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Dr Kerry Schott AO  
Independent Chair  
Energy Security Board

Submitted via email to: [info@esb.org.au](mailto:info@esb.org.au)

**28 July 2020**

Dear Dr Schott

**Governance of DER Technical Standards, Consultation Paper, July 2020**

AGL Energy (**AGL**) welcomes the opportunity to respond to the Energy Security Board's (**ESB**) Consultation Paper on Governance of DER Technical Standards, July 2020 (**Consultation Paper**).

AGL's product and service suite promote continued consumer uptake of distributed energy resources (**DER**) enabling customers to actively participate and share in the value that DER can provide to the electricity system. Our current DER product and service offerings include our leading-edge Virtual Power Plant<sup>1</sup>, our retail offer for electric vehicle owners<sup>2</sup> and our Peak Energy Rewards *Managed for You* program.<sup>3</sup>

As a leader in DER products and services, AGL has also actively participated through bringing the consumers' view and interests into the development of a range of technical standards applicable to DER. We currently represent the Australian Energy Council (**AEC**) membership on a range of relevant Standards Australia Committees, including:

- EL-42 (Renewable Energy Power Supply Systems and Equipment);
- EL-54 (Remote demand management of electrical products); and
- EL-64 (Decentralised electrical energy and grid integration of renewable energy system).

We are also engaged in a range of industry forums focused on the development of appropriate technical standards and protocols to support DER integration, including the Distributed Energy Integration Program and API Technical Working Group. We have consistently advocated in these forums for technical standards and protocols governing DER to empower consumers with choice to utilise and optimise DER assets for their own comfort and to participate in competitive market services which address broader energy system needs.

Our feedback on the Consultation Paper is based on our operational experience with DER products and services and ongoing involvement in technical standards development.

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<sup>1</sup> For further information regarding AGL's Virtual Power Plant, currently available to customers in New South Wales, Queensland, South Australia and Victoria please refer to [https://www.agl.com.au/solar-renewables/solar-energy/bring-your-own-battery?cde=semr&gclid=EAlalQobChMlicjKmKuP5wlVjUrCh2eXwvVEAAYASAAEgLRPD\\_BwE&gclid=aw.ds](https://www.agl.com.au/solar-renewables/solar-energy/bring-your-own-battery?cde=semr&gclid=EAlalQobChMlicjKmKuP5wlVjUrCh2eXwvVEAAYASAAEgLRPD_BwE&gclid=aw.ds).

<sup>2</sup> See further, AGL EV Plan, available at <https://www.agl.com.au/electric-vehicles>.

<sup>3</sup> See further, AGL Peak Energy Rewards Managed for You, available to existing AGL homeowners in New South Wales with a digital smart meter, available at <https://www.agl.com.au/solar-renewables/projects/peak-energy-rewards-managed-for-you>.

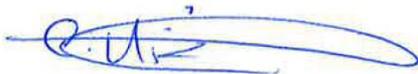
### Strategic direction

1. AGL supports the proposal to establish a DER Standards Governance Committee (**Committee**), provided its functions and powers complement and enhance the current standards making process, particularly the functions of Standards Australia, and do not introduce additional complexity or duplication.
2. We support the Committee being advisory rather than determining and we consider that the Committee should be responsible for:
  - Setting a strategic direction with respect to DER technical standards.
  - Considering issues related to compliance and enforcement of standards in their development.
  - Providing advice on standards and undertaking related reviews.
  - Assessing distribution networks' grid connection standards and ongoing obligations to manage voltage levels on the network to ensure transparency and alignment to support consistent consumer outcomes.
3. We would recommend that the ESB's final decision articulate how the Committee's advisory function would interact and guide Standards Australia's standard setting work to ensure that the two regulatory frameworks align.
4. AGL is generally supportive of the proposed nature and structure of the Committee, provided it is intended to fulfil an advisory function. Should the ESB decide that the Committee is to fulfil a determining function, an alternative structure should be considered to ensure that the membership entails relevant expertise to deliver on that function.

We elaborate our feedback in the **Attachment**.

Should you have any questions in relation to this submission, please contact Kurt Winter, Regulatory Strategy Manager, on 03 8633 7204 or [KWinter@agl.com.au](mailto:KWinter@agl.com.au).

Yours sincerely



Con Hristodoulidis

**Senior Manager, Regulatory Strategy**



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## ATTACHMENT

### Legal framework for a new coordinating governance structure

*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?*

AGL supports the proposal to establish the Committee under the National Electricity Rules (**NER**), provided its functions and powers complement and enhance the current standards making process and do not introduce additional complexity or duplication.

In summary, our preferred approach is:

- A Committee that provides advisory functions
- Standards Australia to continue to set DER technical standards.

AGL believes that Standards Australia as an independent body skilled in standards setting, is best placed to develop and adopt technical standards that reflect international best practice through broad stakeholder engagement and with the support of relevant industry expertise.

Nevertheless, as we observed in our response to the Sapere/CutlerMerz review of existing and potential governance arrangements for DER technical standards and to Standards Australia's own governance review in 2017, AGL support improvements to the technical standards governance arrangements to ensure standards development remains technical, customer-focused and evidence-based.

We agree with the critical gaps and weaknesses identified by Sapere/CutlerMerz in the current governance system and support the development of a new coordinating structure and processes as proposed to address these concerns. We consider this is a preferable approach to large scale overhaul of governance of DER standards which could entail substantial risks to Australia's technical standards development processes.

We agree that the Committee should be convened under the Australian Energy Market Commission (**AEMC**) with the National Electricity Law (**NEL**), with specific Rules provided in NER to allow for its appointment, operations and functions to be prescribed and its powers set out. We consider that convening the Committee under the AEMC would provide a greater level of independence in the Committee's function. We also consider that prescribing its functions and powers in the NER would ensure its effective operation in complementing and enhancing the current standards making process, guarding against any duplication.

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

AGL supports the Committee being advisory rather than determining for the following reasons:

- The Committee's function should complement and enhance the functions of existing standards bodies, particularly Standards Australia. It should not duplicate those existing functions, thereby creating additional complexity and undermining the policy intent for DER technical standards to support the use and optimisation of DER across Australia's energy markets.
- Standards Australia has an established role, as independent body that is best placed to develop and determine technical standards reflecting international best practice through broad stakeholder engagement with the support of relevant industry expertise.

- Determining DER technical standards entails a range of customer market considerations that are best determined upon by a body that is independent of the energy market system. While we appreciate the Reliability Panel analogy given that DER will increasingly influence system security and reliability, determining appropriate DER standards also entails a range of customer market considerations, including that:
  - Technical standards governing DER need to empower consumers with choice as to how they use their DER assets, given that the customer benefits associated with DER investment will not always be associated with grid interactions.
  - The international commodity market for DER requires that Australian Standards align with international standards to enable as wide a range of innovative products and services as possible into the Australian market at least cost to consumers.

Establishing the Committee as a determining body could lead to shortcomings in the compliance regime associated with technical standards, given the current incorporation of technical standards through state-based legislative and safety requirements. By way of example, we understand that state-based legislative and safety requirements incorporating AS/NZS3000 enable state regulator to prosecute workers for not achieving minimum wiring safety requirements. Determining technical standards outside of this regulatory framework would potentially rely upon enforcement through networks connection agreements, placing the compliance burden on networks businesses and electricity retailers who may not have direct carriage of installations. Given the policy intent to improve compliance, we recommend a preferable approach would be to leverage the existing compliance framework through state-based instruments.

### **Functions of the DER Standards Governance Committee**

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

We believe the Committee should be responsible for:

- Setting a strategic direction with respect to DER technical standards.
- Considering issues related to compliance and enforcement of standards in their development.
- Providing advice on standards and undertaking related reviews.
- Assessing distribution networks' grid connection standards and ongoing obligations to manage voltage levels on the network to ensure transparency and alignment to support consistent consumer outcomes.

In our experience with the development of DER technical standards through Standards Australia, we have observed that proposals often do not reflect a coordinated cross-industry view on the desirability of changes. Rather, proposals reflect proponents' individual strategic priorities, for example improved system security and reliability or enhanced interoperability for customers. While Standards Australia committees undertake an initial assessment of proposals before commencing a formal development process, we consider that the Committee could fulfil a broader strategy function that includes:

- Assessing whether proposals align with broader policy objectives, for example stemming from AEMC market review recommendations, prior to proponents submitting proposals to Standards Australia.



- Commissioning specific research or studies to determine if new or revised technical standards are needed.
- Overseeing relevant technical modelling and cost benefit analysis to validate proposed changes and inform more robust decision-making in Standards Australia committees.

In our view, this would support standards development proposals that are evidence-based and accurately reflects industry's broader strategic priorities, as identified through broader market reviews. While the Distributed Energy Integration Program has begun to engage industry in some strategic planning with respect to standards development, through its working groups and taskforces, to date this has been *ad hoc* and has tended to be driven by the strategic objectives of individual organisations such as AEMO rather than as the result of AEMC market reviews with robust stakeholder engagement.

We do not consider that the Committee should be empowered to set DER technical standards. As noted above, we believe that the functions and powers of the Committee should complement and enhance the current standards making process, especially through Standards Australia, and not introduce additional complexity or duplication. Accordingly, we would recommend that the ESB's final decision articulate how the Committee's advisory function would interact and guide Standards Australia's standard setting work to ensure that the two regulatory frameworks align.

#### *Broadening the Committee's functions*

Beyond the functions envisaged in the Consultation Paper, we would also recommend the Committee have remit to consider distribution networks' grid connection standards and ongoing obligations to manage quality of supply on the network to ensure transparency and alignment to support consistent consumer outcomes.

The Consultation Paper appears to frame the challenge of DER integration principally as one of developing appropriate technical standards to ensure that DER does not impact the secure operation of electricity system and distribution networks. In our view, DER integration is equally about ensuring that network investment and operations facilitate the interaction of DER with the broader energy market system. Technical standards also need to support the evolution of the NEM by facilitating rather than hindering the emergence of a two-sided market.

#### *Role for the Committee in considering current issues and how they interact with technical standards*

Through AGL's SA VPP, we have been able to draw upon operational data to develop a range of important insights into the interaction of DER with the low voltage distribution network, including on voltage management.<sup>4</sup>

Among a range of insights, we have observed that voltage levels across the grid are generally high, regardless of whether customers are exporting solar. We note that the ESB and Australian Energy Regulator's (**AER**) commissioned UNSW report,<sup>5</sup> also found that high voltages are due to a range of factors, especially historic circumstances of distribution network operation, with implications for compliance and

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<sup>4</sup> For further information regarding AGL's ARENA SA VPP program, including the two milestone reports published to date, please refer to <https://arena.gov.au/projects/agl-virtual-power-plant/>.

<sup>5</sup> 2ESB cover note on UNSW voltage report:

<https://prodenergycouncil.energy.slicedtech.com.au/sites/prod.energycouncil/files/200502%20ESB%20cover%20note%20on%20UNSW%20Voltage%20Report.pdf>.



consumer losses. Accordingly, we support network businesses' approach to engaging with the overvoltage issue and seek to understand a range of potential solutions that support customer value.

Given that DER is typically not the sole cause of the problem, we would support complementary reforms to deal with legacy network operating issues so that the burden of the transition is not borne by customers alone.<sup>6</sup>

#### *Role of the Committee in considering Connection Agreements*

In our experience with distributed energy products and services, we have also observed that varying technical requirements enforced by distribution networks have limited consumers' ability to utilise their DERs to participate in services which provide broader system benefits. Agents registering customer connections also experience difficulty in understanding distribution network connections processes and technical requirements. This complicates agents' ability to design and register DER systems and adversely impacts consumers' ability to realise the full value of the DER assets.

Whilst Energy Networks Australia sought to address these discrepancies through the development of its National Distributed Energy Resources Grid Connection Guidelines in 2019, the results of that project highlighted some of the risks associated with establishing a national connections framework for DER through an industry body. These include that unless appropriately implemented into the NER and/ or individual network businesses' technical guidelines and Connection Agreements, consumers, installers and manufacturers would have limited recourse to challenge network connection settings that do not adopt or align with the Connection Guidelines. This legal ambiguity would result in less certainty for consumers.

We consider that empowering the Committee to assess distribution networks' grid connection standards and ongoing obligations to manage voltage levels would enable the Committee to provide more balanced advice on improvements to the regulatory framework to support DER integration.

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

Our preferred approach is for the Committee to have an advisory function for the reasons elaborated above.

Should the ESB decide that the Committee should have a determining function, AGL would recommend that any minimum standards be published in the NER, as well as being reflected in connection contracts. Given the extent to which grid connection rules are often opaque and vary between distribution network business, this would improve transparency and accessibility for customers.

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

Given the policy intent to improve compliance, we would recommend a preferable approach would be to leverage the existing compliance framework through state-based instruments.

We consider that developing new compliance and enforcement arrangements for DER technical standards could create additional complexity and/or shortcomings in the existing compliance regime associated with DER technical standards.

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<sup>6</sup> See further AGL submission in response to the AER on assessing distribution energy integration expenditure (20 January 2020), Available at <https://thehub.agl.com.au/articles/2020/01/submission-to-aer-on-assessing-distributed-energy-integration-expenditure>.



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As noted above, given the current incorporation of technical standards through state-based legislative and safety requirements, enforcing technical standards outside of the current regulatory framework would potentially rely upon networks connection agreements, placing the compliance burden on networks businesses and electricity retailers who may not have direct carriage of installations.

An alternative compliance pathway proposed by AEMO in its rule change proposal<sup>7</sup> was based on mirroring the ring-fencing compliance regime. Under that proposal, the AER would develop a light-touch monitoring and compliance framework that would rely upon proactive reporting of breaches by covered entities. Given that potential DER technical standards are intended to apply to matters touching upon customer safety (in inverter performance and grid responsiveness) and the security of the energy market system (in interoperability and cyber security), we do not consider that a light touch compliance regime will be sufficient to ensure compliance.

#### **The nature and structure of the DER Standards Governance Committee**

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

AGL is generally supportive of the proposed membership composition of the Committee. We consider that the proposed composition is appropriately balanced to enable the Committee to fulfil an advisory function.

Should the ESB decide to establish the Committee as a determining body, we would recommend that the membership require greater participation of registered participants to ensure any decisions appropriately reflect the diversity of businesses operating in DER.

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

AGL would support the development of an appropriate Code of Conduct to manage any conflict of interest risks in the Committee membership.

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<sup>7</sup> See further, AEMC, Technical standards for distributed energy resources, Consultation Paper, June 2020, Available at <https://www.aemc.gov.au/rule-changes/technical-standards-distributed-energy-resources>