



Submission to AEMC on The pricing review: Electricity pricing for a consumer-driven future

Zero Emissions Noosa Inc. applauds the AEMC for undertaking this review as part of the Consumer Energy Resources (CER) Roadmap, to realise the benefits of CER for all energy consumers, including those without CER. CER is the missing link in the transition process.

It will also help to integrate CER into the NEM to deliver lower overall costs for everyone.

Question 1: Do you consider that we should make any changes to our proposed approach to this review?

It is heartening to read that the AEMC will include consumer groups and advocates, including remote and regional consumers, and small and large businesses in the Review. However, this representation needs to include the many local communities working away right around Australia, providing CER and community energy solutions for their communities. These community energy groups need to be part of any future Stakeholder Reference Group to provide the on the ground lived experience about how they are enabling the energy transition to take place. They are currently not well recognised for the role they are playing as the “missing link” the energy transition.

One of the early groups in this space was Totally Renewable Yackandandah (TRY) whose goal is to power their town with 100% renewable energy.

We at Zero Emissions Noosa Inc. are making inroads into the provision of CER in our local community. We are working with the Noosa Shire community towards net zero greenhouse gases. It was to have been done by 2026, but we have recently taken that aspirational target out of our vision statement. However, during 2025, one of our CER assets will be the only community owned community battery in Qld., with the other community batteries in Qld. owned and operated by the DNSP's Energex & Ergon.

The Coalition for Community Energy (C4CE) is the peak body of the growing community energy sector in Australia. It has more than 105 member groups across Australia who are transforming their communities to zero-net emissions. C4Ce is about:

- **Decarbonise** our energy supply
- **Decentralise** our energy supply
- **Democratise** our energy system
- **Demonstrate** that a clean energy future is possible.

Saul Griffith's Rewiring Australia program currently has more than 50 communities electrifying their postcode areas to save their community members money on their energy bills and help to save the planet.

The SMART Energy Council of Australia should also be included as they are the key policy development group for the renewables industry annually.

Having some face to face community consultations in these communities and getting a really good understanding for what they are putting into making the energy transition at the CER level, would assist the review at the “grassroots”, i.e. where the consumer lives.

Question 2: What are your views on our proposed Consumer Preference Principles?

They should include clearer reference to reduction of greenhouse gas emissions, given Federal and State legislated targets

- Are you aware of additional existing research that could help us refine the CPPs?

No

- How might the CPPs help us in assessing whether our decisions will lead to good consumer outcomes?

Consumer Preference Principles (CPPs) capture the enduring elements of customer wants and needs:

- **Value for money** – customers want affordability and value
- **Availability** – customers want electricity to be available when they need it
- **Meaningful options** – customers want options from a range of products that meet their needs
- **Simple engagement** – customers want accurate and accessible information from interactions with their service providers
- **Appropriate protections** – customers want to be protected against adverse product and service outcomes

The CPP’s can be used as the test for all proposals to help assess whether the AEMC decisions will lead to good consumer outcomes or not, i.e. do all proposals meet the CPP’s.

Question 3: What are your views on our proposed Consumer Archetypes?

For the purposes of this review:

- Do the Consumer Archetypes capture the diversity of future energy consumers?
While the AEMC **Consumer Archetypes** capture much of the diversity of customers in the future:
- **‘Not to be left behind’** – low resources and interest to engage
- **‘Behind barriers’** – low resources, high interest to engage
- **‘Full of potential’** – high resources, low interest to engage
- **‘Embracers’** – high resources and interest to engage

They do not include those affected by high voltage transmission lines who are becoming increasingly vocal. A new archetype could be **Impacted persons**.

- Do you agree that engagement is the primary axis of differentiation among electricity customers?

No. Equally there is the issue of ability to install and benefit from renewable initiatives, e.g. installation of BTM batteries to avoid time of use, increased costs, or benefit from vehicle-to-grid capability of EVs.

Question 4: We want stakeholders to help us imagine the widest range of possible future products, services, and pricing structures. How might they look in the future? For example, you might consider:

- How have products and services evolved in similar markets that were disrupted by new technologies, for example, in telecommunications and point-to-point transport?
- What new innovations are we starting to see in current offerings?

Energy will be much more decentralised and localised. Consumers will get their energy from locally generated sources e.g. a community battery, if they have CER. One of the first challenges is how that energy is shared with those who don't have CER. Those that invest in CER are somewhat reluctant to give away the benefits of CER to those that haven't invested in CER.

Therefore, to make decentralised systems work, there needs to be a pricing mechanism in place whereby the person with CER is paid to share their excess solar, for example, with their neighbour by exporting their excess solar to a community battery.

Likewise, there needs to be a pricing mechanism for their neighbour, to buy the energy that he needs from the community battery.

Vehicle-to-grid capability is just over the horizon and will both benefit those able to take advantage of it and could have an impact on peak demand periods.

- What electricity products and services are available internationally that aren't available here?

- Which technological trends may impact the electricity market, beyond those already discussed in this paper?

Community batteries demonstrate all the benefits for consumers of CER technologies including:

- flexibility in how and when they use energy so they can save money within their own home or business
 - having the option to allow their CER technologies to be used in the wider power system and to be rewarded for that
- contributing to the achievement of a net zero energy system
- lower overall spending on network infrastructure.

Community batteries also demonstrate all the benefits for consumers without CER technologies including:

- Reduced costs for all consumers who are connected to the community battery, as they don't have to purchase power from fossil fuel providers during the time they are drawing from the community battery
- Avoiding costs of upgrading the network as a result of greater energy availability locally from CER resources
- As EV's are integrated into the CER energy system, lowering energy costs everyone benefits, whether they have CER or not

Community batteries have the ability to reduce long term infrastructure costs, but DNSPs have different approaches on matters such as connection costs and network tariffs which affect their uptake across different states.

Appendix A, the COMPARISON OF STORAGE TARIFFS BY VICTORIAN, NEW SOUTH WALES AND QUEENSLAND DNSPs, highlights that some distributors are charging tariffs which make community owned batteries potentially financially viable. For example, Citipower (Powercor & United Energy in Vic) have set very reasonable tariffs; including the annual fee, import and export rates (45c/day, -1.5c/kWh 10am-3pm, -1c/kWh 4pm-9pm).

Endeavour Energy (NSW) likewise have a reasonable annual fee and export tariffs that vary by season (\$408 per annum, -11.036c/kWh Nov to Mar, 3.337c/kWh Apr to Oct).

However, some other DNSP's like Essential Energy in NSW and Energex in Queensland, both have annual fees that are much higher than other states and in the case of Energex, have no import or export rebates, making the net operational costs or benefits negative to the tune of -\$3041 and for Essential Energy and -\$6513 for Energex. If a number of DNSP's can make the community battery model financially viable, especially those in the same state e.g. NSW, why can't all DNSP's make the community battery model financially viable to incentivise investors to invest in community batteries as a key CER plank in the successful transition to renewable energy?

- What types of pricing structures might align well with the proposed Consumer Preference Principles?

Under the existing arrangements, network pricing is subject to economic regulation, while retail prices are determined largely by market competition, with more limited regulation in place.

As customers' bills comprise both network and retail components, though these components are not necessarily designed with the same objective in mind. These two components need to be better integrated with the network component able to be changed by the AER for customer benefit. .

Question 5: How could electricity products, services, and pricing structures be presented to serve future consumers?

Time of use pricing is important and necessary, but consumers will need a lot of information on how it works and how best to structure their electricity use.

Consumers are installing small storage systems behind the meter, for example 10kWh to 20kWh batteries at households. Some state governments are offering rebates to make the investment in a behind the meter battery more attractive. Small incentives are offered to behind the meter customers to be part of a VPP, which of course means staying connected to the grid. The rebates and incentives to stay connected to the grid and to become part of a VPP are 'weak'. Strengthening incentives to become and remain part of 'coordinated CER storage' is desirable.

Question 6: How could consumer protections be balanced to enable further innovation in a future retail electricity market?

Electricity retailers now include a 'Demand (KW/Day)' charge on electricity bills (if customers have a 'smart' meter). This can be a substantial part of the customer's bill. The main concern is that - customers rarely understand what it is . It started being added without much 'notice'. It is calculated and described in a way that is hard for customers to know what it is, how to reduce it.

One of our board member's electricity bill says Demand - 7 days a week: 4pm to 9pm.

A kW is an instantaneous measure, ie if you turn on a 1000W (1kW) radiator it is 'using' 1000W or 1kW. If its on for one hour, it will have used 1000Wh or 1kWh.

'Smart' meters record kWh usage for every 5 minutes of every day.

The kW Demand for each billing period is determined by finding the 30 minute period with the highest kWh consumption, doubling it and calling the result max or kW Demand for the period.

It may not matter that the amount is derived this way, as opposed to determining the actual maximum kW demand, i.e. the one second you had the a/c on, the microwave on and you turned the kettle on. But retailers should be telling you when the 'max demand' occurred in case you want to do something about it. Businesses have had max demand included on electricity bills for years. Businesses (in Victoria at least) get told when the max demand occurs and some have implemented

energy management systems so that not too many things can be on at once; or have installed a battery to limit max demand.

Question 7: What barriers will need to be addressed to deliver future consumers a meaningful and beneficial range of products, services, and pricing structures? How might we consider addressing those barriers?

- Consider the changes that are happening in the system now - what barriers might either endure or emerge post 2035?

We need to support the groups identified, including low income, renters, strata, leasehold businesses. Plus EV charging capacity for apartments.

Question 8: What should network tariffs look like in the future?

- What are the key choices and trade-offs we should consider when answering this question? Tariffs should reflect NER objectives, of which latest amendment re complying with legislated greenhouse gas emission reduction targets is fundamental. AER currently does not appear to have the power to require DNSP tariffs to reflect this??

Network tariffs should be adaptable.

Refer to the answer to Q. 4 and Appendix A. for an example using tariffs for community batteries .

Question 9: How should the role of energy supply businesses evolve to meet customer and energy system needs in the future?

With the rapid uptake of CER in Australia, the energy supply businesses evolve to become an enabler (connecting the customer to the provider) of their needs, for the customer to choose their energy services rather than the energy supply business being the provider as is the case now.

Question 10: What changes might be required in the future to the interfaces between different energy supply businesses?

Question 11: Do you have any feedback on our proposed assessment criteria?

The proposed assessment criteria are:

1. Outcomes for consumers
2. Principles of market efficiency:
3. Innovation and flexibility
4. Implementation considerations:
5. Principles of good regulatory practice:

They all seem to reflect the purpose of this review.

Appendix A

COMPARISON OF STORAGE TARIFFS BY VICTORIAN, NEW SOUTH WALES AND QUEENSLAND DNSPs

(using Noosaville 120kW/360kWH capacity to compare like for like and assuming only 80% of capacity is used for storage and export)

DNSP	STATE	ANNUAL FEE	ANNUAL IMPORT REBATE	ANNUAL EXPORT REBATE	NET OPERATIONAL COST OR BENEFIT	COMMENT BY DNSP IN TRIAL TARIFF PROPOSAL
Powercor*	Victoria				+\$2463	

DNSP	STATE	ANNUAL FEE	ANNUAL IMPORT REBATE	ANNUAL EXPORT REBATE	NET OPERATIONAL COST OR BENEFIT	COMMENT BY DNSP IN TRIAL TARIFF PROPOSAL
United Energy*	Victoria	\$164 ¹				<i>The trial tariff encourages network usage when there is generally low network demand and discourage network usage when there is generally high network demand. The trial tariff results in a net rebate to community batteries which generally flatten the local demand/export profile.</i>
Citipower*	Victoria		\$1576 ²	\$1051 ³		
Jemena	Victoria	\$3012	\$1179 ⁴	\$1577 ⁵	-\$256	<i>This tariff is expected to incentivise uptake of batteries. The tariff will provide pricing signals to battery operators to provide network support, and the installation of a sufficiently large number of batteries will provide cheaper electricity to the grid lowering the tariffs for all network customers over time.</i>
Essential Energy*	NSW	\$7001 ⁶	0	\$3960 ⁷	-\$3041 ???	<i>The behavioural incentives intended by the trial tariff will target storage operation that inversely responds to the network cost drivers being imposed by other customers — that is, consuming at times of distribution system daily minimum demand and exporting at times of distribution system daily maximum demand.</i>
Endeavour*	NSW	\$408	0	\$4765 ⁸	+\$4358	

¹ Based on 45 cents per day.

² Calculated at 1.5 cents/kWh between 10am-3pm x 365 days at 80% of 360 kWh capacity

³ Calculated at 1.0 cents/kWh between 4-9 pm x 365 days at 80% of 360 kWh capacity

⁴ Calculated as 1.5 cents/kWh from September to May (273 days) at 80% of 360 kWh capacity

⁵ Calculated as 1.5 cents/kWh between 3-9 pm all year at 80% of 360 kWh capacity

⁶ Calculated as \$19.1811 per day

⁷ Calculated as (4.8793-1.1233) cents/kWh x 365 x 80% of 360 kWh capacity

⁸ Calculated as:

- High season (November to March) (4-8 pm business days) 11.036 cents/kWh = 104 days x 11.036c/kWh x (360kWh*80%) = \$3305
- Low Season (April to October) (4-8 pm business days) 3.337 cents/kWh = 152 days x 3.337 x 288 = \$1460

DNISP	STATE	ANNUAL FEE	ANNUAL IMPORT REBATE	ANNUAL EXPORT REBATE	NET OPERATIONAL COST OR BENEFIT	COMMENT BY DNISP IN TRIAL TARIFF PROPOSAL
Ausgrid**	NSW	\$2477 ⁹	\$2808 ¹⁰	\$5279 ¹¹	+\$5610	<i>A battery that operates this way supports our network, reducing costs to load and export customers over the long run. We therefore consider it is appropriate that a battery operating to support the network would receive the same amount in rewards as its annual fixed charge.</i>
Energex**	QLD	\$6513	0	\$0 ¹²	-\$6513	

* No capped hours restrictions

** Capped at 40 hours

References

Citipower: Citipower Trial tariff notification 2022-2023

Essential Energy: Essential Energy Price List & Explanatory Notes 2024-25_FINAL_25112024 – NOT sure which tariff applies!!!!!!!!!!

Endeavour Energy: Sub-Threshold Tariff Notice 1Jul2023-30Jun2024 (28Feb2023); High Season (HS) Nov to Mar, Low Season (LS) Apr-Oct. NUOS – Net Use of System; DUOS – Distribution Use of System tariffs,

Ausgrid: re <https://www.ausgrid.com.au/In-your-community/Community-Batteries/Connecting-a-Community-Battery> and ‘

2023-24 sub-threshold tariff notification, February 2023’

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Dec., 2024.

⁹ Calculated as \$1.72/kW per month x 120 kW x 12

¹⁰ Calculated at 75 cents/kWh for maximum 40 hours (assume 75 cents/kWh X 288 X 13 days of 3 hours each

¹¹ Calculated at 141 cents/kWh for maximum 40 hours (assume \$1.41/kWh X 288 X 13 days of 3 hours each

¹² There is a proposed Critical Peak Reward amount of \$1.66kWh for a maximum of 40 hours but this is entirely discretionary and therefore provides no certainty for investment.