

28 July 2020

Submission made by email to info@esb.org.au

Subject: ESB Governance of DER Technical Standards Consultation Paper, July 2020

SA Power Networks welcomes the opportunity to provide feedback in response to the Energy Security Board (ESB) consultation paper on governance of Distributed Energy Resources (DER) technical standards.

As the Distribution Network Service Provider (DNSP) for the state at the forefront of DER uptake nationally, SA Power Networks understands the challenges and opportunities arising from the increasing uptake of DER by Australian energy customers. We understand the key role that current and future DER technical standards will have in enabling the ongoing transition to distributed energy in a way that delivers the greatest long-term benefit for energy users. Well-developed DER standards, implemented in a timely manner, will make it easier for DER customers to tap into multiple value streams through active participation in markets for energy, ancillary services and network support services. Standards will also help ensure that DER can be actively integrated with the grid at both distribution network and system level. This will be key to enabling very high levels of DER to operate actively as part of the energy system without exceeding the technical 'operating envelope' of the distribution network or the system as a whole.

Over the last two years SA Power Networks has been actively working with the DER industry, the Australian Energy Market Operator (AEMO), the Australian Renewable Energy Agency (ARENA) and others to help progress DER standards on a number of fronts, including through instigating the cross-industry DER API Working Group now convened under ARENA's Distributed Energy Integration Program (DEIP), which is working to standardise the application of the IEEE2030.5 smart DER standard in Australia.

We are also undertaking field trials in this area, including our flagship 'Advanced VPP Grid Integration' project, supported by ARENA, in which we have, since 2019, been actively publishing dynamic 'operating envelopes' to Tesla's 1,000-customer South Australian Virtual Power Plant (VPP) via a secure web interface based on a subset of IEEE2030.5, enabling the VPP to dispatch at higher levels of power than would otherwise be possible at times and in locations where there is sufficient network capacity to support this. We are currently working with several leading inverter manufacturers to progress a second-stage trial to extend this concept to individual small customer solar PV systems through flexible or dynamic export limits, which we hope to make available as a standard network connection offer in South Australia by mid 2022.

We commend the ESB on its efforts to review the governance arrangements for DER standards in Australia and we fully support the ESB in its goal of expediting, and improving the coordination of, DER standards development, to keep pace with the very rapid transformation of the energy sector and to maximise the long-term benefits of the significant ongoing community investment in DER.

Our high-level feedback on the ESB's consultation paper is as follows:

1. We support the proposal to establish a new entity with responsibility for coordinating, aligning and accelerating the development of nationally-consistent DER standards in Australia based on 'option 3' recommended by the Sapere and CutlerMerz review.
2. We support the establishment of a new DER Standards Governance Committee similar to the existing Reliability Panel to undertake this role, so long as:
 - The Committee has adequate representation from all key stakeholders, in particular (a) the DER industry, who must implement and support any new technical standards and align their product development efforts with corresponding international standards in other

markets, and (b) DNSPs who must connect DER and integrate DER with their networks. DNSPs have a key role in determining technical standards for parties connecting to the distribution network. DNSPs have a detailed understanding of local distribution network issues, and need to set connection standards that are reflective of these local operational requirements, as well as the broader obligations, risks and customer considerations DNSPs carry.

- The Committee is chaired by an independent DER expert and makes decisions by consensus
- The standards themselves are developed by appropriate expert sub-committees through suitably rigorous and consultative processes. Where possible, the Committee should support, utilise and enhance existing Standards Australia sub-committees and processes.

3. We agree that AEMC would be best placed to convene the Committee

In the remainder of this response, we provide further feedback on the specific questions posed in the consultation paper. If the ESB would like to discuss any aspect of our response, please contact Bryn Williams, Future Networks Strategy Manager at bryn.williams@sapowernetworks.com.au or on 0416 152 553.

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Manager Network Strategy

Attachment: Feedback on specific consultation questions

Q1. Do you support the proposal to establish a DER Standards Governance Committee under the National Electricity Rules? If not, what alternative would you suggest?

Yes. We support the need for change, and of the four options put forward by Sapere and CutlerMerz, we agree that 'option 3' is the best.

We do not support 'option 4', the consolidation of responsibility for developing standards into a single entity.

Q2. Do you support the DER Standards Governance Committee being advisory or be determining? Please provide reasons.

Subject to further clarification on the scope of its responsibilities, we would support the Committee having a determining role. We think it would be appropriate for the AEMC to delegate authority to the Committee for maintaining and approving the subordinate instrument referenced in the Rules that sets out applicable DER standards.

That is not to say that the Committee should have a determining role in the development of standards themselves, which should be developed through an appropriately rigorous and consultative process by appropriate sub-committees or working groups of key stakeholders with expertise in the standards in question.

Q3. Do you have any feedback on the proposed functions of the DER Standards Governance Committee?

We agree broadly with the functions and scope of the Committee as outlined in the consultation paper, subject to our understanding of these as set out in our answers to the other consultation questions.

Q4. Do you have any feedback about the Committee determining standards in a subsidiary instrument under the rules?

We understand that the intent is that there would be a general subordinate instrument defined in the Rules that sets out the set of applicable DER technical standards. The subordinate instrument would call upon standards established by Standards Australia, but also possibly other technical standards or specifications that are not yet incorporated in Australian Standards, such as the Australian Implementation Guide for IEEE2030.5 currently being developed through the cross-industry DER API Working Group convened under ARENA's DEIP programme, DNSP technical connection requirements, or AEMO-specific technical requirements in relation to system security. We would hope over time that these would be formalised as Australian Standards, to avoid a proliferation of different standards-making processes.

The subordinate instrument would play a key role in balancing the need for flexibility in the Rules to allow for the timely adoption of new best-practices in a rapidly evolving energy system, without the need for a protracted Rule change process each time, against the critical need for fulsome and rigorous consultation and consensus in deciding on standards that may have wide-ranging impacts across many different stakeholders.

Q5. Do you have any feedback on the development of new compliance and enforcement arrangements for DER technical standards?

We agree that consideration of compliance and enforcement should go hand-in-hand with the development of new standards, and this is an area where a new governance body can add value. Compliance and enforcement regimes will vary according to the nature of the standard, but strong type testing and certification processes by appropriately resourced national bodies will often be most efficient.

DNSPs tend to rely on certification processes such as the CEC's inverter approval process today, and are not resourced to undertake active compliance auditing of DER, so any changes in responsibility in this regard

would have to take into account DNSPs' regulated funding cycles, as DNSPs would need to seek approved allowances from the Australian Energy Regulator through their 5-year revenue determinations to fund any new ongoing compliance activities. We note that one area in which DNSPs could contribute to compliance enforcement could be through analysis of data from DER connected to DNSP data interfaces or, where DNSPs can access it, smart meter data.

Q6. Do you support the proposed composition of the membership and nature of chair of the Committee? Please provide reasons or nominate alternative arrangements.

We support the intent behind the proposed composition in keeping the Committee small enough to be effective as a consensus-based decision-making body while ensuring all key stakeholder groups are represented. We support the idea of an independent DER expert chair.

We are not sure why DNSPs are included under a sub-category of 'Registered Participants' and do not have the same prominence in the list of members as other stakeholders such as DER OEMs. DNSPs are absolutely key stakeholders in the development of DER technical standards. DER, by definition, is connected to the distribution network, and a significant portion of DER standards, today and in future, will relate directly to the integration of DER with the distribution network. DNSPs rely on, and will increasingly rely on, DER technical standards to enable DER to continue to connect and to operate to its fullest capability within the technical operating envelope of the network, while meeting their core obligations to maintain safety, reliability and quality of supply for all customers.

We note that jurisdictional regulators can have quite different views from one another, and so having a single representative may be problematic. This role, and the manner in which it will engage with and represent the diverse views of different regulators, requires further consideration.

Q7. Do you support the proposed terms and selection arrangements? Please provide reasons.

There may be difficulty in enacting the idea that at least one third of industry must support a nomination in the case of DER aggregators, given there may be many of these and they will change over time.

Other than that, the proposed terms and selection arrangements appear reasonable.

Q8. Do you have any feedback on the other elements of the proposed operation of the Committee?

Some things remain unclear, including how the Committee is to be funded and the extent to which it has access to funds that it can direct to resource specific standards development activities, noting that one of the shortcomings identified with the Standards Australia process has been the reliance on volunteers and lack of resources.

We look forward to engaging with the ESB further on this and other details of this proposal.