



Andrew Swanson

Australian Energy Market Commission (AEMC)

7 October 2021

Dear Andrew

**Re: National Electricity Amendment (Governance of Distributed Energy Resources Technical Standards) Rule 2022 Consultation Paper (Consultation Paper)**

Tesla welcomes the opportunity to provide the Australian Energy Market Commission (AEMC) with a response to the Energy Security Board's (ESB) rule change and AEMC Consultation Paper reviewing the governance framework for distributed energy resources (DER). This review is critical for the DER industry and consumers. The rate of change of regulation and governance of the industry has not kept pace with industry growth which has led to a fragmented and inconsistent framework for DER in Australia.

Tesla agrees with the position put forward by the ESB that *"the current lack of coordination, planning and resourcing and slow pace of decision making within the various governance arrangements for DER technical standards in place across Australia, together mean that DER systems deployed today are unlikely to be able to deliver the performance levels and service levels required"*.

While we are very supportive of improvements to DER Governance, the scope of this governance review still requires more clarity and work is needed in determining what constitutes distributed energy resources (DER), and what fits within the definition of a "DER Technical Standard". Tesla makes the following summary comments on the Rule Change and the scope of the review.

- **Scope of DER and DER Technical Standards:** Tesla supports the introduction of a DER Technical Standards Governance Committee, however we also believe that:
  - Governance of DER technical standards is much broader than AS4777.2. The AEMC consideration of "DER Technical Standards" should extend beyond AS4777.2:2020. While only AS4777.2 is currently included in the National Electricity Rules (NER), limiting this to the full scope of DER governance does not address other existing issues, not support future market development.
  - The intention of the ESB in submitting the Rule Change goes beyond AS4777.2. The rule change mentions Virtual Power Plants (VPPs), AS4755 and demand response as well as other emerging technical challenges.

- This governance review needs to be broad enough to cover current and emerging forms of DER. Otherwise we will end up in a situation where technologies remain ungoverned. As is clear in the ESB Rule Change, where a lack of governance exists this void is filled with fragmented and inconsistent processes from a variety of different bodies.
- The lack of definition of DER within the NER may create issues as we further consider scope. The AEMC may wish to revisit the definition previously proposed by AEMO in the DER Technical Standards Rule Change.
- **Need for review of roles and responsibilities:** an in-depth review of roles and responsibilities of the roles and responsibilities of all bodies involved in DER would be beneficial. There is no clear alignment on the roles and responsibilities of different agencies currently, and this has led to the seven individual processes outlined by the ESB in the Rule Change submitted. While we recognise that the AEMC does not have the authority to define the roles and responsibilities of state governments and electrical regulators, or of the Clean Energy Regulator, it would be helpful for this process to articulate how all processes tie in together.
- **Long-term DER planning:** A key responsibility of the DER Technical Standards Committee should be in developing a forward-looking DER policy roadmap that articulates the policy priorities for DER, as well as the technical standards necessary to achieve these requirements. This will drive the development of new DER Technical Standards included in the NER in the future.

The current lack of coordination in process often drives sub-optimal solutions or duplicative processes which add cost to industry which are ultimately pushed down to consumers. The lack of coordination also means that where ambiguities in Australian Standards exist, or where an Australian Standard is inconsistent with another regulation, it is challenging for industry to get clear guidance on the correct interpretation.

It will be critical for the AEMC to get the scope of this Consultation right to both deal with existing challenges and to set an appropriate framework for the significant amount of work that will be done in the response to the ESB DER workplan.

Our detailed response to the AEMC regarding the points raised, and questions asked, in the Consultation Paper is provided below. For more information on any of the content included in this submission, please contact the Tesla Energy Policy Team ([energypolicyau@tesla.com](mailto:energypolicyau@tesla.com)).

Kind Regards

Tesla Energy Policy Team

## Tesla Response to Consultation Paper

### DER Technical Standards issues to be addressed

The ESB Rule Change provides a good summary of the primary concerns surrounding having Standards Australia as the primary body responsible for developing DER technical standards, as well as other challenges currently facing the DER industry.

These issues relate primarily to the lack of transparency in considering stakeholder comments, the make-up of Standards Australia committees and the lack of resourcing for the development of standards. On the other hand, there are also some benefits with the Standards Australia processes that should be considered as an important starting point for any new process – 1. Standards Australia committee members are appointed based on their technical knowledge, and 2. Representatives are asked to remain independent from their corporate interests.

More detail on the current DER Governance issues are included below:

1. **Lack of transparency:** Standards Australia committee members are bound by confidentiality agreements, and meetings are deemed to be commercial in confidence, so no record of discussions and reasoning are made available to the public. This is problematic as it means that the rationale for decisions remain unpublished. It also means that if legitimate concerns or problems are raised to justify a particular position being taken, industry is not made aware of this issue.
2. **Committee make-up:** the DER industry is evolving quickly with new technologies entering the market and the technical capabilities of existing technologies continuing to grow. Conversely Standards Australia committee members often remain on committees for years. It is important that those setting technical standards have the right knowledge of what the technical standards that they're developing. Also important is having a relatively even mix. The current make-up of Standards Australia committees is heavily weighted to electrical regulators and networks, with little representation from OEMs and newer industry players (such as DER aggregators).
3. **Lack of resourcing:** as the process is based on volunteer time from committee members the timelines for developing, or amending standards, can be incredibly lengthy – with Committee members required to often do the bulk of the development work and drafting in their personal time. The time commitments can also make it difficult for smaller, less well-resourced companies to join Committees. This should be resolved through appropriate resourcing.
4. **Network Service Providers:** as the scope of governance of DER Technical Standards evolves to be more closely linked to Network Service Providers (NSPs) and the distribution network connection process, it will be equally important that the governance of NSPs is robust. Tesla has included some framework recommendations below in respect of NSPs that will be necessary to ensure that this Rule Change is as effective as possible.

**Recommendations:**

Tesla broadly supports the idea of setting up a new committee to develop DER Technical Standards (DER Technical Standards Committee), and believes that this could overcome most, if not all, of the current issues regarding the establishment of DER Standards.

Our position on the role of a new DER Technical Standards Committee and recommendations in response to the AEMC questions are below.

**Question 4: DER Technical Standards in the Rules****1. *Should DER technical standards relevant to the NEM be included in the Rules or a subordinate instrument?***

This should really be determined following the development of a DER roadmap that provides more of an indication as to what future DER Technical Standards are likely to be developed. Having clarity on that will be important in determining whether it makes the most sense to include DER Technical Standards directly within the rules, or whether the Rules may refer to subordinate documents. It is most likely not going to be a one-size fits all solution.

**2. *How should any new governance arrangements interact with Standards Australia***

This is addressed in more detail in response to Question 5 below.

**3. *What are the main benefits/ risks of including DER Technical Standards in the Rules?***

The main benefit of what is currently being proposed is the establishment of a DER Technical Standards Committee. Having a DER Technical Standards Committee responsible for establishing a clear DER policy pathway, identifying gaps in technical standards development, providing advice on the roles and responsibilities of all parties responsible for DER, and ensuring consumers are protected will provide a number of benefits.

Without having a detailed workplan, the inclusion of DER Technical Standards in the Rules provides only some benefits (in that it improves cost-benefit analysis mechanism and provides a more transparent process on setting Rules). It does not deal with the other governance issues raised – in particular the duplication of effort and lack of coordination across the bodies involved in setting DER standards.

**4. *Did the recent DER technical standards rule change address these issues?***

As above, the DER Technical Standards Rule change just includes reference to AS4777.2 in the Rules and creates a compliance pathway for NSPs to follow. This has the potential to create more duplication of effort in the absence of having a proper DER governance framework.

As we said in our response to the AEMC in the National Electricity Amendment (Technical Standards for Distributed Energy Resources) Rule 2020 Rule Change:

*while we agree that reform of the DER governance approach in Australia is necessary, we believe that there are major risks associated with progressing this rule change ahead of the finalisation of the related Energy Security Board (ESB) work looking at governance of DER Standards.*

Establishing a proper DER governance framework is necessary to support any additional DER Technical Standards that are developed.

## **Question 5: Who develops and maintains DER Technical Standards**

### **1. Should a new committee be responsible for determining or advising on DER Standards?**

Tesla believes that a new DER Technical Standards Committee should have the following responsibilities:

1. Review of roles and responsibilities of existing DER bodies. While we recognise that the AEMC, and by extension the DER Technical Standards Committee, does not have the authority to determine the role of state governments in setting DER technical standards, a detailed review of the roles and responsibilities of players in the DER space will be important in identifying the gaps and providing industry with clear guidance as to the roles of the AEMC, AEMO, AER, ESB and NSPs.
2. Developing a DER policy roadmap that outlines when and how the ESB DER priorities will be implemented. The sequencing of these reforms and the corresponding technical standards will be particularly important to manage. It is critical that the introduction of new DER Technical Standards and requirements are introduced in a way that does not create duplicative efforts, or expenditure in new requirements that become redundant within a 1 – 2 year period.
3. Publication of identified gaps in DER technical standards and publishing an annual work program based on the DER policy roadmap.
4. Consulting with industry in respect of the DER policy roadmap and publishing Determinations on the outcomes of the consultation. Also engaging third party research to support with both the consultation and the sequencing of new DER policies and technical standards
5. Undertaking cost-benefit analysis, consultation and consideration of customer impacts and business impacts prior to new standards taking effect with force of legislation.
6. Directing DNSPs regarding the DER technical standards that should be included in customer connection agreements,
7. Providing binding interpretations of DER technical standards where there are legitimate disagreements in interpretation,
8. Monitoring enforcement and compliance and providing recommendations for improvement.

In setting this work program, and with particular regard to point 1 – review of roles and responsibilities, it will be important for the AEMC to articulate whether the DER Technical Standards Committee will replace the functionality of bodies such as the Distributed Energy Integration Program (DEIP) and the ESB Maturity Plan, and the Clean Energy Regulator (CER) or if it's intended that these processes run parallel in a complementary manner. If the intent is for the processes to run in parallel, then it will be important to ensure that they're not duplicative (again, reinforcing the need for a detailed review of roles and responsibilities).

A second important point, which is addressed in more detail in respect of Question 3 below, is that Tesla does not believe that the DER Technical Standards Committee should be directly responsible for the drafting of the technical standards themselves – simply for determining and advising on their development and ensuring that Standards that are developed serve broader market, customer, and network priorities.

## **2. How should members be appointed the new committee?**

As with Standards Australia the make-up of a new technical committee will be incredibly important. Tesla supports the merit-based appointment to a new committee proposed by the AEMC. Similarly, we support having a mix of stakeholders. We also need to ensure that the make-up of the committee is reviewed for appropriateness prior to the commencement of any new technical standard.

The make-up proposed by the ESB covers all the right bodies to be included, but it will also important that the ratios of membership are accurate to prevent the same issues as has been seen with the Standards Australia standard setting processes. Tesla believes the following points are critical for the AEMC to consider in determining the make-up of a new DER Technical Standards Committee:

- The total number of OEMs and aggregators represented on the panel should be roughly equal to the number of combined representatives from market bodies, DNSPs, jurisdictional safety regulators and Standards Australia.
- Aggregators should also encompass electricity retailers that have active DER offerings.
- OEMs should include a mix of OEMs to ensure representation across inverter and battery storage technologies, as well as OEMs of relevant technologies that may be affected (demand response providers and electric vehicle/ electric vehicle supply equipment (EVSE) OEMs)
- Consumer representatives should represent consumers with DER, as well as considering the impacts on consumers.
- Following the development of a DER policy design roadmap, the make-up of the DER Technical Standards Committee should be reviewed to ensure that the right mix of knowledge is included.

## **3. What knowledge and experience would be needed to develop and maintain technical standards for DER?**

In respect of the appointment of members to the Committee, Tesla believes this should be merit based and driven by the technical knowledge of the person being appointed. The detailed technical knowledge will depend on the nature of the DER Technical Standard that is being developed.

As the Committee itself is likely to be relatively small it will not necessarily make sense for the DER Technical Standards Committee to be responsible for the actual drafting of DER Technical Standards. This drafting could be done either through delegation down to one of the following bodies:

- Existing Standards Australia committees or sub-committees;
- AEMO; or

- New AEMC led “DER Technical Standards sub-committees” set up in a fit for purpose manner to develop individual standards.

Regardless of the approach taken in respect of the actual drafting, it will be critical that the following processes are introduced to address the concerns raised earlier in this submission:

- Clear timelines for the drafting must be set, including approach for consultation;
- The make-up of the sub-committee should be reviewed ahead of drafting of technical standards, with the DER Technical Standards Committee given the authority to appoint additional members with relevant technical expertise; and
- Final outcomes and considerations leading to the final DER Standard need to be published.

#### ***4. Should membership of the new committee be paid or voluntary?***

This will depend on the level of work required from and expected by the DER Technical Standards Committee (and any sub-committees established as per response to previous question). It will be important that a certain level of independence is maintained from Committee members. AEMC should consider this as well as the speed of delivery of standards.

Resourcing to manage the cost-benefit analysis, consultation and drafting of the DER Policy Roadmap and findings of the Committee/ sub-committees will be critical, and we would expect that these would be paid positions within the AEMC or another energy regulatory body.

#### ***5. Should the Committee report to the AEMC?***

This will depend on the relationship with the ESB work. If the AEMC is expected to acquire most of the ESB work-program when the ESB is dissolved in late 2021, then the AEMC may be the most appropriate body for the DER Technical Standards Committee to report to. If the Maturity Plan process processes in parallel with different governance and reporting structures, then this may create further inconsistencies and additional risk of duplicative effort.

#### ***6. How would the governance arrangements proposed interact with existing governance arrangements?***

The approach proposed is a complementary addition to the current approach from the DER Technical Standards Rule Change.

In respect of coordination with other governance arrangements, this is a critical question and why Tesla believes that a review of roles and responsibilities is important at the outset. In particular we would like more information from the AEMC in respect of how this DER Technical Standards Committee may interact with (or replace the functionality of):

- The ESB Maturity Plan process;
- The DEIP processes; and

- The CER recent recommendations in respect of governance of solar PV systems as per the SRAS scheme requirements.

Developing a clear roadmap of how DER policies may develop, and progress will also be important in this respect. The DEIP processes, for instance, may provide early, high-level guidance on industry best practice and stakeholder positions on new standards ahead of the DER Technical Standards Committee considering them.

### ***7. Are the proposed governance arrangements likely to reduce how long it takes to develop new technical standards?***

The AEMC should consider the speed of introducing new DER Technical Standards as only one target outcome from this Rule Change process.

The higher priority outcomes of this new governance arrangements are:

- Ensuring that the new DER Technical Standards are fit-for-purpose and sequenced in a way to achieve the best market outcomes;
- Are fully consulted on, and have gone through a rigorous cost-benefit analysis as well as a detailed understanding of consumer impacts;
- Do not reduce the ability of DER to participate in markets/ do not replace alternative workstreams on the creation of new DER markets.

### **Additional DER Governance recommendations**

There are additional DER governance considerations that the AEMC should consider as necessary to establishing a long-term governance framework for DER. Where additional governance power is given to the NSPs, it would make sense that the governance of NSPs is also considered.

Governance of customer connection agreements is not best practice. Currently, DNSPs can unilaterally amend the terms and conditions for new customer connection agreements without any requirement for cost-benefit analysis, consultation or consideration of customer impacts and business impacts. The Governance of DER Technical Standards Committee should be tasked with reviewing and approving all amendments to DNSPs' customer connection agreements where the amendments relate to DER Technical Standards.

The scope of the work of the DER Governance of Technical Standards Committee should not be limited to AS/NZS 4777.2. Its scope should include all DER Technical Standards included in DNSPs' customer connection agreements.

Tesla believes that there are a number of improvements to NSP processes that could be considered within the scope of this Rule Change, ahead of the NSP connection regime being the preferred compliance framework for DER Technical Standards.

1. There should be national consistency in consultation on connection frameworks. Currently NSPs take different approaches to consulting on their connection arrangements. Tesla recommends a framework where

each NSP is required to consult on their connection arrangements for a defined period. Consistency in the frequency of review, approach to incorporating new technical standards would also be appreciated.

2. As areas such as interoperability and dynamic export/ operating envelopes continue to evolve, then there will need to be more clarity on the approach taken by the AER in assessing the suitability of different connection frameworks. It will be important to have a transparent approach to assessing the impacts on customers.
3. Where DER Technical Standards interact with, or form part of, NSP Service and Installation Rules, these should also be captured under the same governance approach – with equal effort put into the consistency in consultation and transparency on decision making.

It may also be valuable for the DER Technical Standards Committee to be tasked with reviewing and approving amendments to DNSP customer connection agreements where those amendments relate to DER Technical Standards.