

7 October 2022



Mr Warwick Anderson
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Australian Energy Regulator

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Dear Warwick

Battery tariffs - Network tariffs for the DER future

Ausgrid is pleased to provide this submission to the Australian Energy Regulator (**AER**) in response to its Position Paper on the on the exploratory paper – Network Tariffs for the distributed energy future (**Position Paper**). Ausgrid operates a shared electricity network that powers the homes and businesses of more than 4 million Australians living and working in an area that covers over 22,000 square kilometres from the Sydney CBD to the Upper Hunter.

Ausgrid's recent experiences with batteries

We expect to see our new and existing customers investing in residential, commercial, community and grid-scale batteries over the coming years. Our forecasts suggest that the installed capacity of batteries on our network could grow to 1.7 GW of capacity by 2040. Tariffs that encourage customers with batteries to consider network costs and provide support at times when we experience voltage and demand challenges could benefit all our customers.

Batteries and other energy storage systems present a huge opportunity for the Australian energy sector. As a distribution network, Ausgrid has a particular interest in:

- How batteries can help Ausgrid and other distribution networks to efficiently manage network voltage and peak demand,
- How we can set prices for batteries that do not create inefficient barriers to deployment but remain fair, and
- How the inherent flexibility of batteries can be harnessed to increase network utilisation without driving new costs.

We are currently trialling a critical peak pricing tariff for community batteries as a sub-threshold tariff. This community battery trial tariff includes two event-based components:

- Rewards when the battery discharges electricity during peak demand events (or takes load during minimum demand events); and
- Charges if the battery takes load during peak demand events (or discharges during minimum demand events).

The level of these two payment/charge components is set to reflect the long run marginal cost of consumption and export services. Community batteries that provide network support over 20 events will earn payments equal to their annual network access charge. This effectively gives a

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community battery free access to the network if it provides Ausgrid¹ with network support throughout the year.

In addition, to support the concept of community electricity, the tariff includes a local use of system (LUOS) charge. This means that energy from local storage or generation (and not from the upstream network) is charged at a discount. This could allow retailers and third parties to offer new products (such as virtual storage) and may enable schemes such as customers donating excess exports to local charities.

Responses to the consultation paper

The Position Paper lists the 'accepted general principles for tariff setting' on page 6. Ausgrid notes that these general principles for tariff setting differ from the National Electricity Rules pricing principles (CI 6.18.5). We seek clarification from the AER on the extent the general principles described in the Position Paper will be considered in future annual pricing proposals and Tariff Structure Statements.

Locational pricing (Section 2.3)

The Position Paper raises the useful and timely question of whether to implement locational export charges. We see potential benefits of locational export charges, however, in our consultation for our 2024-29 regulatory reset process we have found that community members identified a preference for a single network-wide export price across the Ausgrid network.

We are also exploring the question raised in the Position Paper about whether prices for batteries should be based on long-run or short-run marginal cost (page 13). We are currently exploring this issue in Project Edith, where we are testing the ability of pricing for highly responsive customers to support the network and reduce the economic costs of dynamic operating environments. With the introduction of batteries and information technology that can respond to price in real time, some customers may have greater control of when they import, export or island from the network, potentially making short-run marginal cost pricing an effective pricing method for these customers.

Transmission costs (Section 2.6)

We also agree with the Position Paper that it is important that there is a level playing field for transmission and distribution connected batteries. The current regulatory framework allows negotiated connection arrangements for transmission and dual function asset connections but not for distribution connections. This means distribution networks are at a disadvantage from connecting new large-scale batteries and this inconsistency could delay or even deter the efficient introduction of this new technology in our network.

Network control of flexible load (Section 2.4)

At Ausgrid, we are not seeking to introduce network control of customers batteries and other energy resources. In Project Edith, we are exploring an optional tariff that will provide real-time price signals supported, when necessary, by dynamic operating envelopes. We consider that pricing, accompanied by transparency, should create opportunities for customers and their agents to optimise investments in batteries and how they use batteries on our network. The use of real-time pricing should minimise the need for a hierarchy of instructions for when network and wholesale market needs are not in alignment.

¹ The Community Battery tariff is available to all batteries connected to the LV Network. Within the Ausgrid Community Battery trial we are testing both direct dispatch and response to price events to compare the effectiveness of these two approaches.

In rare situations where pricing fails to manage demand from batteries, we expect the dynamic operating envelopes within Project Edith can provide a guardrail against battery use that could damage our network. In general, we consider network control has been a simple and cost-effective solution and that over time this should evolve towards dynamic operating envelopes rather than direct network control of devices.

Local Use of System pricing (Section 2.5)

We support the Position Paper's view that successful and sustainable LUOS pricing requires customers to make a fair and ongoing contribution to residual network costs. As described above, in July 2022 Ausgrid began offering a subthreshold community battery tariff that includes LUOS charging. We intend to review this tariff as we learn more about how battery operators respond to LUOS pricing.

Jurisdictional schemes and residual costs (Sections 2.7 & 2.8)

We consider that the NER residual cost recovery pricing principle (NER 6.18.5(g)(iii)) should guide networks when allocating a fair proportion of residual costs to prices for batteries and other flexible loads. Additionally, we consider Governments and networks should consider applying this principle when designing and allocating jurisdictional scheme costs.

At Ausgrid, we are exploring a variety of tariff designs to support efficient battery investment in our network. This includes the community battery tariff, Project Edith, and further tariff trials including a grid connected battery trial tariff.

Efficient tariff design (Section 2.10)

We agree with the Position Paper that it is generally important to test pricing structures through tariff trials for unintended consequences. However, it is important to note that subthreshold tariffs can be removed with 4 months' notice and the increased threshold will expire for Ausgrid in 2029 and all distributors by 2033. In some instances, the uncertainty created by the trial nature of subthreshold tariffs could reduce investment certainty and may inefficiently deter investment. Our recent discussions with large battery proponents have confirmed that this is the case.

We also agree with the Position Paper that aggregated tariffs for retailers have significant challenges to overcome, including encouraging retailer incumbency.

Role of retailers (Section 3.4)

We agree with the view expressed in the Position Paper that retailers should have the freedom to package network charges how they see fit. We consider that it is the retailers' role to translate the complexity of the energy system into end-use products tailored to their customers' needs.

Looking ahead

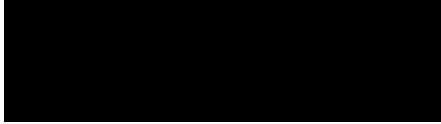
During the 2024-29 period, we aim to further develop innovative energy storage tariffs. We are considering trials of the following:

- Locational peak charges and location-based critical peak events for community batteries;
- Critical peak pricing tariffs (potentially locational) that apply to small business and household price responsive electricity technology including batteries, rooftop solar, water heating and electric vehicle charging; and
- Locational critical peak pricing tariffs for grid scale batteries and hydrogen electrolyzers. This approach should allow hydrogen electrolyzers to receive a 90% reduction in

network charges when they are located in areas with no constraint and respond to critical demand events, in line with the NSW Government's 2021 Hydrogen Strategy.

We welcome further discussions with the AER on our network tariff innovation for batteries. If the AER has any questions in relation to this submission, please contact Bill Nixey, Manager Network Pricing, in the first instance on [REDACTED].

Regards,



Rob Amphlett Lewis
Chief Customer Officer