

AEMC
Pricing Review Panel

Confidential information has been omitted for the purposes of section 24 of the Australian Energy Market Commission Establishment Act 2004 (SA) and sections 31 and 48 of the National Electricity Law/sections 223 and 234 of the National Energy Retail Law.



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Submission on the AEMC Pricing Review Discussion Paper

Dear Sir /Madam,

My husband and I are enthusiastic supporters of, and investors in, consumer energy resources (CER). We own 20 KW of rooftop solar panels and over 100 KWh of household battery storage (including our EV) across our family home and our holiday rental property. We have trialled different retailers including Amber and OVO for EVs and we are about to participate in a trial V2G arrangement with Sigenenergy and Energy Queensland. We are small scale participants in the CER market with genuine 'skin in the game'.

Thank you for publishing the AEMC **Discussion Paper: The Pricing Review** (June 2025) and inviting submissions from members of the public on its content.

I note your review has two fundamental objectives stated at page 4:

- Ensuring that the pricing framework supports the availability of the products and services that consumers want in the future; while also
- Delivering a lower-cost system for all consumers.

I note also your review poses three more specific questions:

1. Can we rely on competition in the retail market to deliver the mix of products and services that customers value?
2. How can better outcomes for consumers be enabled through network tariff-setting processes?
3. What role can network tariffs play in meeting customer preferences whilst also contributing to lower costs?

Please see below my response to these specific questions and a final reflection on the potential for developing solar and storage in commercial and industrial settings.

1. Context: The distributed, low voltage network provides a huge amount of untapped potential for low-cost energy supply and transmission.

A 2019 report by the University of New South Wales estimated the total potential for rooftop solar in Australia is 179 gigawatts (at that time) with an annual energy output of 245 terawatt-hours.¹ The **2025 draft Electricity Network Options Report**, published by AEMO in preparation for the 2026 ISP, identifies a huge amount of under-utilised transmission capacity in the low voltage, distributed network where most CER is located. According to AEMO, we could add more than 57 GW of consumer energy resources (CER) to our local grids at little to no extra cost with sufficient load shifting.² This contrasts with the exponential growth in long distance transmission costs identified in the 2025 draft Electricity Network Options Report. After accounting for inflation, AEMO estimates a 25% to 55% increase in real costs for overhead, long distance, transmission line projects compared to equivalent cost estimates prepared for the 2024 ISP.³

The facts speak for themselves: it is time to ramp up efforts to ensure the solar capacity in our built environment and the distributed networks that serve them are utilised to the full.⁴ To make that happen, greater support for CER is warranted. Acknowledging the significant contribution the Cheaper Home Battery Program will make, tariff reform is probably the next most important lever capable of supporting greater uptake of CER. In this respect, I applaud the objectives of this consultation, and I premise my recommendations on the potential for distributed CER identified by AEMO.

2. Can we rely on competition in the retail market to deliver the mix of products and services that customers value?

No, I believe not. For instance, to date, most retailers have failed to offer meaningful VPP /export rates that incentivise feed-in to the grid from CER enabled households during peak demand times.⁵ VPPs are commonly viewed unfavourably. They are seen as offering poor value and limited flexibility whilst necessitating ‘outside control’ over the assets CER enabled customers have invested in.⁶ Consumers are reluctant to hand over control to large energy companies from

¹ ISF/SPREE/ APVI, How much rooftop solar can be installed in Australia? Report prepared for the CEFC in 2019, p.5.

² AEMO, Draft 2025 Statement of Electricity Network Options Report at pp.181-189 https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2025/2025-electricity-network-options-report/draft-2025-electricity-network-options-report.pdf?la=en

³ AEMO, Draft 2025 Statement of Electricity Network Options Report, at p. 5.

⁴ S Bashir, Putting the Power in Peoples’ Hands, Nexa Advisory, October 2023, p.5 <https://nexaadvisory.com.au/putting-the-power-in-peoples-hands/>

⁵ A Delaney, Virtual Power plants will fail without an industry overhaul that puts consumers first” One Step off the Grid, 13 November 2024 <https://onestepoffthegrid.com.au/virtual-power-plants-will-fail-without-an-industry-overhaul-that-puts-the-consumer-first/>

⁶ A Delaney, Virtual Power plants will fail without an industry overhaul that puts consumers first” One Step off the Grid, 13 November 2024 <https://onestepoffthegrid.com.au/virtual-power-plants-will-fail-without-an-industry-overhaul-that-puts-the-consumer-first/>

which they have just obtained a degree of independence and where there is a huge trust deficit.⁷ Anecdotal evidence suggests many households are now over-sizing their battery purchases to maximise their benefit from the Cheaper Home Battery Program. This underscores the lost opportunity for households and the grid if VPPs do not reorient to better align with consumer interests.

Most retail offerings have also flattened out innovative network tariff structures – such as cheap, solar sponge (solar soaker) rates in the middle of the day – limiting the choice and incentives to customers on the assumption there is no appetite for competitive time of use tariffs.⁸

One company, Amber, has chosen a different type of market offering – to pass on the wholesale price direct to customers. This offering is proving popular with some CER enabled households but, even with Amber, we personally have found profit margins are tight and occasional ‘wins’ are infrequent and unpredictable. The recent change to a midday solar sponge tariff in Queensland has helped improve the overall rate of return when we purchase power from the grid – but it does nothing to incentivise (or reward) further investment in rooftop solar.

Fixed, feed-in tariff rates have worked effectively in the past to encourage the rapid adoption of rooftop solar.⁹ A similar strategy is now required to support CER participation in the market within the distributed network. No one takes pleasure in tariff shopping. Consumers will not be motivated to participate in VPPs without being paid a decent rate for their participation. This recommendation is further developed below.

3. *How can better outcomes for consumers be enabled through network tariff-setting processes? What role can network tariffs play in meeting customer preferences whilst also contributing to lower costs?*

I have six recommendations:

3.1 Abolish the (network) negative solar feed-in tariff (the so called ‘sun tax’): This sends the wrong signal to consumers despite its modest (and therefore largely inconsequential) amount.¹⁰ It feels manifestly unfair to everyone that households that contribute an essential resource – electricity – will be punished for doing so. It also denies the reality that rooftop

⁷ S Bashir, Putting the Power in Peoples’ Hands, Nexa Advisory, October 2023, p.7

<https://nexaadvisory.com.au/putting-the-power-in-peoples-hands/>

⁸ F Vierboom, Sun taxes and surprise tariffs: Why alienate consumers right when we need them most? One Step off the Grid, 14 June 2024 <https://onestepoffthegrid.com.au/sun-taxes-and-surprise-tariffs-why-alienate-consumers-right-when-we-need-them-most/>

⁹ Simshauser, Nelson and Gilmore, The sunshine state: cause and effects of mass rooftop solar PV take-up rates in Queensland April 2022 https://www.griffith.edu.au/_data/assets/pdf_file/0033/1799250/No.2022-05-Queensland-Solar-Cause-and-effects-of-mass-rooftop-solar-PV-take-up-rates.pdf

¹⁰ F Vierboom, Sun taxes and surprise tariffs: Why alienate consumers right when we need them most? One Step off the Grid, 14 June 2024 <https://onestepoffthegrid.com.au/sun-taxes-and-surprise-tariffs-why-alienate-consumers-right-when-we-need-them-most/>; S Bashir, Putting the Power in Peoples’ Hands, Nexa Advisory, October 2023, p.3 <https://nexaadvisory.com.au/putting-the-power-in-peoples-hands/>

solar is increasingly feeding into utility scale batteries¹¹ for little or no cost only to be sold back to consumers for many times that price in the evening – a case of daylight robbery quite literally.

3.2 Eliminate the (network) demand charge: The majority of consumers do not understand the network demand charge and it unfairly discriminates against those who can least afford to pay it (that is, households without their own access to CER).¹² The reality is busy families and households need to cook dinner and cool and heat their homes in the evenings when they occupy them. Network based time of use tariffs already factor in peak demand charges and are more transparent in their application. If any additional measure is needed at all (for instance, to disincentivise EV charging during peak demand times), a surcharge for heavy users (over and above average household use) across a whole billing period (not just a half hour time slot) would be a more transparent and fairer levy.

Additional network demand charges are premised on a Capex not Opex model for future supply (in which the user pays for past, existing and future planned growth in maximum demand calculated as an additional infrastructure requirement).¹³ It is anticipated the Cheaper Home Batteries Program and the rapid expansion of big batteries will help reduce peak demand.¹⁴ If this evolution is nurtured and carefully managed, and recognising the sizeable under-utilised capacity in the distribution network identified by AEMO¹⁵, there should be no need for further expansion of the poles and wires to accommodate (speculative) future demand in the distributed network.¹⁶

3.3 Provide a fixed rate, supplementary, peak hour feed-in rate for CER enabled customers: As argued above, a short term, guaranteed, supplementary payment for feed-in exports to the grid during peak hours will encourage greater participation in the market by CER enabled households, including households able to offer vehicle-to-grid services -

¹¹ S Vorath, Australia's biggest battery proposed to soak up Brisbane rooftop solar, Renew Economy, 14 June, 2024 <https://reneweconomy.com.au/australias-biggest-battery-proposed-to-soak-up-brisbane-rooftop-solar/>

¹² F Vierboom, Sun taxes and surprise tariffs: Why alienate consumers right when we need them most? One Step off the Grid, 14 June 2024 <https://onestepoffthegrid.com.au/sun-taxes-and-surprise-tariffs-why-alienate-consumers-right-when-we-need-them-most/>

¹³ ECA, Cost reflective network tariffs are 'nt cost reflective, 2024 <https://energyconsumersaustralia.com.au/sites/default/files/wp-documents/report-cost-reflective-network-tariffs-arent-cost-reflective-3.pdf>

¹⁴ Australian Government, Cheaper Home Battery Program, <https://www.dcccew.gov.au/energy/programs/cheaper-home-batteries>

¹⁵ AEMO, Draft 2025 Statement of Electricity Network Options Report at pp.181-189 https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2025/2025-electricity-network-options-report/draft-2025-electricity-network-options-report.pdf?la=en

¹⁶ ECA, Cost reflective network tariffs are 'nt cost reflective, 2024 <https://energyconsumersaustralia.com.au/sites/default/files/wp-documents/report-cost-reflective-network-tariffs-arent-cost-reflective-3.pdf>

where the wear and tear on vehicle batteries will be a real cost borne by vehicle owners.¹⁷ Small businesses should also be eligible for this supplementary, feed-in rate capped, for instance, at up to 500 KWh of peak hour feed-in supply.¹⁸

This recommendation, as with previous ones, is premised on an Opex not Capex model of future supply within the distributed network.¹⁹ It assumes there will be significant overall savings for the transition to renewable energy when CER enabled customers are appropriately incentivised to rapidly increase their supply into the distributed network.²⁰

As the proposed feed-in tariff rate will serve to reduce the need for further investment in Capex, a like-for-like cost recovery is not required – it pays for itself in future investment foregone.²¹ If, however, any cost recovery is required, a surcharge on heavy users of the grid during night-time (currently off peak) hours might be most appropriate. These customers are relying on the most expensive, least reliable and most polluting sources of supply (from coal and gas) into the grid.²²

Care must be taken, to ensure the burden of the proposed supplementary peak feed-in tariff is not passed on to households that are not CER enabled.²³ Equity demands that households using relatively small amounts of network supplied electricity during peak evening demand should not be responsible for footing the bill.

3.4 Make night-time use the new peak demand period: The network tariff rate for night-time use - after 9.00 pm - should be raised significantly – because the new reality is this time of day is when it is most expensive to supply (mostly coal and gas generated) electricity to the

¹⁷ ECA, Cost reflective network tariffs are not cost reflective, 2024

<https://energyconsumersaustralia.com.au/sites/default/files/wp-documents/report-cost-reflective-network-tariffs-arent-cost-reflective-3.pdf>

¹⁸ This would stretch the incentive supplied by the Cheaper Household Battery Program. Operators with greater capacity could be covered by the small scale, Capacity Investment Scheme (CIS) proposed below.

¹⁹ S Bashir, Accelerating Consumer Energy in Australia, April 2024, Nexa Advisory, Solar Citizens at <https://nexaadvisory.com.au/web/wp-content/uploads/2024/05/Nexa-Advisory-Accelerating-CER-in-Australia.pdf>

²⁰ This was the case in Germany. See, A Delaney, Virtual Power plants will fail without an industry overhaul that puts consumers first” One Step off the Grid, 13 November 2024 <https://onestepoffthegrid.com.au/virtual-power-plants-will-fail-without-an-industry-overhaul-that-puts-the-consumer-first/>

²¹ A Delaney, Virtual Power plants will fail without an industry overhaul that puts consumers first” One Step off the Grid, 13 November 2024 <https://onestepoffthegrid.com.au/virtual-power-plants-will-fail-without-an-industry-overhaul-that-puts-the-consumer-first/>

²² S Vorath, Solar and wind power half the cost of coal and gas, one third the cost of nuclear says Lazard, Renew Economy, 17 June 2024 <https://reneweconomy.com.au/wind-and-solar-power-half-the-cost-of-coal-and-gas-one-third-the-cost-of-nuclear-says-lazard/>

²³ Acknowledging that past subsidized feed-in tariff rates have often been regressive in nature. Simshauser, Nelson and Gilmore, The sunshine state: cause and effects of mass rooftop solar PV take-up rates in Queensland April 2022 https://www.griffith.edu.au/_data/assets/pdf_file/0033/1799250/No.2022-05-Queensland-Solar-Cause-and-effects-of-mass-rooftop-solar-PV-take-up-rates.pdf

grid.²⁴ The coal powered stations supplying this electricity are expensive to run even without factoring in their costs to the climate.²⁵ Those who rely on this power should be required to pay the true price for it. A higher night-time tariff will encourage load shifting to daytime hours when renewable energy production is maximised. It would help to offset the feed-in tariff rate for CER in the peak evening demand period, as proposed above.

3.5 Extend the length of solar sponge tariffs (incorporating zero poles and wires charges) to match high solar production seasons and encourage load shifting: Solar sponge tariffs are a welcome development for CER enabled customers, like myself, who can use it to charge their surplus battery capacity. The solar soaker tariff is a good complement to the Cheaper Home Batteries Program, as the incentive to over capitalise on storage is enhanced. If that surplus battery capacity is channelled back into the grid, there will be downward pressure on evening prices for the benefit of all customers – hence the need to make VPP offerings more attractive.

Even without battery storage, some people may be able to adapt their use to match the price signal the solar sponge tariff provides, if it is passed on to consumers by their retailers. Extending the solar sponge period during the summer months, when rooftop solar is even more abundant, could make it easier for some non-CER enabled households to participate in this type of load shifting behaviour.²⁶

3.6 Pass on network savings to remote communities transitioning to microgrids based on local renewable energy: Network charges should be reduced for remote communities switching from expensive, long-distance, transmission-based energy supply to microgrids based on renewable energy. This transition creates considerable cost savings for the grid operator. They should be required to pass on at least some of those savings to these remote (and often marginalised) communities. It may also be possible to offer participants in other locally based, not for profit or peer to peer VPPs a reduction in transmission costs.

4. Additional comment

The commercial and industrial sector can play a much more active role in distributed network services.²⁷ The investment-reward gap may be even more gaping for these commercial customers who have the capacity – but need a sufficient incentive – to make significant upfront

²⁴ S Vorrath, Regulator confirms another coal and gas fuelled power price hike, but why?, Renew Economy, 25 May 2023 <https://reneweconomy.com.au/regulator-confirms-another-coal-and-gas-fuelled-power-price-hike-but-why/>

²⁵ S Vorrath, Solar and wind power half the cost of coal and gas, one third the cost of nuclear says Lazard, Renew Economy, 17 June 2024 <https://reneweconomy.com.au/wind-and-solar-power-half-the-cost-of-coal-and-gas-one-third-the-cost-of-nuclear-says-lazard/>

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²⁷ Business View, Australia leading the way in rooftop solar, 11 August 2024, <https://business.nab.com.au/heres-why-roof-top-solars-future-is-supercharged/>

investments in megawatt scale energy storage with a view to providing CER services.²⁸ I understand participating in FCAS and grid support services has been rewarding for some early adopters.²⁹ As more companies enter the market, there is no guarantee these services will continue to be sufficiently lucrative to stimulate significant upfront capital investment on a scale that can – and should - be accommodated in the distributed network.³⁰ To de-risk this investment, these potential market participants need a small-scale Capacity Investment Scheme (CIS) that will underwrite a minimum rate of return on their investment over a ten year period factoring in their presumed participation in various available - but highly volatile - wholesale energy markets (eg. FCAS and grid support services). Targeted loan schemes may also be warranted. I understand these recommendations fall outside the scope of this review.

Thank you for allowing me this opportunity to make a submission to the Pricing Review.

Regards.

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²⁸ See, Smart Commercial Solar, Huon Hougesteger, All Stick, No Carrot: Incentivising Demand Management 2024, Smart Commercial Solar at

<https://www.smartcommercialsolar.com.au/resources/incentivising-demand-management>

²⁹ S Vorrath, IKEA Adelaide solar and battery microgrid first big step to 100% onsite solar, 15 October 2020 <https://reneweconomy.com.au/ikea-adelaide-solar-and-battery-microgrid-first-big-step-to-100-onsite-solar-power-66158/>

³⁰ M Petrass, Frequency control ancillary services (FCAS) price collapse: Inevitable or avoidable? Energy Insights <https://blog.energy-insights.com.au/frequency-control-ancillary-services-fcas-price-collapse-inevitable-or-avoidable#:~:text=FCAS%20market%20saturation%20and%20the,distribution%20costs%20when%20well%2Dsited>