

Andrew Swanson
Australian Energy Market Commission

3 February 2022

Dear Andrew

Re: Governance of Distributed Energy Resources Draft Determination (ERC0319)

Tesla Motors Australia, Pty Ltd (Tesla) welcomes the opportunity to provide the Australian Energy Market Commission (AEMC) with feedback on the Draft Determination on the governance of Distributed Energy Resources (DER). Tesla has been supportive of the increased governance arrangements for DER since the Energy Security Board (ESB) put forward their Rule Change. Our own concerns with the current DER governance framework and reasons for improvement are set-out in our responses to the previous consultation on this topic.

In particular, Tesla agrees with the issues raised by the ESB in their Rule Change request, and their identification of the number of distinct decision-making bodies around DER. As the uptake of DER continues at pace, and with more households installing battery storage and electric vehicles (EVs), this issue will continue to grow as more bodies will introduce more disparate requirements in the absence of a governance. A particular concern to Tesla is that there has been no review of roles and responsibilities across the multitude of bodies that are involved in DER development.

While we appreciate the points that the AEMC raise in respect of the Distributed Energy Integration Program (DEIP) and ESB Maturity Plan, we see those work-streams as being tangential to this Rule Change. Those two work programs are specifically focused on new DER technical requirements, but do not consider the underlying governance frameworks.

There needs to be a clear distinction between **development** of new DER technical requirements (i.e., interoperability, dynamic operating envelopes etc.) and **governance** of how those requirements are developed. Tesla believes that the AEMC could extend on the recommendations put forward in the Draft Rule Change and further support the governance of DER by undertaking three additional roles:

1. Review of roles and responsibilities of DER players
2. Clear DER Reform Roadmap which focuses on a technical standards implementation pathway
3. Consideration of costs vs incentives that are being proposed throughout the reforms being introduced.

More detail on our recommendations is included in the body of our response below. For more information on any of the points raised in this submission please contact Energypolicyau@tesla.com.

Kind regards

Tesla Energy Policy Team



General comments

The Commission has identified five distinct roles to support DER technical standards, where the AEMC could potentially play a role:

1. identifying when the NEM needs new DER technical standards
2. working with the Energy Security Board (ESB) and the Australian Renewable Energy Agency (ARENA)'s DEIP
3. observing Standards Australia's DER committees
4. updating DER technical standards in the NER
5. reporting on progress adopting standards and integrating DER.

While these new roles can play a role in supporting the development of new DER standards, it is important for the AEMC to recognise that many, if not all, of the governance concerns raised in respect of existing DER standards still exist. Tesla's recommendations below are based on our views of additional work that the AEMC can do to both improve governance around new and emerging DER standards or technical requirements, as well as improving the governance of existing standards.

Tesla makes the following recommendations in respect of areas which the AEMC can, and should, take more of a lead in respect of DER governance. These recommendations are not explicitly recommended in the Draft Rule Change but are related to the five key areas where the AEMC sees themselves playing an increased role.

A starting principle that Tesla has for all DER market reforms is that it must incentivise smarter DER behaviour. AEMO's latest ISP projections are assuming ~6GW of coordinated, aggregated DER by 2030, growing to 31GW by 2050¹. However, industry currently has no clear understanding of how this will be achieved. Our three key recommendations below will support a more coordinated pathway for DER reform in the NEM, with a key focus on supporting the increased penetration of smart, orchestrated DER.

Review of roles and responsibilities

As flagged in the Rule Change request made by the ESB, one of the key issues that is impacting on the DER industry is a lack of clear understanding of roles and responsibilities. This relates to both existing and established DER standards and for new and emerging DER standards that are being developed. The issues that apply to existing and emerging standards are distinct and summarized below.

Existing standards:

The primary issue for the DER sector in respect of existing standard is the lack of an adjudicating body that can provide advice on any ambiguous aspects of an Australian Standard. There is no dedicated body that can provide industry advice or adjudication on ambiguous clauses within Australian Standards. In the absence of a dedicated body, this interpretation is left to the discretion of individual state electrical regulators, and in some instances

¹¹ AEMO, "Draft 2022 Integrated System Plan", available at <https://aemo.com.au/-/media/files/major-publications/isp/2022/draft-2022-integrated-system-plan.pdf?la=en>

individual inspectors. Even though Australian Standards can be applied nationally, what is deemed to be compliant differs from state to state. Further if the DER industry is looking for guidance or wants to challenge the views of an individual inspector, there is no clear body that can support this.

This issue is a natural result of the concerns around the lack of resourcing for Standards Australia that have been raised in previous consultations on DER Governance. Standards Australia is a volunteer agency, with most committee members giving up their own time to support the development of new DER Standards. It is not reasonable to expect them to continue to provide interpretation advice. It would also not be reasonable to ask individual committee members to perform this function as they are not entirely independent.

However, it is also clear that the intent of the Standards committee will be important in establishing findings/ advice for the industry. There is a need to assign this role to an agency and ensure that the agency is involved in the setting of the standard from start to finish so they have a clear understanding of the intent behind a particular clause.

New DER technical standards

In addition to the ongoing management of existing standards, there is also a need for a dedicated review of roles and responsibilities for establishing new DER Technical Standards.

The ESB has made recommendations on a “DER Implementation Plan” that highlights the different focus areas, however the timelines and actual approach for implementation are not currently clear. It is not clear who is responsible for the development of the new DER technical standards, how industry will be properly engaged throughout the process, and how new requirements of various other DER workstreams (i.e., the DEIP) will be used to inform new requirements.

Tesla has included more information on the need for a more detailed DER Roadmap below. In respect of roles and responsibilities we recommend that the AEMC considers the following in a “Roles and Responsibilities Review”

- Which party owns the development of each new DER technical standard (i.e., AEMO, AEMC, ESB).
- Which energy regulatory bodies should have input into the design and development of the new DER technical standard.
- Which existing DER reform pathways (i.e., the DEIP) should be used to inform the new DER technical standard.
- Industry consultation requirements, including the need for an expert industry working group or advisory panel.

Recommendations:

Tesla recommends that the AEMC undertakes a detailed “Roles and Responsibilities Review” of the DER Industry. This should focus on both existing DER standards, and standards that are currently under development or will be needed in the future.

The key outcomes of this Review should be:

- Identifying gaps in existing processes where there is no clear ownership by any agency (i.e., interpretation of Australian Standards) and making recommendations on potential bodies that could take on this role.

- Identifying duplication of work that is currently being done across multiple agencies.
- Identifying agencies to own each workstream proposed in the ESB DER Implementation Plan, and the additional agencies that need to input into the development of those new DER requirements.
- Identifying the best way for Industry to be engaged and input into the design of all new DER technical standards that are developed.
- Identifying how other DER workstreams, such as the DEIP, will inform or input into the development of new DER technical standards.

We recognise that the AEMC has limited authority to provide direction to federal or state government agencies. However, we believe that this review should consider those agencies as well as the energy regulatory bodies, and that any recommendations or observations arising from a “Roles and Responsibilities Review” will provide useful guidance to all parties involved in DER development.

Development of a DER reform roadmap

Tesla appreciates the work done by the ESB in developing the DER Implementation Plan. This provides a useful overview of all the interrelated workstreams and technical DER standards that are in varying stages of development.

The key aspect that is missing from the work that the ESB has undertaken in respect of the DER Implementation Plan is the end-goal that is trying to be achieved. In the absence of an end-goal the Implementation Plan naturally just highlights a series of reforms that are happening, rather than creating a targeted roadmap for what needs to happen to achieve a specific outcome.

To move away from the DER Implementation Plan to a more detailed roadmap, the AEMC will need to consider what the goals for DER for 2030 and beyond are. These should consider:

- **Customer implications:** the intended outcomes and goals for customers (i.e., full freedom to connect all DER; how regulatory and other barriers locking customers demographics, such as renters, out of the DER market are being addressed; customer protections for new business models); and
- **Market barriers and goals:** is a future goal for more DER to be actively participating in the markets and controllable? Is the goal for AEMO to have more visibility over DER? The AEMO ISP projections of up to 31GW by 2050 seem to indicate considerable growth of VPPs. It is important to note that this will not happen without a dedicated DER reform plan.
- **Technical development:** both in respect of DER product expectations and development work that the NSPs and AEMO will need to undertake to achieve a future state that has more orchestrated DER.
- **Proposed outcomes of each reform and duplication:** the DER Roadmap should consider whether multiple reforms are trying to achieve the same outcome. If this is the case, then the DER Roadmap should highlight the additional benefits or outcomes achieved by each reform.
- **Sequencing and implementation timelines:** a key consideration for all major DER reform packages will be ensuring that the sequencing of reforms is right and that appropriate implementation timelines are given for new product standards.



This is a non-exhaustive list and there are a wide variety of other things that should be considered within a more detailed DER Roadmap.

Recommendation:

The AEMC, either in partnership with the ESB or independently, should develop a more detailed DER Reform Roadmap that highlights how all DER reforms will be developed and implemented. The DER Reform Roadmap should be developed as a natural companion document to the Roles and Responsibilities Review, as having clarity on roles and responsibilities will be vital to successful development of new DER Standards.

Consideration of costs versus incentives

A key feature and underlying principle of all DER reform and technical standards appears to be that orchestrated, controllable DER is better for the electricity network than passive DER. Orchestrated DER can be used to provide smart market and network services (frequency control ancillary services, fast frequency response, inertia, voltage support, peak demand reduction and a variety of other new and emerging services). Orchestrated DER can also be used to respond dynamically to network and market signals to ensure that the market is supported and that networks can manage the level of DER installed.

The ability for the market to make the shift from passive DER to active, orchestrated DER is dependent on customers being incentivised to hand over control of the DER that they own; and on aggregators or electricity retailers investing the engineering time and development costs into platforms and optimisation software. From a first principles perspective this means that if the costs of the DER reforms focused on improved orchestration of DER, outweighs the incentives, and the customer has a choice in passive DER as an alternative, then the DER industry will self-select a focus on passive DER.

At every point in the DER reform pathway a single agency should be given the responsibility to assess the cost versus incentive trade-off across the DER reform pathway. It may be acceptable for companies to incur initial costs with a trade-off for future incentives. But where the value, or timelines of these incentives are unclear, then this becomes a more challenging ask for industry.

For instance, if aggregated DER and VPPs are asked to comply with scheduling requirements, then this will necessarily incur a cost to do the up-front software development work, pay market registration fees; incur potential market liabilities; and employ a workforce capable of managing market bidding and compliance. The incentives for shifting to scheduling of DER is less clear. If the value of scheduling assets is less than the total cost to do so, then these costs will need to be passed through to consumers, making it more expensive (rather than less) for customers to move from passive DER to active DER. Alternatively aggregators and OEMs will cease to invest in these smart services.



Recommendation:

The proposed DER Reform Roadmap should include dedicated reviews each year of the costs versus incentives of the DER standards. If the costs are higher than the incentives, then the timing or structure of the DER reform pathway needs to be reconsidered.