure. In the last twelve months there have been two new standards released as well as a new version of AS / NZS 4777.2 about to be published which is in excess of \$1000 for every installer to have bought all three. Most therefore do not and the requirements contained do not necessarily become correctly implemented.

There is currently a significant gap regarding the interpretation of standards. Sometimes standards are ambiguous and there can be several valid interpretations. Differences of opinion can arise when electrical inspectors differ in their interpretation. Disputes for instance are often referred to the likes of the CEC, but they often do not have the authority to make interpretations that would bind an inspector. The CEC has occasionally written to the Electrical Regulatory Authorities Council (ERAC) requesting interpretation of standards, but it is not clear that this is or should be the role of ERAC. Recently, for instance the CEC has also approached the Australian Building Codes Board (ABCB) regarding interpretation of standards. The DER Standards Governance Committee should be given responsibility for issuing interpretations of standards where there is ambiguity or differences of opinion among electrical inspectors. Ideally, the interpretation would be binding on electrical inspectors and other regulators. There should also be a process that allows

industry or regulators to request clarification regarding interpretation of standards from the DER Technical Standards Governance Committee.

The proposed DER Standards Governance Committee will, however, be guided and reliant on the work of relevant existing bodies contributing to DER requirements across the country. The Cutler Merz/ Sapere review for the ESB identified seven different governance arrangements, the relevant bodies that are involved in the development and setting of standards, and ongoing compliance is set out as follows.

- Technical performance:
 - Set by a combination of DNSPs, AEMO, Standards Australia and increasingly state governments
- DER product safety:
 - No real ownership. Combination of industry led work (BESS Battery Safety Best Practice Guide) and Clean Energy Council (CEC) listing requirements enforceable only through state subsidy schemes.
- Installation requirements:
 - Specified and managed through Standards Australia (i.e. AS3000 and AS5139) and state electrical safety regulators.
- Interoperability and market integration requirements:
 - Work underway by AEMO and state governments as part of the state subsidy schemes.
 - No compliance mechanisms in place yet

In the absence of a dedicated governance framework there are major flaws in each of the areas above, across the seven governance arrangements outlined by Cutler Merz/ Sapere. The ESB Consultation Paper notes the following issues:

- An overall lack of leadership and coordination and clear objective as to how DER technical standards should be governed.
- Weaknesses in the Standards Australia technical standards process in terms of speed, participation and decision making not being explicitly aligned with National Electricity Objective (NEO).
- Lack of harmonisation in network connection standards across DNSPs.
- Under-resourcing of compliance and enforcement activities, and gaps especially for non-safety related standards.

Other issues also have been broadly identified as existing by the industry:

- Lack of engagement with the “new energy” sector.
 - The majority of work and engagement is managed by incumbents. Companies offering new energy technology solutions are often left out of the fold because they’re more thinly resourced and don’t necessarily have the internal business capacity (financial or human) to spend large amounts of time engaging in multiple committees across multiple agencies, and responding to countless consultation processes.
- Lack of transparency.
 - A number of processes undertaken above are non-transparent in their approach. For instance, Standards Australia committees are commercial-in-confidence so no discussions on the comments received or findings are made visible to industry. As a determining body, this lack of transparency is a critical issue. Similarly, NSPs are under no regulatory obligation to provide updated connection standards to industry for comment. As a result, there is a wide variance between NSPs as to the level of consultation that is taken, if any.
- Lack of coordination with market reforms
 - A lot of the technical standards discussions appear to be happening in parallel to DER market development and integration. It is difficult to see how these two processes are complementary – i.e. if new voltage response requirements are progressed will this negate the need for future dynamic voltage response markets? How do the freq-watt requirements introduced via technical standards interact with VPPs providing frequency control ancillary services support (FCAS) etc.

The approach of establishing a DER Governance Committee will ultimately be reliant on the work done by all agencies involved in the DER regulatory space to date. The approach proposed by the ESB will manage concerns in respect of how future standards are set and lead to an effective future model. It will therefore be critical for the existing flaws as identified above to be resolved. Without addressing the underlying issues then the DER Standards Governance

Committee is likely to continue to encounter these same concerns and or help to support and perpetuate the existing challenges for the industry.

A high-level priority for any DER governance process should be addressing the existing concerns. This may become the first order of business to be completed by the DER Standards Governance Committee or to occur before the DER Standards Governance Committee is formed. It will also be critical that all regulatory bodies involved in the DER Standards Setting Process have clear roles and responsibilities as well as a clear process in place. Consideration should be given to:

- Who can suggest new Standards
- Conflicting laws/ legislative and regulatory requirements,
- Who has review authority
- Who is responsible for managing industry or consumer complaints, questions or disputes
- Compliance requirements of each body

Having clear roles and responsibilities determined up front will allow agencies to set appropriate budgets, allocate suitable resources, and it sets expectations for industry as to who will be doing what

The consultation paper notes that the Proposed DER Standards Governance Committee would be responsible for:

1. Setting a vision for DER technical standards;
2. Developing a technical standards work program;
3. Monitoring, reviewing and setting DER technical standards;
4. Considering issues related to compliance and enforcement of standards in their development; and
5. Providing advice on standards and undertaking related reviews.

Our specific views and governance priorities under each of these areas are outlined as below.

1. Setting a vision for DER technical standards

Sonnen Australia supports this position with the focus on consumers. We also believe that full coverage of DER requirements product safety and installation under this program. Ultimately compliance will rest with the relevant state electrical regulators – but electrical system security and distribution network management also requires focus on product safety.

Safety is also critical for consumers as well and a clear gap with no body taking ownership of the Battery Storage Best Practice Guide on Product Safety. Other industries are likely to face similar gaps in ownership on product and installation standards as the industries evolve.

As per the point above, allocating clear roles and responsibilities will be critical in setting the vision for DER standards. The vision should cover not just the standards themselves, but how they are to be developed. Support the approach of establishing technical expert sub-committees although we do not agree that using existing Standards Australia committees is a good approach. There's a need to refresh and review to make sure the right people are consulted on specific standards.

It will also be critical for the vision to consider the assessment of technical standards vs. market incentives for particular behaviours (through DER integration into real-time markets or through tariff restructuring). Often the two are related and in some instances technical standards will be used to enable market integration (i.e. interoperability and communications standards). However, there is a risk that DER will be forced to provide certain services that would otherwise be remunerated under market structures. The vision for DER technical standards cannot be designed in isolation, it needs to consider all other DER work programs underway.

Sonnen Australia also supports the focus on how stakeholders will be engaged. It will be important for the DER Standards Governance Committee to consider how all stakeholders are best engaged, not just the major market players. We would suggest that industry working groups will be a way to bring industry players on board early on, and will be preferable to desktop consultation

2. Developing a technical standards work program

In developing a technical standards work program, the committee will need to ensure that all suggested standards are introduced to solve a particular problem or contribute to the growth of the industry. As per the comments on point 1 above, all new standards should be considered against incentive based alternatives.

In setting the work program we also recommend that the following is taken into account:

- Clear timelines for consultation, approach for consultation and establishment of industry working groups to support new standard development.
- Timelines for implementation – with appropriate compliance timeframes

3. Monitoring, reviewing and setting DER technical standards

When setting new DER technical standards there should be more focused attention on international standards and not working based on the assumption that this is the first time such a technical requirement has ever been looked at globally.

Further consideration should be given to appropriately resourcing bodies that are developing the standards. It will also be important to address the flaws in the existing processes raised above.

There are other critical questions that need to be answered in respect of how the Committee sets standards:

- Who is able to suggest new Standards to the Committee?
 - Can anyone make recommendations for the Committee to consider (similar to the current rule setting process overseen by the AEMC).
- Will the Committee be the only body who has the opportunity to guide DER standards written by Standards Australia?
 - Or is there the potential that Standards Australia will continue to publish DER standards outside of the approved work program?
 - If so will the Committee have the authority to advise state governments that Standards developed outside of the “technical standards work program” should not be called upon in state legislation?
- What authority will the Committee have over DNSP processes?

4. Issues related to compliance and enforcement of standards

This is a very important issue as there is a clear gap at the moment, with very little focus on compliance. Sonnen Australia supports this being a part of the DER Governance Committee priorities.

It will be equally important for the DER Standards Governance Committee to consider how complaints are lodged, both by industry and consumers. While the Committee may not have adjudicative functions, it should consider the bodies that are best able to clarify any ambiguities in the Standards and respond to industry questions and concerns.

6. Do you support the proposed composition of the membership and nature of chair of the Committee?

Yes, it is appropriate for the committee to be chaired by an independent DER expert. However, the Committee composition does appear to be skewed to the regulatory bodies with only 2 out of 11 members likely able to accurately represent the DER technology experience (one market aggregator and one DER OEM). We would also make the following comments:

- The “Market Aggregator” should not be limited to registered participants. There is no classification for VPP operators and many VPPs operating under the AEMO trial are doing so through the customer retailer. Third party VPP aggregators registered with AEMO through this process are not “registered participants” and so would be excluded from committee membership. This is clearly not the intended outcome as these non-registered VPP operators would have far more relevant experience for the committee.

- It is difficult to see how one DER OEM can represent the full suite of OEM views when it potentially captures everything from residential solar and storage, through electric vehicles and controllable loads like air-conditioners. The experience of each of these DER technologies will be very different.
- The consumer expert should be an expert in DER specific consumer issues. The broader customer experience in respect of the electricity sector is already well protected through existing forums.

7. Do you support the proposed terms and selection arrangements?

It will be important to ensure that members of the DER Standards Governance Committee who are appointed as a representative of a group of stakeholders are seen by the stakeholder group as having legitimacy and that they fulfil their representative role. Conflicts of interest (and perception of conflicts of interest) is a risk that needs to be managed. We would also recommend a Code of Conduct (or similar arrangement) for representatives to ensure that expectations are understood and to establish a benchmark for accountability.

It would be preferable for an industry representative to be supported by at least half of the industry they represent. The one-third benchmark proposed might be better as a 'fall back' position if no single candidate is supported by a majority. Crucial to this process will be the criteria for who is eligible to cast a vote.

8. Do you have any feedback on the other elements of the proposed operation of the Committee?

In the next stage of consultation, we would welcome further clarification of the process of budget allocation to and by the DER Standards Governance Committee. One of the main issues with the current process of standards development is that it relies on volunteers and is inevitably dominated by well-resourced companies and regulated entities.

We would also welcome further elaboration on the proposed consensus decision making process, noting that 'consensus' is sometimes interpreted as unanimity and sometimes is taken to mean a vote won by a significant majority.

If you have any further questions or seek any further clarification please contact me via j.sturcht@sonnen.com.au.

Yours faithfully,



James Sturch
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