

2023-24 sub-threshold tariff notification
February 2023

28 February 2023



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Dear Dr Funston,

Sub-threshold tariff notification

We are writing to notify the AER that Ausgrid's 2023-24 pricing proposal will include six sub-threshold tariffs, and each trial tariff will be available for one year (the remainder of our current regulatory period). The sub-threshold tariffs meet the requirements of the National Electricity Rules. The sub-threshold tariffs are:

- Residential two-way tariff – a time of use tariff with export rewards and charges;
- Community battery tariff – a critical peak pricing and local use of system tariff;
- Flexible load tariff – with anytime capacity charges and critical peak prices;
- Small business flexible load tariff – with anytime capacity charges and critical peak prices;
- Stand-alone power systems tariff – a usage only tariff for stand-alone power systems customers;
- and
- Super off-peak tariff – a time of use tariff with a four-hour super off-peak charge to encourage discretionary network use away from the network peak.

The stand-alone power systems tariff and super off-peak tariff are new in 2023-24. We also have made changes to our flexible load tariffs for 2023-24 by including critical peak pricing and adding a primary version of the tariff. The existing residential two-way and community battery tariffs will be retained in 2023-24 and are consistent with our 2022 sub-threshold tariff notification.

Ausgrid is committed to offering our customers cost reflective tariffs that encourage innovation and ultimately lower costs for customers. These sub-threshold tariffs will give us insights into retailer and customer response to new tariff options. We intend to share our findings broadly to support tariff development throughout the NEM.

If your team has any questions about our trial tariffs please contact Justin Robinson, Pricing Innovation Manager on [REDACTED] or [REDACTED].

Regards,



Rob Amphlett Lewis
Chief Customer Officer

Ausgrid sub-threshold tariffs for 2023-24

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Our proposed sub-threshold tariffs for 2023-24

Ausgrid is submitting this sub-threshold tariff notification to the Australian Energy Regulator (AER) in accordance with the requirements of the National Electricity Rules (NER).¹

We will trial six tariffs:

1. Residential two-way tariff – continuing from 2022-23;
2. Community battery tariff – continuing from 2022-23;
3. Flexible load (secondary) tariff – a modified version of the flexible load tariff that commenced in 2022-23;
4. Flexible load (primary) tariff – a new tariff offering critical peak pricing to small business customers;
5. Stand-alone power systems tariff – new tariff in 2023-24; and
6. Super off-peak tariff – new tariff in 2023-24.

Ausgrid's framework for tariff reform

Ausgrid is committed to tariff innovation. We are continuously researching new ideas and ways for tariffs to better serve our customers and encourage efficient use of the shared network. However, changing our tariffs can have a significant impact on our customers, our network, and the broader energy system. For this reason, we take a staged approach to evolving our tariffs that generally involves:

1. **Concept development.** We research and develop new tariff ideas and ways for tariffs to better serve our customers through desktop studies or small trials. An example is Project Edith where we are trialling demand subscriptions and real time pricing in partnership with Reposit (an aggregator).
2. **Tariff trials.** The National Energy Rules allows distribution networks like Ausgrid to add new tariffs each year if they do not recover more than 1% of our revenue each or 5% of our revenue combined. These are known as sub-threshold trial tariffs, or trial tariffs. This provision allows us to implement innovative tariffs alongside our regulated tariffs, testing our capabilities and customer interest.
3. **Tariff standardisation.** Ultimately the insights from our tariff trials and broader modelling informs the tariff reforms we include in our TSS proposal. Once approved by the AER, these tariffs become our standard tariff offerings.

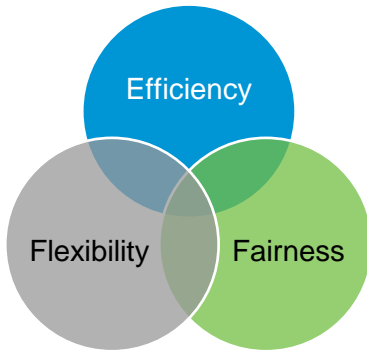
In some limited instances we transition directly from concept development to tariff standardisation. For example, we have proposed to introduce high voltage and sub-transmission storage tariffs from 1 July 2024 as part of our TSS proposal. We have chosen this path to provide requisite certainty for investment in large scale storage, which is critical to support a fast transition to variable renewable energy generation.

In all cases we undertake detailed customer impact analysis and consult with our Pricing Working Group and others as appropriate before progressing.

In our concept development phase, our closely related pricing principles guide our thinking.

¹ NER, clause 6.18.1C

Figure 1 Ausgrid's pricing principles



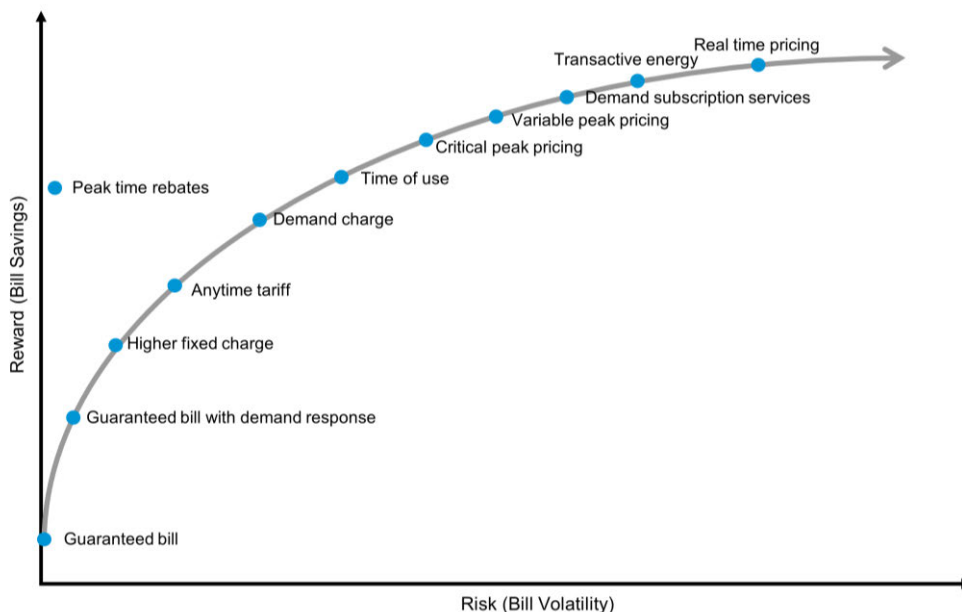
Our pricing principles align with the pricing objective and pricing principles in the National Electricity Rules.²

We want our tariffs to maximise allocative **efficiency** by signalling to customers the costs of their network use. We share with customers the benefits of their **flexibility**. We share a **fair** proportion of the resulting long-term network cost savings directly with the flexible customers, while sharing some of the benefits with the broader customer base. We also recognise that it is not **fair** to mandate prices that customers cannot reasonably understand or respond to and will allow customers to (at minimum) opt-out of more complex network tariffs.

In some instances, there is a tension between efficiency and flexibility, and fairness. In particular, the most efficient tariffs can be complex and difficult for customers to understand. Ahmad Faruqi and Cecile Bourbonnais developed the efficient pricing frontier in Figure 3 (based on their interpretation of Bonbright's 1961 *Principles of Public Utility Rates*). In general:

- Tariffs have the potential to be more cost reflective the further they are along the efficient pricing frontier (grey line); however
- Tariffs are more difficult for most customers to understand and respond to the further they are along that frontier.

Figure 2 Faruqi and Boubonnais' efficient pricing frontier³



In the figures below, we have analysed our existing suite of tariffs, our tariff trials and the efficient pricing frontier. We have grouped the tariffs by the level of support we expect customers will need to respond to different tariffs (to manage the risk created by greater price volatility). We consider that a large majority of residential customers would need assistance (either from technology or by allowing

² NER, clause 6.18.5

³ Reproduced with permission and modified to reflect Ausgrid's tariff offerings: A. Faruqi and C. Bourbonnais, "The Tariffs of Tomorrow:

Innovations in Rate Designs," in *IEEE Power and Energy Magazine*, vol. 18, no. 3, pp. 18-25, May-June 2020, doi: 10.1109/MPE.2020.2972136.

third-party control of devices) to effectively respond to critical peak pricing, demand subscription services and real time pricing.

Figure 3 Ausgrid’s residential and small business tariffs and the efficient pricing frontier⁴

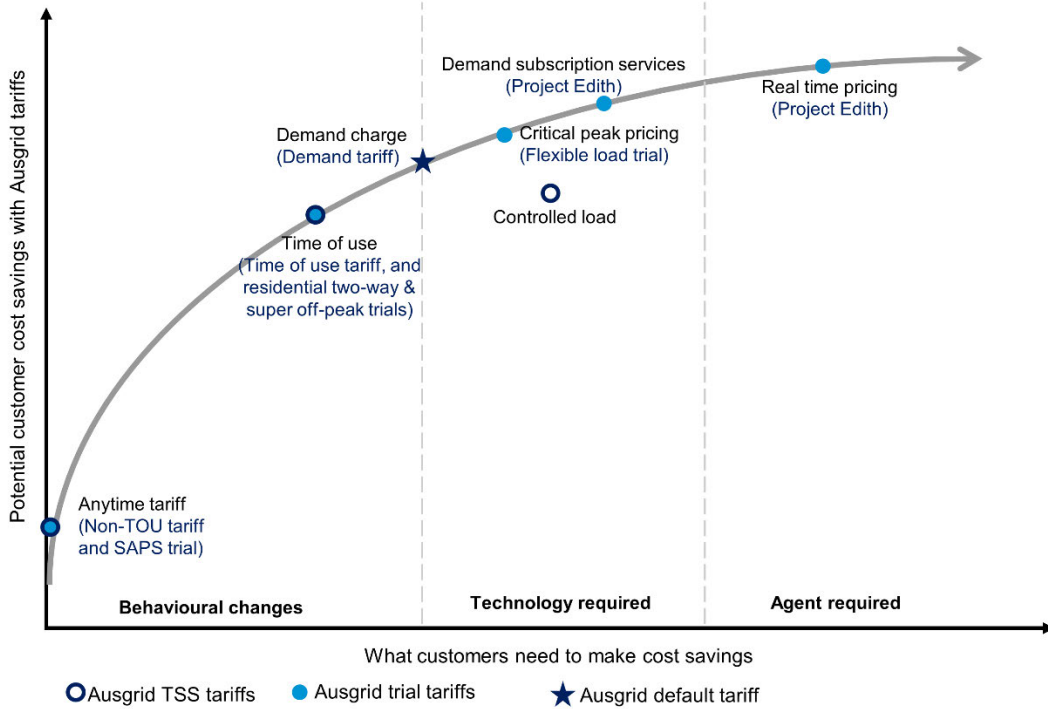
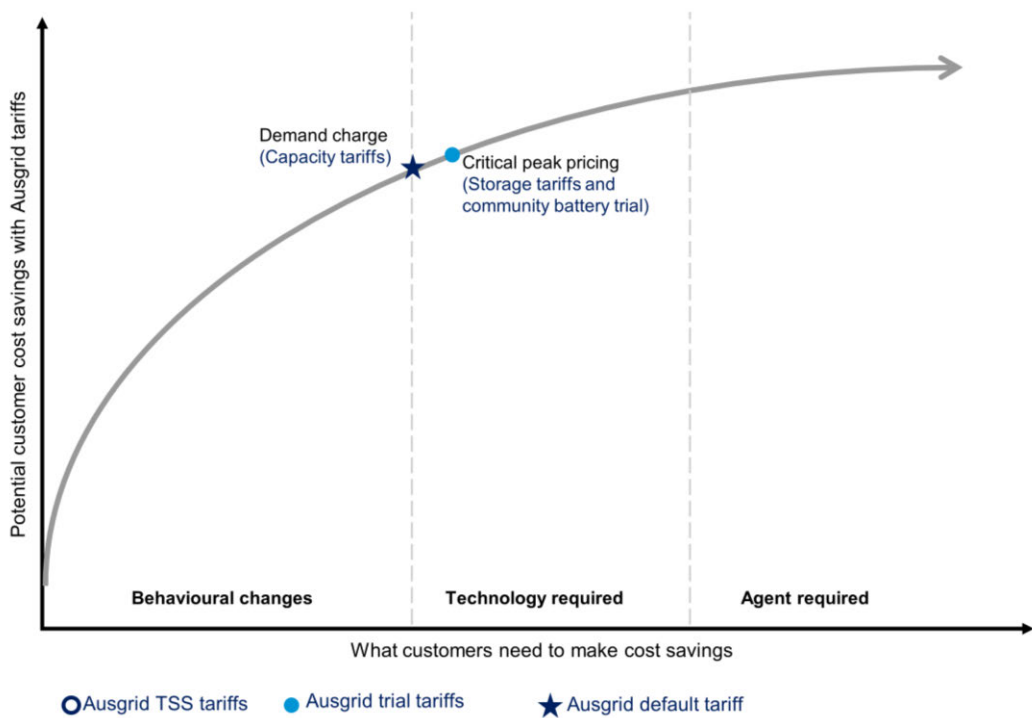


Figure 4 Ausgrid’s large business tariffs and the efficient pricing frontier



We develop tariffs in line with our pricing principles.⁵

⁴ The analysis in this diagram and the following diagram is our own and is only based on the Faruqi and Boubonnais diagram in style.

⁵ We also have regard to the NER pricing objective and principles. NER, clause 6.18.5.

1. Residential two-way tariff – initial takeaways

We will maintain the residential two-way tariff in 2023-24. The only changes will be to update prices to maintain near consistency with charge levels in our residential time of use tariff. Our indicative structure and prices (based on current estimates for 2023-24 prices) are below.

Table 1 Indicative structure and prices for residential two-way tariff

	Applicable time	Consumption charge	Export reward / charge
Peak import period	2pm – 8pm everyday	Res TOU peak charge <i>30.8c/kWh</i>	Reward equal to Res TOU peak charge (excluding jurisdictional schemes) <i>-30.0c/kWh</i>
Off-peak	8pm to 10am everyday	Res TOU off-peak charge <i>3.9c/kWh</i>	N/A
Fixed charge		Res TOU fixed charge <i>54.5c/day</i>	N/A
Solar soak period	10am – 2pm everyday	Res TOU off-peak charge <i>3.9c/kWh</i>	N/A

With over 400 customers participating we have decided to continue to offer this tariff largely unchanged, consistent with our 2022-23 sub-threshold tariff notifications and agreements with our retailer partners. The only significant change is that the peak usage charge and export reward are no longer the same rate. The export reward is matching only the DUOS and TUOS component charges. We continue to apply jurisdictional scheme revenue to the consumption charge but not in the reward component which explains the 0.8c/kWh difference.⁶

To ensure retailers can confidently participate in our trial tariffs we have balanced the opportunity to adjust the tariff further with the benefit of providing continuity and certainty for retailers. This will help ensure we can continue to attract partner retailers to our trial tariffs and learn if retailers will further develop how they respond to the tariff.

2.1 The residential two-way tariff has driven use of behind the meter batteries

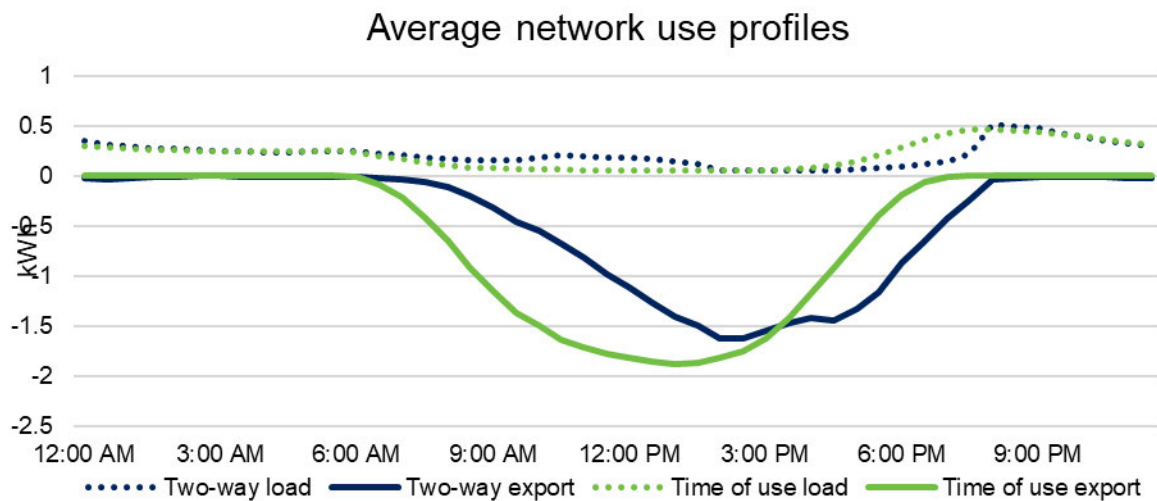
A large proportion of customers that have signed up for our residential two-way tariff have batteries. Two of our partners have made our tariff available to customers with behind the meter batteries.

We have analysed customer meter data to help understand how the tariff has influenced energy usage behaviour. Figure 2 compares the average daily network use profile (in November and December 2022) for:

- 450 residential two-way trial tariff customers; and
- 43,000 residential time of use tariff customers (not on a trial tariff) with average exports of more than 10 kWh per day.

⁶ In 2022-23, we did not refund jurisdictional schemes, however we increased the DUOS component of export reward to make the NUOS charge symmetrical.

Figure 5 Average customer usage profile on residential two-way tariff and time of use tariff (Nov-Dec 2022)



We have found that residential two-way tariff customers:

- Export later in the day than typical customers (with similar quantities of daily exports), this suggests that most two-way tariff customers are charging their behind the meter batteries with their own solar generation.
- Continue to export and do not consume significant electricity until 8pm, suggesting batteries are maximising export rewards and minimising peak usage charges.
- The peak network usage for two-way tariff customers is from 8pm to 10pm, with very little usage in the tariff peak window of 2pm to 8pm.

We understand that the bulk of our two-way tariff customers are allowing their agents (retailers or aggregators) to have some level of control over battery operation. We have observed different patterns of use from these retailers:

- One retailer appears to operate batteries to minimise consumption from the network. This retailer’s customers export more than five times as much electricity as they import from our network;
- Multiple retailer’s customers consume grid electricity during the middle of the day to fill batteries before the 2pm-8pm export reward period. These same retailers typically fully discharge batteries by 8pm to maximise export rewards, with retailers showing distinct export spikes in the evening; and
- All retailers appear to commence charging batteries from when solar systems begin generating electricity, however two retailers appear to increase the rate of charging at 10am to minimise export charges.

We have found that customers of our residential two-way tariff will earn more than we charge them for network use. We expect this to continue in 2023-24 with net reward forecasts of:

- \$45,000 of distribution use of system revenue
- \$429,000 transmission use of system revenue

This means our broader customer base is paying more for electricity than they would if we did not serve our residential two-way trial tariff customers. Residential two-way trial tariff customers are on aggregate recipients of a cross-subsidy. This is an important finding as it reinforces the importance of the balance between charge and reward given the potential for customers (or their agents) to respond to financial incentives. We discuss these trade-offs in our recently submitted Tariff Structure Statement explanatory statement for 2024-29.

2.1 The two-way tariff recovers less than revenue than it pays out

The NER allows Ausgrid to recover up to 1% of its revenue from a trial tariff (and up to 5% of its revenue from all trial tariffs).⁷ In 2022-23 we forecast that we would recover \$470 per customer per year, however a higher concentration of battery customers has meant we are paying more to customers than we charge them. In 2022-23 on a DUOS basis, we expect to spend over \$20,000 on our residential two-way tariff.

We expected to need to cap customer numbers between 4,000 and 20,000 customers in 2022-23, to avoid exceeding the 1% threshold. We now consider that it is unlikely that we will need to cap customer numbers to comply with the NER.

This has informed the export tariff in our TSS. We designed the trial two-way tariff to have import and export charges that mirror one another. The justification is that in a market, assuming away transactions costs, the price of buying (importing) and selling (exporting) are equal.

This created a situation where our trial export tariff may drive inefficient network use and investment into battery technology. It may even create cross-subsidies where the revenue recovered by customers of this tariff is less than the costs we would avoid not serving these customers at all. This has informed our export tariff in our 2024-29 TSS – it is based on our long-run marginal cost to better reflect what we should be willing to pay customers to export, to minimise our long-run costs. It also ensures that we can avoid potential cross-subsidies.

2.2 Efficient network utilisation is part of our demand management strategy

Ausgrid sees two-way tariffs as an important component of future demand management. Two-way tariffs signal to customers the costs of export during periods of above average voltage levels. We have found that this trial tariff over-signals the benefits of export during periods of high demand. However for 2023-24 we propose to maintain a similar balance between charge and reward to maintain our commitments to our retailer partners.

In the 2-year trial period, we support this tariff with our demand management innovation allowance (DMIA). The DMIA will pay for our “no customer worse off” guarantee. We consider that this is a prudent use of DMIA. We expect to learn, and share what we learn, about customer willingness to change their export behaviour. The DMIA allows us to do this without dampening our price signals to customers.

2.3 The two-way tariff’s rewards exceed the cost savings we expect from the exports

Ausgrid is committed to transitioning all our customers to cost reflective tariffs. We consider that the responses to the residential two-way tariff trial have demonstrated that it is unlikely the tariff is cost reflective. A cost reflective tariff under the National Electricity Rules is:

- Based on the LRMC at the time and place of network use;⁸ and
- Recovers total efficient costs without distorting LRMC price signals.⁹

We consider that key differences in the time of use tariff and two-way residential tariff, and the customer bases of the two tariffs mean the same peak usage charge is cost reflective for the standard tariff but not for the trial tariff.

⁷ NER, clause 11.141.8(b)

⁸ NER, clause 6.18.5(f)

⁹ NER, clause 6.18.5(g)

Table 2 Comparing the time of use and two-way tariff (real \$, FY24)

	Time of use tariff Peak	Two-way tariff Peak load
NUOS (excluding GST)	30.82c/kWh	30.82c/kWh
Peak window	880 hours 2pm-8pm weekdays November to March 5pm-9pm weekdays June to August	2,190 hours 2pm-8pm every day
DUOS	16.95c/kWh	16.95c/kWh
LRMC	10.92c/kWh ¹⁰	5.43c/kWh ¹¹
Residual DUOS costs in peak charge	6.03c/kWh	11.53c/kWh

The table above shows that the derived peak period LRMC for the two-way trial tariff is less than half the LRMC for our time of use tariff. This creates a very high allocation of residual costs to our two-way trial tariffs peaks (both the charge for load and reward for exports).

We allocate residual costs to peak charges in our residential time of use tariff.¹² In the previous regulatory period we commissioned a study to identify how to best allocate residual costs to avoid inefficient distortions of customer usage (i.e. allocative inefficiencies). When the study was conducted (in 2017), it found that customers are less price responsive to price changes during peak periods than in non-peak periods, this means adding residual costs to peak has minimal distortion to the allocative efficiency of network tariffs. We consider that this likely remains true for most customers. We can see with our time of use usage profile (the green curves in Figure 5) that even with residual costs making up most of the peak usage charge, customer demand remains is highest during those hours.

However, the two-way trial tariff has proven that the customers on this tariff (predominantly customers with behind the meter batteries) are clearly responding to price. We see significant exports during the export reward window and dramatically lower usage in the peak window, with usage spikes at the end of the peak.¹³ Therefore, the residential two-way trial tariff is potentially sending inefficient signals and creating allocative inefficiencies. While increasing price responsiveness is a positive development, with the allocation of residual costs to peak charges it appears highly likely that the tariff could be driving inefficient behavioural changes.

In our TSS, we have developed an LRMC based export tariff that neither recovers nor refunds any residual costs. This ensures that price responsive customers are not able to reduce their contribution to Ausgrid's revenue below their total efficient costs. Our TSS tariff will not drive any inefficient long-term export behaviours. In contrast, if maintained the trial tariff could drive over investment in behind the meter storage and inefficient usage patterns.

¹⁰ This is based on the 2019-24 TSS LRMC model that found (in \$2019) an augmentation expenditure LRMC of \$56.22 (or \$0.0639/kWh in the peak window) and replacement expenditure LRMC of \$0.0314/kWh in the peak window.

¹¹ This is based on the 2019-24 TSS LRMC model that found (in \$2019) an augmentation expenditure LRMC of \$56.22 (or \$0.0257/kWh in the extended peak window) and replacement expenditure LRMC of \$0.0216/kWh in the extended peak window.

¹² Ausgrid, [Attachment 10.01 – Tariff Structure Statement](#), April 2019, pp 68-69.

¹³ The spike demonstrates that the network price is the key driver, if it were simply batteries minimising overall imports we would see a less clear cut change in network use at 8pm.

Table 3 Two-way tariff's performance against the NER pricing principles

NER clause	Principle (summarised)	Ausgrid's assessment
NER 6.18.5(e)	Revenue for tariff classes must be between avoidable cost and stand alone cost	<p>The two-way tariff would be part of the low voltage tariff class. With only 1,000 customers this tariff will not have a material impact and will not drive the low voltage tariff class into non-compliance with the NER requirements.</p> <p>However, we consider that this tariff (alone) does not sit within the bounds of avoidable and stand alone cost.</p>
NER 6.18.5(f)	Each tariff must be based on the long run marginal cost of providing the service	<p>The consumption charges and export reward are significantly higher than the LRMC. The LRMC makes up less than a third of the peak usage charge. This suggests that the tariff is not based on LRMC as the LRMC is not core to its design.</p>
NER 6.18.5(g)	The tariff reflects the total efficient costs of serving the retail customers, without distorting efficient pricing signals.	<p>We consider that this tariff, paying customers an average of around \$100/year for network access, recovers less than the avoidable costs of the tariff. While the AEMC's guidance was DNSPs would have discretion in how to calculate total efficient costs we consider this is unlikely to comply.</p> <p>Additionally we consider it is very likely that the allocation of residual costs is creating a significant distortion to efficient network use. We will continue to test this hypothesis in 2023-24.</p>
NER 6.18.5(h)	We must consider the impact on retail customers	<p>This tariff has provided significant benefits to customers and would likely pass this test.</p>
NER 6.18.5(i)	The tariff must be reasonably capable of being understood by customers or incorporated by retailers.	<p>This tariff applies a simplified time of use structure and customer response indicates they understand the tariff.</p>
NER 11.141.12	Export tariffs must have a basic export level	<p>We have included a basic export level between 10am and 2pm, when customers are charged for exports.</p>
NER 11.141.13(b)	Basic export level should be set regarding intrinsic hosting capacity and expected demand for export capacity.	<p>Our 6 kWh basic export level is equivalent to the maximum output within a 1.5 kW basic export level.</p>

2. Community battery tariff – initial takeaways

We will connect community batteries to our community battery trial tariff in early 2023. We have learnt how to implement the community battery tariff. Given that the batteries have just started to operate under the tariff, we have not yet learnt how effective the tariffs are at encouraging efficient network use. The community battery tariff is available to any storage customers consistent with eligibility for the LV storage tariff in our TSS.

We will not make any changes to our trial tariff in 2023-24. The components of the ‘DUOS’ charge that applies when the battery is charging from non-local sources will change somewhat, but it will remain consistent with the 2022 notification on NUOS terms.

However, a LV storage tariff will replace the community battery in the next regulatory period and forms part of our TSS proposal. The LV storage tariff has two key differences to our community battery tariff:

- The LV storage tariff does not have a LUOS charge. We have invested in LUOS metering for our three first community batteries. We seek to test LUOS charging for future use with this trial tariff. However, at this time LUOS metering remains both high cost and we are unable to standardise LUOS metering given existing assets. This makes it difficult to offer to non-network owned batteries, as it is expensive with a bespoke cost for each installation. We may seek to reintroduce LUOS charging in future trial tariffs or future regulatory periods because of what we learn in the next 16 months.
- The LV storage tariff has a fixed charge instead of a battery capacity-based annual charge. Billing system limitations make the nominated capacity charges resource intensive to set up for new batteries and it is not clear whether the costs exceed any benefits. The trial tariff is set up for our existing community batteries, and therefore it remains a viable approach for the remainder of the tariff trial.

All customers eligible for the LV storage tariff from 1 July 2024 are eligible for the community battery tariff. If a customer does not have LUOS metering, we will charge the customer as though they are not using the local network.

3. Flexible load (secondary) tariff

We launched a flexible load tariff in 2022-23. The flexible load tariff was:

- Available only to residential customers;
- Applied to the whole household's consumption, with Ausgrid refunding network charges for a nominated device; and
- Available through only one retailer partner.

The tariff was a compromise approach to offer a fixed charge tariff with interruptions, without installing new metering. It applied as a primary tariff but we designed it as a secondary tariff.

The tariff has only attracted a single customer in its first six-months. We consider that key limitations were:

- Significant wholesale market challenges (unrelated to this trial) contributed to only a single partner;
- Supply interruptions which were unpopular with potential retailer partners;
- An administratively complex contractual arrangement to allow customers to benefit from the tariff with Ausgrid refunding electric vehicle charger usage; and
- Limiting the availability to residential customers.

In response to these challenges, we are modifying our flexible load tariff in 2023-24. Our flexible load tariff will be available as a secondary tariff to small customers applied to a dedicated circuit.

The existence of our 2022-23 trial tariff led to metering providers to contact Ausgrid and our retailer partner with metering solutions that would allow Ausgrid to apply the flexible load tariff as a secondary tariff. This would significantly reduce the administrative costs of the trial and create a potential method of future large-scale implementation. Metering providers expect that the cost to customers or retailers of upgrading the metering are a relatively small marginal increase in costs at the time of installing an at home or at work high powered device, such as an electric vehicle fast charger.

Table 4 Indicative structure and prices for flexible load tariff

	2022-23	2023-24
Fixed charge	Our residential time of use tariff's fixed charge plus \$180 per year	7.5c/kW/day (\$27.38/kW/year) (approximate) anytime capacity charge
Consumption charges	Our residential time of use tariff's usage charges with device use refunded to the retailer quarterly.	1.1c/kWh (approximate) recovering NSW Government scheme costs.
Peak events Up to 40 hours a year in 2-hour events	Interrupt supply to the device	153c/kWh (DUOS approximate) during critical peak events

Capacity charges can serve two purposes

Capacity charges in the Ausgrid network are based on a customer's maximum demand in a 30-minute interval (during a charging window) over the last 12 months. Capacity charges can serve two purposes:

1. Signal the future costs (LRMC) – this is most appropriate where a customer's maximum demand is closely correlated with the cost drivers for future costs. The correlation is greatest where we serve customers with customer specific assets.
2. Recover residual costs without distorting LRMC signals – capacity charges can be a way to scale residual cost recovery with customer connection sizes. Where customers cannot avoid network use during the capacity charging window the capacity charge does not distort usage.

We are using an anytime (24/7) capacity charge in our flexible load tariff as our intention is to recover residual costs. An anytime capacity charge is the hardest charge to avoid and therefore the least likely to distort customer behaviour. As a trial tariff we will monitor whether it has any meaningful distortions to customer behaviour.

3.1 The flexible load (secondary) tariff recovers less than 0.1% of our revenue requirement

The NER allows Ausgrid to recover up to 1% of its revenue from a trial tariff (and up to 5% of its revenue from all trial tariffs).

Uptake of this tariff is highly uncertain. We expect at least 50 customers will use either of our flexible load tariffs. We expect interest in this tariff for the purpose of electric vehicle charging:

- We assess that there is a limited market for this tariff for residential electric vehicle charging. Most electric vehicle customers will pay less under alternative tariffs with off-peak windows (both our standard demand and time of use tariffs, as well as our super off-peak trial tariff).
- For business electric vehicle charging, customers will have a choice of two identical tariffs that only differ in terms of how the customer connects; this tariff for secondary connections (i.e. a distinct circuit on an existing meter and NMI); and the flexible load (primary) tariff if they choose to have an individual connection and NMI for electric vehicle charging.

It is necessary under how the NSW market operates and Ausgrid systems that flexible load (secondary) and flexible load (primary) are two different tariffs. We will ensure we comply with NER, clause 6.18.1C as though both tariffs are one tariff to avoid any appearance that having two nearly identical flexible load tariffs is a way to circumvent the trial tariff threshold.

We expect at least 50 customers across both flexible load tariffs. Our initial forecasts expect around 10 customers specifically on flexible load (secondary) in 2023-24 given our experience in 2022 with residential customers and uncertainty over whether business customers will choose primary or secondary connections.

We have customer caps available if we find revenue recovery from this tariff is increasing at a rate that could risk non-compliance. The flexible load tariff, because of the critical peak pricing, will only be available to retailers that partner with Ausgrid as we need to communicate the timing of critical peak events.

1.3 Flexible load is a demand management tool

We will continue to offer the ‘no customer worse off’ DMIA to our existing retailer partner, and will offer to refund their existing customers’ controlled device usage for the remainder of the initial trial period.

However, we will no longer use DMIA to refund the retailer for the interruptible device’s usage as we consider the costs of metering for the likely use cases is a relatively small marginal cost increase.

1.4 The flexible load tariff is important to the future direction of our tariffs

We are not intending to offer the flexible load tariff as a standard tariff in our 2024-29 TSS. However, we proposed to continue to offer this trial tariff for the 5-years of the 2024-29 TSS. This reflects that we have not had sufficient customers on the trial tariff to understand if there is a sufficient market for the tariff or what further modifications we will need to make to the tariff to ensure it drives efficient network use. We will look to continue updating the tariff, as needed, as we learn about customer interest in and use of this tariff.

Table 5 Flexible load tariff’s performance against the NER pricing principles¹⁴

NER clause	Principle (summarised)	Ausgrid’s assessment
NER 6.18.5(e)	Revenue for tariff classes must be between avoidable cost and stand alone cost	The flexible load tariff would be part of the low voltage tariff class. This tariff is within the avoidable and stand alone costs so would not drive non-compliance.
NER 6.18.5(f)	Each tariff must be based on the long run marginal cost of providing the service	Usage during the critical peaks will be charged based on LRMC.
NER 6.18.5(g)	The tariff reflects the total efficient costs of serving the retail customers, without distorting efficient pricing signals.	We consider that this tariff will recover between avoidable and stand alone costs, which is consistent with AEMC guidance when it decided on NER 6.18.5(g).
NER 6.18.5(h)	We must consider the impact on retail customers	This tariff will always be opt-in (like controlled load tariffs) and provide network price certainty.
NER 6.18.5(i)	The tariff must be reasonably capable of being understood by customers or incorporated by retailers.	The biggest challenge for this tariff is explaining to customers that they face high prices during peak events and understanding capacity charges. However, we consider that they can be very easily incorporated in retail tariffs as interruptible load tariffs for a particular size electric vehicle charger or other device.

¹⁴ Amended from 28 February 2022 submission: Replaced content of table to refer to the flexible load tariff. The content is identical to the draft notification provided to the AER on 21 February 2022.

4. Flexible load (primary) tariff

The flexible load (secondary) tariff is available to all small customers (<160 MWh consumption per year).¹⁵ We consider that there are numerous use cases for the tariff including:

- Electric vehicle charging;
- Water heating;
- Space heating and cooling; and
- Other activities where customers can shift the timing of their network demand.

For electric vehicle charging there is a risk that the flexible load (secondary) tariff could drive a particular business model for electric vehicle charging; that is co-locating where the customer can receive a secondary tariff. We consider that our tariffs should not influence how customers connect and where they connect, except where there is a material cost difference to Ausgrid.

With customers funding connection costs, there is no material cost difference to Ausgrid if an electric vehicle charger is separately connected to the Ausgrid network or co-located with an existing connection. Therefore, we will offer our flexible load (primary) tariff to separately connected electric vehicle charging stations. We will also consider other customer applications for this tariff where there is also an inefficient incentive to co-locate.

In 2022-23, EVX and other electric vehicle charging stations have expressed interest in our flexible load trial tariff. The default assignment for business customers to capacity tariffs is a clear barrier to entry for electric vehicle charging infrastructure. Extending our flexible load trial to business customers and incorporating critical peak pricing structures will test the viability of more cost reflective tariffs as an alternative for electric vehicle charging.

In December 2023, EVX launched Australia's first pole mounted electric vehicle charging station in Australia and in the Ausgrid network. Supporting electric vehicle charging infrastructure will support transport electrification.

The tariff is identical to our flexible load tariff trial except that it will be applied as a primary tariff and only available to small business customers. We summarise the tariff structure and price levels (relative to the 2022-23 trial tariff) in Table 6 below.

Table 6 Indicative structure and prices for flexible load tariff (business)

	2022-23	2023-24
Fixed charge	N/A	7.5c/kW/day (\$27.38/kW/year) (approximate) anytime capacity charge
Consumption charges	N/A	1.1c/kWh (approximate) recovering NSW Government scheme costs.
Peak events Up to 40 hours a year in 2-hour events	N/A	153c/kWh (DUOS approximate) during critical peak events

¹⁵ In NSW, law defines small customers as customers with less than 100 MWh consumption per year. Ausgrid is transitioning to this definition for tariffs between now and the middle of the 2024-29 regulatory period. Until that transition is completed, we will allow customers with up to 160 MWh consumption onto this tariff, as it aligns with our current tariff eligibility groupings.

Table 7 Flexible load tariff's performance against the NER pricing principles¹⁶

NER clause	Principle (summarised)	Ausgrid's assessment
NER 6.18.5(e)	Revenue for tariff classes must be between avoidable cost and stand alone cost	The flexible load tariff would be part of the low voltage tariff class. This tariff is within the avoidable and stand alone costs so would not drive non-compliance.
NER 6.18.5(f)	Each tariff must be based on the long run marginal cost of providing the service	Usage during the critical peaks will be charged based on LRMC.
NER 6.18.5(g)	The tariff reflects the total efficient costs of serving the retail customers, without distorting efficient pricing signals.	We consider that this tariff will recover between avoidable and stand alone costs, which is consistent with AEMC guidance when it decided on NER 6.18.5(g).
NER 6.18.5(h)	We must consider the impact on retail customers	This tariff will always be opt-in (like controlled load tariffs) and provide network price certainty.
NER 6.18.5(i)	The tariff must be reasonably capable of being understood by customers or incorporated by retailers.	The biggest challenge for this tariff is explaining to customers that they face high prices during peak events and understanding capacity charges. However, we consider that they can be very easily incorporated in retail tariffs as interruptible load tariffs for a particular size electric vehicle charger or other device.

¹⁶ Amended from 28 February 2022 submission: Replaced content of table to refer to the flexible load tariff. The content is identical to the draft notification provided to the AER on 21 February 2022.

5. Stand-alone power systems tariff

It is expensive to provide reliable connections to the electricity grid in parts of our network, particularly in isolated areas with difficult terrain. Stand-alone power systems are a potential way to reduce the long-run costs of providing electricity in parts of Ausgrid's network and other networks across Australia. The potential for cost efficiencies puts downward pressure on customer bills

Stand-alone power systems have different cost drivers to our traditional electricity network assets.

Traditionally, the main cost drivers for electricity networks is having the capacity to transport a high volume of electricity (both instantaneously and for sustained periods) through our infrastructure. We typically see high loads on our networks at peak times that are reflected in our peak and shoulder charging windows.

In stand-alone power systems, Ausgrid provides solar arrays, batteries, diesel generators, and a very small network connecting these generation assets to our customers' connection points. The main cost drivers are the quantity of electricity the stand-alone power system can generate and store. There is some, limited, time-based impacts – for example if stand-alone power systems customers can more cheaply use electricity when the solar system is generating electricity, not requiring storage or diesel fuel.

Our stand-alone power system tariff will have a single component: an anytime usage charge. We consider that this tariff:

- Best reflects our cost drivers for stand-alone power systems;
- Does not restrict access to interval and smart meters, with two out of four confirmed stand-alone power systems customers currently supplied with type 6 meters; and
- Is a popular tariff structure, which may help encourage customers who could sign up to a stand-alone power system to do so – driving significant cost savings to our broader customer base.

3.1 The stand-alone power systems tariff recovers very little revenue

The NER allows Ausgrid to recover up to 1% of its revenue from a trial tariff (and up to 5% of its revenue from all trial tariffs). We expect between four and twenty customers. Total revenue is forecast at below \$10,000.

This tariff will only be available to customers served by a stand-alone power system and therefore we consider there is no risk of breaching the subthreshold tariff threshold.

Table 8 Stand-alone power system's performance against the NER pricing principles

NER clause	Principle (summarised)	Ausgrid's assessment
NER 6.18.5(e)	Revenue for tariff classes must be between avoidable cost and stand alone cost	The flexible load tariff would be part of the low voltage tariff class. In this instance, the tariff recovers less than the avoidable costs of not serving the customer, but this doesn't account for the long-term cost savings of serving this customer by a stand-alone power system relative to continuing to serve the customer with a traditional grid connection.
NER 6.18.5(f)	Each tariff must be based on the long run marginal cost of providing the service	The LRMC for a stand-alone power systems is the costs of running the diesel generator or installing a larger battery, we estimate the LRMC is higher than the usage charge and therefore including all costs on the usage charge is the most LRMC based tariff structure.
NER 6.18.5(g)	The tariff reflects the total efficient costs of serving the retail customers, without distorting efficient pricing signals.	<p>This tariff will recover similar NUOS to other customers on standard network tariffs.</p> <p>The customers receiving stand-alone power systems (both before and after) are likely receiving cross-subsidies, as the costs we could avoid not serving these customers exceeds what they contribute to the network.</p> <p>However, the stand-alone power systems tariff may manage to save money for our broader customer base by ensuring customers are not worse off by transferring to a stand-alone power system, which represents a lower long-run cost to serve these customers.</p> <p>The price being entirely usage based minimises the distortions relative to the LRMC which we expect exceeds the total costs we will recover from stand-alone power system customers.</p>
NER 6.18.5(h)	We must consider the impact on retail customers	We will calculate this tariff to make sure stand-alone power system customers are no worse off in NUOS terms.
NER 6.18.5(i)	The tariff must be reasonably capable of being understood by customers or incorporated by retailers.	We expect customers and retailers can easily understand and incorporate anytime tariffs.

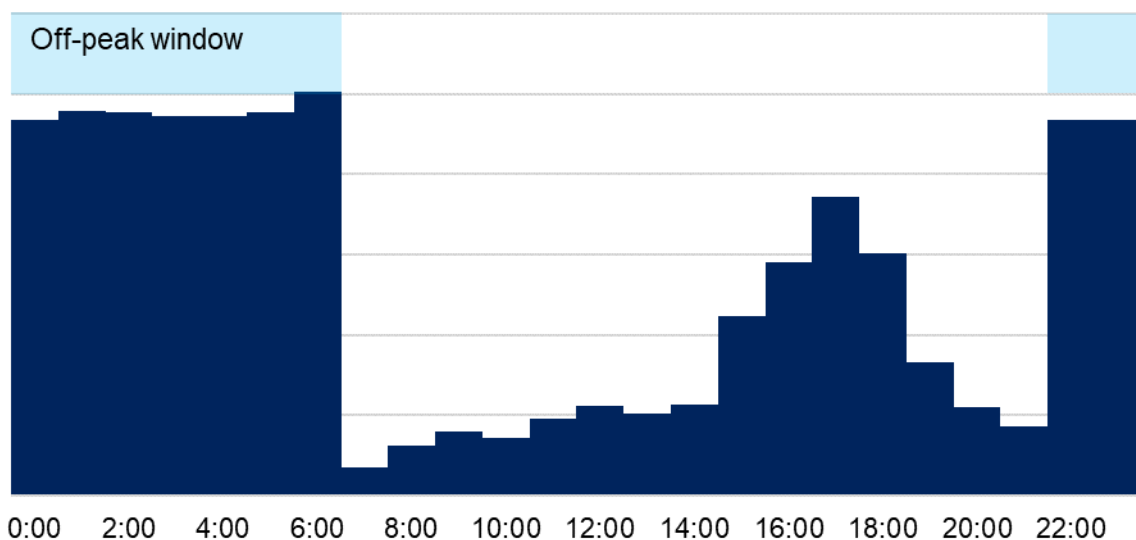
6. Super off-peak tariff

We expect that with increased smart metering and increased smart(er) technology we will see more customers responding to price. We have observed:

- Consultants for the South Australian Government noted that its wholesale electricity market persistently saw price spikes at midnight when hot water systems, using time clocks, responded to network tariffs.¹⁷
- Responses to our residential two-way tariff trial show customers (predominately with batteries) consuming very little electricity during the peak charging window and an immediate demand spike at the start of the network off-peak charging window (see Chapter 5).
- The United Kingdom has introduced regulations to require that all new electric vehicle charging points sold in Great Britain have a randomised 10-minute delay function that can be remotely extended to 30-minutes, to avoid a spike in electricity use at 10pm.¹⁸

Our forecasts expect electric vehicle customers to respond to network prices when customers charge their vehicles on weekdays (based on existing time of use charging windows), see Figure 6.¹⁹

Figure 6 Forecast weekday electric vehicle charging based on existing time of use tariff



Many network assets, such as transformers, are rated to handle different maximum loads instantaneously versus after sustained periods of high use. We typically see our highest network loads in the evenings of very hot days.²⁰ Network assets are particularly vulnerable to overloads in heatwaves as the network assets do not get a sufficient opportunity to rest and cool down. Reducing loads immediately after the peak period can have a meaningful impact on the timing of replacement expenditure and network reliability.

Additionally, on days without large evening peaks there are benefits to reducing network ramp rates (i.e. how quickly demand changes on the network). When there are significant load changes, such as a high number of customers and devices responding to a price change, we can see significant

¹⁷ Energy Efficient Strategies with George Wilkenfeld & Associates and Common Capital, [Review of Residential Sector Hot Water Requirements for South Australia](#), Final Report for The Department of Energy and Mining, South Australia, 30 October 2020, p 54.

¹⁸ Office for Product Safety & Standards (UK Government), [Complying with the Electric Vehicles \(Smart Charge Points\) Regulation 2021](#), May 2022

¹⁹ Our forecast of weekend usage does not follow this pattern, with most electric vehicle charging demand between 10am and 5pm.

²⁰ Over a longer time horizon. In individual years (particularly with mild summers) we may see winter peaks however we have found winter peaks less regularly approach network capacity constraints.

impacts on voltage. The United Kingdom’s standards for smart charge points are addressing this issue.

At present, we do not currently see significant demand response to prices in a way that could create future network costs for numerous reasons, however each control is currently at risk.

Table 9 Controls to avoid coincident price responsive peaks

Control	Future state
<p>Off-peak diversity – the time when network charges becomes lowest varies by tariff;</p> <ul style="list-style-type: none"> • There is no off-peak for the 1.1 million customers on anytime tariffs; • The off-peak commences at 10pm for 400,000 customers on time of use tariffs; and • The off-peak commences at 8pm (or 9pm between June and August) for 250,000 customers on demand tariffs 	<p>From 1 July 2024 we will simplify our tariffs:</p> <ul style="list-style-type: none"> • We will move over 100,000 customers to cost reflective tariffs; and • The off-peak period will start at 9pm for all 750,000 customers on cost reflective tariffs. <p>We expect that nearly 1 million customers on anytime tariffs will receive upgraded electricity meters and be reassigned to cost reflective tariffs by 2030. This will mean by 2030 the off-peak window will commence at 9pm (or 10pm if our peak charging window changes) for almost all of our customers.</p>
<p>Controlled load tariffs – we have 450,000 customers on controlled load tariffs which randomise when customers can commence using electricity.</p>	<p>We expect, as customers are reassigned to cost reflective tariffs, that fewer customers will remain on controlled load tariffs.</p> <p>In 2022-23 the off-peak charges that apply for at least 18 hours a day (i.e. when demand charges do not apply) for our residential demand tariff (the default tariff) were 2.46c/kWh, while:</p> <ul style="list-style-type: none"> • Controlled load 1 (which offers 8 hours of electricity use) was 1.92c/kWh; and • Controlled load 2 (which offers 16 hours of electricity use) was 4.41c/kWh. <p>Customers with self-generation, such as solar PV, cannot use their own electricity for controlled load devices. Further making controlled load less competitive for a growing cohort of customers.</p>
<p>Price responsive demand – Our existing customers have relatively little price responsive demand. Timer based pool pumps and hot water systems are likely the largest sources of price responsive demand. We have relatively small number of behind the meter batteries or electric vehicles that we expect to respond to prices.</p>	<p>We are expecting an eight-fold increase in behind the meter batteries by 2030 and expect annual electric vehicle charging consumption to increase from 20 GWh to 1,500 GWh. This growth in potentially price responsive demand creates a significant risk that we will see demand spikes at the start of the off-peak window.</p>

With the risks of more customers facing the same pricing signal, and more customers expected to be able to automatically respond to price signals, we need to consider what tools we could implement in the future to help mitigate these risks. We would prefer to use price where possible and avoid mandatory solutions similar to those introduced in the United Kingdom.

For electric vehicles, our flexible load tariff is one of the tools we are trialling, it is suitable for customers wanting convenience and higher-powered home charging that requires dedicated circuit wiring. It may not suit customers seeking overnight charging (the annual charge for the flexible load

tariff may not be offset by savings if customers are not charging electric vehicles during the peak window) or customers using lower powered charging that does not require significant rewiring.

The super off-peak tariff achieves this by introducing a third charging window to a time of use tariff;²¹ the 'super off-peak'. In 2023-24 we will trial a super off-peak tariff that encourages customers to use overnight loads between 1am and 5pm. This creates a 5-hour gap in summer months and a 4-hour gap in winter months between the peak charge and the super off-peak charge, hopefully giving the network sufficient time to see loads reduce and assets recover enough to handle time discretionary loads without creating additional network costs.

Table 10 Structure and indicative prices for super off-peak tariff

	Charging window	2023-24 super off peak tariff (NUOS 2022-23 price levels incl. GST)
Fixed charge		54.46c/day Equal to the residential time of use fixed charge
Peak	Weekdays 2-8pm Nov-Mar 5-9pm Jun-Aug	30.82c/kWh Equal to residential time of use peak charge
Off-peak	All days 5am-1am except peak window	5.41c/kWh Equal to residential time of use shoulder charge
Super off-peak	All days 1am-5am	0.86c/kWh Standard jurisdictional scheme usage

We have carefully considered whether to include a day-time off-peak or solar soak window for this trial tariff. At this stage, we have decided against it, as we are focusing on customers that would likely use the electricity overnight anyway. Our goal is to see whether this style of tariff could be a useful tool to delay the start of price responsive loads at night. We note because this tariff applies to the whole house (and isn't a dedicated circuit) so customers with solar PV will find charging from their own generation cheaper. If we offer this tariff in future years, we will continue to look at whether to include a solar soak period.

3.1 The super off-peak tariff recovers less than 0.1% of our revenue requirement

The NER allows Ausgrid to recover up to 1% of its revenue from a trial tariff (and up to 5% of its revenue from all trial tariffs). We have forecast that 20 customers will participate in the trial and note there is some uncertainty on customer take up. We have consulted with numerous retailers and expect some retailers to take up the tariff, however we have no firm commitments at this stage. The total revenue is forecast at below 0.1% of our revenue requirement.

We will allow any retailer that is interested in this tariff to offer it to their customers (however they must notify Ausgrid). We will close the tariff if we approach 10,000 customers to avoid breaching the 1% threshold. We note that 10,000 customers opting into a new tariff in a year would be unprecedented and therefore consider the risk of closing the tariff very small.

²¹ From 2024-25 we will only have two charging windows for our time of use tariffs, peak and off-peak.

Table 11 Super off-peak tariff's performance against the NER pricing principles²²

NER clause	Principle (summarised)	Ausgrid's assessment
NER 6.18.5(e)	Revenue for tariff classes must be between avoidable cost and stand alone cost	The super off-peak tariff would be part of the low voltage tariff class. The tariff recovers between avoidable and stand alone cost of its customers, so it will help compliance.
NER 6.18.5(f)	Each tariff must be based on the long run marginal cost of providing the service	<p>The super off-peak tariff will have three charging windows with prices based on the long-run marginal cost concept. We have adapted our replacement expenditure model from 2019-24 to reflect the charging windows for the super off-peak tariff.</p> <ol style="list-style-type: none"> 1. The peak window has an LRMC of 10.1c/kWh with all augmentation expenditure allocated to the peak window; 2. The off-peak window has an LRMC of 1.6c/kWh based purely on repex, however we note around 48% of peak events occur in this window, suggesting we could justify an LRMC up to 2.2c/kWh; and 3. The super-off peak window has an LRMC of 0.4c/kWh around half the charge (which recovers NSW Government scheme revenue).
NER 6.18.5(g)	The tariff reflects the total efficient costs of serving the retail customers, without distorting efficient pricing signals.	<p>The tariff recovers between avoidable and stand alone cost of its customers.</p> <p>Residual cost recovery will predominantly be through the fixed charge and the peak charge. There will be some residual cost recovery in the off-peak window. We have committed to Ramsey based pricing in 2019-24, to minimise distortions through allocating residual costs to the least price responsive charging components:</p> <ul style="list-style-type: none"> • Peak energy charges; and • Fixed charges.
NER 6.18.5(h)	We must consider the impact on retail customers	This tariff is slightly cheaper for residential customers on the DMO usage than other tariffs. All customers joining this tariff will do so by choice.
NER 6.18.5(i)	The tariff must be reasonably capable of being understood by customers or incorporated by retailers.	We expect customers and retailers can easily understand and incorporate time of use tariffs with new windows.

²² Amended from 28 February 2022 submission: Replaced content of table to refer to the flexible load tariff. The content is identical to the draft notification provided to the AER on 21 February 2022.

Sub-threshold tariff notification

28 February 2023

Distributor	Ausgrid
<p>Total cumulative revenue of all sub-threshold tariffs (\$ and % AAR)</p>	<p>-\$0.38 million (NUOS) or \$0.02 million (DUOS), equivalent to $\pm 0.0\%$ AAR*</p> <p>Note: This is the forecast annual revenue from all sub-threshold tariffs for the upcoming regulatory year. Includes sub-threshold tariffs which commenced in previous years and are continuing. Measured against TAR during annual pricing per NER cl. 6.18.1C(a)(2).</p>
<p>Confirmation for publication</p>	<p>We confirm that this document contains no commercial or private information and we provide permission for the AER to publish this notification on the AER website.</p>

Name of trial	Residential two-way tariff
	<p>Note: this trial tariff is unchanged from our 28 February 2022 notification, we have included this notification for completeness, it does not replace our existing notification. The notification uses the old template to remain consistent, updated figures are italicised.</p>
Objectives of trial	Learn how customers respond to export charges and rewards. Our tariff specifically looks at energy measures of export charges, rewards and basic export levels (in contrast to other NSW DNSPs).
Retailer engagement	We consulted with 11 retailers and will partner with at least 4 retailers for the trial.
Consumer engagement	We have extensively consulted with our pricing working group, and in joint consultations with other NSW DNSPs (and their customer representatives), AER staff and NSW Department of Planning, Industry and Energy.
Proposed tariff (structure and pricing)	Peak import 2pm-8pm every day with peak consumption charge and export reward; Solar soak 10am-2pm every day with off-peak consumption charge and export charge (with 6 kWh basic export level), all other times off-peak consumption charge and free exports.
Forecast revenue (\$ and % AAR)	- <i>\$0.4 million</i> , equivalent to <i>0.0%</i> AAR for the upcoming regulatory year
Trial start date	1 July 2022
Duration of trial	Two regulatory years: 1 July 2022 to 30 June 2024
Potential changes and triggers	We will monitor uptake, adjusting customer caps every 3-months. We will review the structure and charges in collaboration with affected retailer and our customer representatives before each subsequent year and advise AER of changes agreed.
Notification date	28 February 2022

Name of trial	Community battery tariff
	<p>Note: this trial tariff is unchanged from our 28 February 2022 notification, we have included this notification for completeness, it does not replace our existing notification. The notification uses the old template to remain consistent.</p>
Objectives of trial	<p>To test Ausgrid’s capabilities to operate both critical peak pricing events and local use of system pricing, and to explore how well commercially operated batteries can support the network.</p>
Retailer engagement	<p>We consulted with some retailers on this tariff for third party batteries. We have notified the retailer (that is our launch customer) of the tariff structure and principles behind the tariff.</p>
Consumer engagement	<p>This tariff is charged directly to a customer that happens to be a retailer. It is possible other customers will emerge during the trial. For this reason, we consulted with our pricing working group, and in joint consultations with other NSW DNSPs (and their customer representatives), AER staff and NSW Department of Planning, Industry and Energy.</p>
Proposed tariff (structure and pricing)	<p>Critical peak pricing for peak demand and export events, with LRMC based tariffs. Free consumption and export when using the local system (i.e. network downstream of the 415v transformer) and an off-peak charge for consumption at all other times.</p>
Forecast revenue (\$ and % AAR)	<p>\$0.0 million, less than 0.01% AAR</p>
Trial start date	<p>1 July 2022</p>
Duration of trial	<p>Two regulatory years: 1 July 2022 to 30 June 2024</p>
Potential changes and triggers	<p>We will monitor uptake, adjusting customer caps every 3-months. We will review the structure and charges in collaboration with affected retailer and our customer representatives before each subsequent year and advise AER of changes agreed</p>
Notification date	<p>28 February 2022</p>

Name of trial	Flexible load (secondary) tariff
Objectives of trial	To learn whether there is a market for flexible load tariffs on secondary circuits that provide small low voltage customers with pricing signals only at times when use is likely to drive network costs.
Retailer engagement	<p>This tariff is an evolution of our residential flexible load from 2022-23. We consulted with 11 retailers in developing our residential flexible load tariff and partnered with 1 retailer for 2022-23.</p> <p>In our consultation with retailers, the interruptions in our residential flexible load tariff were seen as a significant problem for greater retailer involvement. We replaced interruptions with critical peak pricing based on this feedback.</p>
Consumer engagement	<p>This tariff is an evolution of our residential flexible load tariff from 2022-23. We consulted with our Pricing Working Group, conducted joint consultations with other NSW DNSPs (and their customer representatives), AER staff and NSW Government before the launch of the residential flexible load tariff.</p> <p>For this evolution we have consulted with our pricing working group and a potential commercial customer.</p>
Expected consumer and/or retailer response	<p>Our hypothesis is that consumers will significantly reduce their network usage during the critical peak events.</p> <p>We expect that retailers, if we can secure additional partners, may take different approaches:</p> <ul style="list-style-type: none"> - Use remote control of smart appliances to interrupt supply (as with our residential flexible load trial tariff this tariff is replacing); - Use remote control of smart appliances to require customers to override interruptions if they choose to use devices during the critical peak period; or - Pass through critical peak prices to customers that choose to operate during critical peak periods.
Proposed tariff (structure and pricing)	<p>The flexible load tariff will have three components:</p> <ul style="list-style-type: none"> - An anytime capacity (maximum demand over a 30-minute interval in the 12-months preceding end of billing period) charge: 7.5c/kW/day (approximate); and - A critical peak price: 153c/kWh (approximate) - An anytime usage charge: 1.1c/kWh
Links to TSS strategy and Export tariff transition strategy (if applicable)	The timing of this trial tariff makes it unlikely to inform our 2024-29 TSS. We submitted our 2024-29 TSS on 31 January 2023. It includes this tariff as an ongoing trial tariff.
Forecast revenue (\$ and % AAR)	<p>\$0.00 million, equivalent to 0.0% AAR for the upcoming regulatory year.</p> <p>Note: Measured against TAR during annual pricing per NER cl. 6.18.1C(a)(1).</p>
Trial start date	1 July 2023

Duration of trial	One regulatory year
Potential changes and triggers	We will monitor uptake and review the structure and charges in collaboration with affected retailer and our customer representatives.
Notification date	28 February 2023

Name of trial	Flexible load (primary) tariff (business)
Objectives of trial	To learn whether there is a market for flexible load tariffs on primary circuits that provide small low voltage business customers with pricing signals only at times when use is likely to drive network costs. The tariff will initially apply to pole mounted EV charging and other business applications will also be considered.
Retailer engagement	<p>This tariff is an evolution of our residential flexible load from 2022-23. We consulted with 11 retailers in developing our residential flexible load tariff and partnered with 1 retailer for 2022-23.</p> <p>In our consultation with retailers, the interruptions in our residential flexible load tariff were seen as a significant problem for greater retailer involvement. We replaced interruptions with critical peak pricing based on this feedback.</p>
Consumer engagement	<p>This tariff is an evolution of our residential flexible load tariff from 2022-23. We consulted with our Pricing Working Group, conducted joint consultations with other NSW DNSPs (and their customer representatives), AER staff and NSW Government before the launch of the residential flexible load tariff.</p> <p>For this evolution we have consulted with our pricing working group and a potential commercial customer.</p>
Expected consumer and/or retailer response	<p>Our hypothesis is that consumers will significantly reduce their network usage during the critical peak events. We expect that retailers, if we can secure additional partners, may take different approaches:</p> <ul style="list-style-type: none"> - Use remote control of EV chargers to interrupt supply (as with our residential flexible load trial tariff this tariff is replacing); or - Pass through critical peak prices to customers that choose to operate during critical peak periods.
Proposed tariff (structure and pricing)	<p>The flexible load tariff will have three components:</p> <ul style="list-style-type: none"> - An anytime capacity (maximum demand over a 30-minute interval in the 12-months preceding end of billing period) charge: 7.5c/kW/day (approximate); and - A critical peak price: 153c/kWh (approximate) - An anytime usage charge: 1.1c/kWh
Links to TSS strategy and Export tariff transition strategy (if applicable)	The timing of this trial tariff makes it unlikely to inform our 2024-29 TSS. We submitted our 2024-29 TSS one month ago. It includes this tariff as an ongoing trial tariff.
Forecast revenue (\$ and % AAR)	<p>\$0.03 million, equivalent to 0.0% AAR for the upcoming regulatory year</p> <p>Note: Measured against TAR during annual pricing per NER cl. 6.18.1C(a)(1).</p>
Trial start date	1 July 2023
Duration of trial	One regulatory year

Potential changes and triggers

We will monitor uptake and review the structure and charges in collaboration with affected retailer and our customer representatives.

Notification date

28 February 2023

Name of trial	Stand-alone power systems tariff
Objectives of trial	Test the effectiveness of a tariff that reflects the specific cost drivers of stand-alone power systems.
Retailer engagement	We are engaging with the existing retailers of each customer we sign up onto a stand-alone power system.
Consumer engagement	We are engaging with customers that are having stand-alone power systems installed on their properties.
Expected consumer and/or retailer response	<p>Our hypothesis is that consumers will reduce the quantity of electricity they use with less focus on timing of use (where customers are currently on a time of use or demand tariff).</p> <p>We note that the cost drivers of stand-alone power systems are different to our standard distribution network. The main cost drivers for a standard network connection is instantaneous capacity to deliver peak demand, while for stand-alone power systems, the main cost driver is building sufficient generation and energy storage capacity.</p> <p>We estimate the costs of upgrading a stand-alone power system are in the order of \$3,000 per kWh of storage, making quantity of energy the main driver of stand-alone power system costs.</p>
Proposed tariff (structure and pricing)	<p>The stand-alone power systems tariff will have one component:</p> <ul style="list-style-type: none"> - A usage charge: 11c/kWh (approximate) <p>The usage charge will be set to make the network charges for stand-alone power systems customers do not see price increases (based on the current usage level).</p>
Links to TSS strategy and Export tariff transition strategy (if applicable)	<p>The timing of this trial tariff makes it unlikely to inform our 2024-29 TSS. We submitted our 2024-29 TSS on 31 January 2023. However, it does include this tariff as an ongoing trial tariff.</p> <p>We note that AEMC requirements to have different distribution loss factors for stand-alone power systems makes it likely that future Ausgrid (and other DNSP) TSSs will need separate tariffs for stand-alone power systems.</p>
Forecast revenue (\$ and % AAR)	<p>\$0.001 million, equivalent to 0.0% AAR for the upcoming regulatory year</p> <p>Note: Measured against TAR during annual pricing per NER cl. 6.18.1C(a)(1).</p>
Trial start date	1 July 2023
Duration of trial	One regulatory year
Potential changes and triggers	We will monitor uptake and review the structure and charges in collaboration with affected retailer and our customer representatives.
Notification date	28 February 2023

Name of trial	Super off-peak tariff
Objectives of trial	We are trialling a super off-peak tariff to understand the interest in a network-led super off-peak tariff to move shiftable loads (such as electric vehicle charging and hot water heating) further from the network peaks.
Retailer engagement	We have contacted all retailers in our network for expressions of interest in joining this tariff trial.
Consumer engagement	We have consulted with our Pricing Working Group on the tariff, and it is based on feedback we have received from a stakeholder in our pricing directions paper.
Expected consumer and/or retailer response	<p>We expect that customers that sign up to the super off-peak tariff will change the timers on devices that require regular, non-time dependent use. This includes:</p> <ul style="list-style-type: none"> - Pool pumps; - Electric vehicles; and - Hot water heating. <p>Customers can use this tariff without installing new meters (unless they are on a Type 6 meter) reducing the costs of entry for this tariff relative to our flexible load tariff that could also apply to similar customers.</p>
Proposed tariff (structure and pricing)	<p>The tariff structure will be (approximately):</p> <ul style="list-style-type: none"> - Fixed charge: 54.46c/day (\$196.43/year) equal to the fixed charge on our residential time of use tariff - Peak usage charge: 30.82c/kWh apply at the same time as the peak usage charge for our residential time of use tariff and apply the same charge. - Off-peak usage charge: 5.41c/kWh 5am to 1am every day except during the peak charging window and same charge as the residential time of use tariff's shoulder charge - Super off-peak usage charge: 0.86c/kWh 1am to 5am every day set to recover only jurisdictional scheme.
Links to TSS strategy and Export tariff transition strategy (if applicable)	<p>This trial tariff looks at a solution to a potential problem we may face in subsequent regulatory periods where customers are more responsive to pricing leading to peak demands at the start of off-peak periods.</p> <p>We do not forecast to see this problem in 2024-29, but it is important Ausgrid, and our peers, understand what tools may be effective if needed in the future.</p>
Forecast revenue (\$ and % AAR)	<p>\$0.007 million, equivalent to 0.0% AAR for the upcoming regulatory year</p> <p>Note: Measured against TAR during annual pricing per NER cl. 6.18.1C(a)(1).</p>
Trial start date	1 July 2023
Duration of trial	One regulatory year

Potential changes and triggers

We will monitor uptake and review the structure and charges in collaboration with affected retailer and our customer representatives.

Notification date

28 February 2023