Tesla Motors Australia, Pty. Ltd.
15 Blue Street
North Sydney NSW 2060

28 August 2024

Mr Andrew Lewis

Executive General Manager
Consumer, Markets and Analytics
Australian Energy Market Commission

Dear Andrew,

RE: Draft Terms of Reference – Electricity pricing for a consumer driven future

Tesla Motors Australia, Pty Ltd (Tesla) welcomes the opportunity to provide the Australian Energy Market Commission (AEMC) with a response to the Draft Terms of Reference (ToR) for the review on electricity pricing for a consumer driven future. We are very supportive of the work being done by the AEMC to consider the important role that electricity pricing, products, and services will play in supporting the diverse needs of customers, including integrating the consumer energy resources (CER) necessary for the energy transition.

Tesla's global mission is to accelerate the world's transition to sustainable energy. As the world's largest vertically integrated renewable energy company, Tesla has a diverse product portfolio of electric vehicles (EVs), solar and battery storage products that cover residential, community and utility scale applications. In Australia, Tesla is leading residential scale and virtual power plant (VPP) developments and playing a key role in the transition to higher penetrations of renewable energy.

As a leader in sustainable energy solutions, Tesla is committed to contributing to the development of a robust, efficient, and consumer-focused electricity market that supports the widespread integration of CER. We partner with leading energy retailers, renewable developers, and networks, and invest across the entire supply chain, reducing electricity costs and supporting reliability outcomes at both a system and household level. This has been directly demonstrated by our VPP offerings, including the SA VPP and the Tesla Energy Plan. Tesla is also uniquely positioned with a rapidly expanding EV fleet in Australia, complemented by our supercharging stations across the country. Optimising these products at both customer and fleet level offers additional opportunity to create a valuable flexible energy service – minimising future network strain in a way that provides system-wide benefits to all consumers.

Going forward, CER, VPPs, EVs and flexible loads are set to scale rapidly, integrating with the grid at all levels to become an increasingly critical component of Australia's energy mix.[1] As such, it is essential that new reforms do not directly, or inadvertently, disincentivise the uptake of these innovative products and services.

[1] https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2024-integrated-system-plan-isp

Tesla supports the AEMC centring this review around the customer by developing a set of principles to inform the assessment of potential solutions. In order to not reinvent the wheel, the AEMC should make use of the substantial existing research on consumer research. Such as, the ESB's commissioned work for the Customer Insights Collaboration project. The first topic focussed on barriers and enablers to consumers being rewarded for their flexible DER and flexible demand. [2] Three key findings that may be important for this review are:

- Consumers are diverse – they differ in terms of their motivation, ability, and opportunity
- 'Flexibility' is a new concept that is not well understood by consumers at either a product/service level, or how it fits into the broader changes underway in the energy system
- Trust around benefits sharing and in relation to delegating/retaining control is an important barrier/enabler

Tesla supports recommendations being made for both shorter- and longer-term to deliver substantial impact through the conclusion of this review. From our experience, we encourage as much of a focus on developing CER market mechanisms and price incentives, as on regulatory interventions. Our concern is that, in recent years, there has been more focus on the latter than the former.

Most CER that is installed in Australia today is smart and controllable, and capable of providing solutions that benefit the market, grid and customers in a much more sophisticated way than currently managed through developing blunt tools, such as emergency backstop mechanisms. The draft ToR is an important first step in considering the key principles and issues that should be covered within the comprehensive review. We are keen to continue to support the AEMC throughout the review process, as well as be involved in the Stakeholder Reference Group.

Kind regards,

Emily Gadaleta
Senior Energy Policy Advisor

[2] https://acilallen.com.au/uploads/projects/720/ACILAllen_BarriersEnablers2022.pdf

Feedback on key focus areas

1. Market arrangements for consumer choice:

Tesla agrees with the AEMC's emphasis on developing market arrangements that offer consumers a diverse range of products, services, and pricing options. It is crucial that these arrangements incentivise consumer participation in the energy market, particularly through the use of CER technologies. Tesla recommends further exploration of dynamic pricing models that can more effectively reflect the value of flexible energy consumption and generation, encouraging consumers to shift their usage patterns in ways that benefit both themselves and the broader grid. Tesla encourages the AEMC to explore new models that will better incentivise consumers to engage with the grid in a manner that meets them where they are, maximises the value of their CER assets and supports overall grid stability.

2. Role of distribution networks:

Distribution networks play an enabling role in providing consumer access to appropriate products, services, and incentives. Achieving the long-term interest of consumers in a consumer-driven future is critical on ensuring that they are paying no more than necessary for network infrastructure. The AEMC should review the evolution of distribution networks and update the way in which they are regulated and incentivised to adopt innovative technologies and practices that facilitate the integration of CER. Ensuring adequate regulation of the network monopolies will help to reduce infrastructure costs, enhance grid resilience, and enable streamlined integration of customer owned assets.

Distribution networks have infrastructure that directly connects to the customers home, although it is Tesla's view that they should not take a role in how customers utilise their assets. While there is a changing nature to the way in which customers interact with their energy, the role of the distribution network as a regulated monopoly should not start to encroach in spaces reserved for competitive markets. Below we have highlighted a few issues where we see opportunities for the AEMC to explore.

<u>Community and distribution connected batteries</u>

Tesla is highly supportive of the AEMC's position that successful integration benefits all consumers, including those without CER, who could enjoy direct and flow-on benefits such as from lower system costs and avoiding increases in network costs. The most cost-effective way to achieve this is through enabling the integration of large-scale storage (>5 MW) at the distribution level in a competitive marketplace. Larger scale storage projects are a much lower $/MW capex than "neighbourhood batteries" but face barriers in connecting to distribution (HV or ST) due to tariffs that are overly onerous, complex, and ill-suited to the impact storage has on network capacity.

Currently, tariffs for the batteries connecting into the distribution networks are being purely designed for <5 MW community batteries and are not reflective of the role and benefits of scheduled bi-directional units that participate in centralised dispatch, FCAS, and network support services. These batteries have little (or positive) impact on network hosting capacity with a marginal cost to networks

of 0 or negative, and thus should not be overcharged for DNSP cost recovery and TNSP cost pass through in the form of TUOS pass through.

Additionally, to achieve investor certainty in these projects, investors require certainty in what the tariff structures will be for the project duration (20 years). Currently, the 5-year regulatory determination periods (in combination with annual tariff trials for storage assets), leads to a high degree of uncertainty for the revenue and operational impacts on storage assets. Alternatively, these projects have the option to go on an individually calculated tariff (ICC), which has monopoly-power related asymmetries and less visibility, given these negotiations happen in parallel with the connection process, meaning these projects often become commercially infeasible compared with the equivalent installed at the transmission level. The AEMC should look to reassess the revenue determination processes to ensure they remain fit for purpose in a consumer driven energy future.

Tesla strongly believes that consumers will get the greatest levels of benefits and face the lowest costs when storage is built in a competitive marketplace rather than from a monopoly provider. For this reason, we strongly raise concern with proposals for DNSP-owned batteries. Tesla recommends that in the AEMC pricing review, the AEMC looks to take a level of equivalence in the approach to connection as transmission level, as we have outlined previously in the discussions around the Integrating Energy Storage Systems Rule Change (IESS).

The AER, in its explanatory statement to the Ringfencing Guideline – November 2021 highlights their thoughts regarding DNSPs owning and operating batteries:

"Battery technology is still relatively new and emerging. There are a number of potential deployment models, one of which involves DNSP ownership. Relative to other models, DNSP ownership of batteries presents risks to competition that needs to be carefully considered. As a result, we do not think that the research provides a conclusive position on this. DNSPs are only one of many potential providers of community-scale batteries. It is therefore important that the regulatory framework supports a range of deployment models."

"We are concerned that allowing DNSPs to actively engage in this market, without appropriate controls, risks the foreclosure of other players. This would not be in the long-term interest of consumers" and "It could mean that the benefits from batteries might not materialise to the same extent and may hinder innovation and competition from what is currently an emerging technology and market."[3]

Batteries present a range of benefits to consumers subject to the business model delivery. We agree with the AER that the full value stack of batteries can be realised through a third-party provider installed the battery scenario and that DNSP ownership and operation of batteries may diminish competition and innovation in this evolving market.

We urge the AEMC within this review to re-evaluate the impact that ring fencing applications have had on the competitive market in delivering outcomes for consumers. This should include review of the Ring-

[3] https://www.aer.gov.au/system/files/AER%20-%20Ring-fencing%20Guideline%20Explanatory%20Statement%20%28Electricity%20distribution%29%20Version%203%20-%20November%202021.pdf

fencing guidelines (electricity distribution) to ensure it remains fit for purpose in promoting competition in the provision of electricity services. A particular clause of note is that is of concern is that a ring-fencing application that relates to batteries that meets streamlining conditions does not have to be consulted on by the AER. The lack of transparency casts a shadow as to why an application should not be consulted on if it is operating in a competitive market and achieving long-term outcomes for consumers.

Import limits

A large, ongoing concern that Tesla has within the broader dynamic operating envelope space (distinct from flexible exports), is the use and introduction of flexible import limits. This mechanism stands in stark contrast to flexible export limits as they are not about controlling site exports that may have a direct impact on the grid, and instead result in DNSPs reaching behind the meter to control when and how customers are using energy – either from their own generation or from the grid.

In general, we believe that the market rationale for flexible or dynamic exports has been well established. Tesla understands the principles that networks have excess capacity to enable higher levels of export for the majority of the year but need to constrain exports during those high solar yield/ low load periods. The customer benefits of moving to flexible exports are also clear (based on the current SA Power Networks approach, and others that are under design). The status quo for standard static connections is 5kW, and customers have the potential to double that where they move to dynamic connections. We do not believe that the equivalent rationale for import controls has been considered. For instance, explaining to customers that they can install a 32A induction cooktop with no restriction, but cannot do the same for EV charging infrastructure, does not appear to have been justified.

A key concern for this pricing review to focus on is if a customer is paying a daily supply charge and an import limit is applied, is the same rate still applicable and/or in the long-term interest of consumers? Should consumers be paying for a supply that they do not receive, or for a supply that they do not receive when they need it?

Standardise integration of CER

A key cost issue currently facing industry is built on a lack of nationally consistent testing and certification processes, and the way in which standards are being interpreted differently by every network utility server. As mentioned above, we continue to hold concerns regarding the manner in which the dynamic control of CER assets is having mandatory controls applied to them by networks without any nationally consistent approach or consideration of the impact that this is having on manufacturers, retailers, installers, or customers. Industry is continually expected to build and rebuild similar but slightly different technical integrations for each network service provider, including up to 3 within a single jurisdiction. This lack of cohesion increases costs which ultimately impacts the customers who are purchasing these assets.

Non-network solutions

Tesla recommends that the AEMC review DNSPs historical utilisation of seeking out and taking up of non-network solutions. Non-network solutions can help to form part of an overall network reconfiguration strategy when a network asset has reached end-of-life to assist in achieving the right balance between reliability and the cost of network services.

3. **Role of retailers and energy service providers:**

Tesla agrees that retailers and energy service providers are pivotal in packaging and pricing electricity products in a manner that aligns with consumer preferences. We advocate for a regulatory environment that supports the entry and participation of innovative third-party service providers, including those offering aggregated CER services, VPPs, and other advanced energy management solutions.

The AEMC should ensure that the regulatory framework remains flexible and adaptive to support ongoing innovation in the energy sector. This includes accommodating new business models and technologies that may emerge as the energy transition progresses. Tesla also suggests that the AEMC explore mechanisms to accelerate the deployment of advanced grid technologies that enable the seamless integration of CER. Tesla appreciates the AEMC's proactive approach in addressing the evolving needs of consumers in the NEM and looks forward to continued engagement throughout the review process. We are confident that, with the right market arrangements and regulatory support, Australia can achieve a consumer-driven energy future that is both sustainable and economically beneficial for all stakeholders.

Effective consumer education and engagement are critical to the success of any market reform, especially during the significant transformation the energy sector is currently moving through. Tesla recommends that the AEMC consider additional initiatives to raise consumer awareness about the benefits of CER, as well as the available pricing options and incentives. This could include collaboration with industry stakeholders to develop clear, accessible information and tools that empower consumers to make informed decisions about their energy use.

A way in which customers receive information is through utilising trusted and easy to access tools, such as Energy Made Easy. We note that in the latest federal budget the Government committed $16.6 million over four years from 2024-25 for the AER to help households get onto a better plan by sustaining regulatory activities, upgrading data and digital systems to reduce regulatory burden and cost, and delivering better outcomes for consumers through the Energy Made Easy website.[4] Currently, Energy Made Easy is not compatible with displaying innovative products and services, nor is it designed to take into account flexible energy offers. This makes it extremely difficult when exploring the roll out of new products to be able to communicate them to customers in a clear and meaningful way.

This is a window of opportunity for the AEMC, together with other market bodies, jurisdictional governments, and industry to collaborate to ensure we are bringing the end customer along the energy transition journey as move towards mass adoption of new energy technologies. This will be critical in the success of this piece of work as there is a real risk if the process confuses, disengages, or excludes consumers more than they are already.

[4] https://budget.gov.au/content/bp2/download/bp2_2024-25.pdf