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19 May 2023

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To whom it may concern

Ausgrid and Endeavour Energy 2024-29 Regulatory Proposal – embedded network tariff

Energy Locals Pty Ltd (ACN 606 408 879) and its related entity, Energy Trade Pty Ltd (ACN 165 688 568) (**Energy Locals**) welcomes the opportunity to provide a submission to the Australian Energy Regulator (**AER**) in relation to the 2024-29 Regulatory Proposals from Ausgrid and Endeavour Energy.

1. Introduction

Energy Locals specialises in energy procurement and management, energy generation and the provision of energy efficient technologies for residential, commercial, and industrial projects. We have extensive expertise in the management and implementation of embedded networks, which include electricity, gas, hot water, solar PV, electric vehicle charging, battery storage and telecommunications.

Energy Locals owns and operates hundreds of embedded networks in total across the NEM, with a majority of sites located across Ausgrid and Endeavour's service areas. Collectively, these embedded networks serve [redacted] active customers as of 31 March 2023. In 2022, we supplied [redacted] of electricity and a range of bundled services to customers. We have installed [redacted] of solar PV and [redacted] of battery storage, giving these apartment residents access to the benefits of distributed energy resource (**DER**) assets at no upfront cost. Over 2022, one of our flagship projects, [redacted], managed to achieve greater than [redacted] of site demand supplied from onsite solar and storage. [redacted]

Energy Locals' ability to service our embedded network customers will be directly affected by the new embedded network tariffs proposed by Ausgrid and Endeavour Energy in their 2024-29 Regulatory Proposals (**Regulatory Proposals**). If these embedded network tariffs are introduced as currently proposed, the benefits of embedded networks enjoyed by our customers, and the

[1] [redacted]

contribution of embedded networks to innovation and the growth of clean energy solutions in Australia, will be significantly compromised.

This submission will:

- discuss the benefits of embedded networks, including the opportunities for installation of distributed energy infrastructure, reduced pressure on transmission and distribution infrastructure, and increased investment in innovation;
- outline why ENs are priced on a cost reflective basis under the current tariffs; and
- detail our response to, and concerns with, the Ausgrid and Endeavour Energy 2024-29 regulatory proposals for embedded networks.

2. The benefits of embedded networks

The societal, environmental, and economic benefits of embedded networks are evident with residents in Energy Locals' embedded networks having access to low energy rates (due to our price match policy), low common area costs, centralised services with cost and space savings, indirect access to renewable energy and distributed energy assets (including electric vehicle chargers) and higher resale values.

We contend that these benefits should be taken into consideration when the AER is assessing the Regulatory Proposals and, as such, we have elaborated further on some of the most relevant benefits of embedded networks below. Most of these benefits are currently contingent on the bundled service offering we provide. We are concerned that the proposed tariffs will strand sunk investments in our existing sites and will reduce our ability to continue our current mix of services and pricing.

a) Distributed Energy Resources

The emergence of distributed energy resources (**DER**), such as solar PV, battery storage and electric vehicle chargers to individual customers provides customers with an opportunity to reduce their power bills but it also provides further opportunities to delay or eliminate the need for certain network investments and enables greater levels of renewable integration and additional resiliency to the networks.

While embedded generators include household solar and battery storage assets, the Australian Energy Market Operator (**AEMO**) has identified that coordination of these distributed resources is essential to alleviate challenges relating to managing voltage levels, optimising demand and supply and ensure the secure and reliable operation of the grid.[2] Embedded networks enable this coordination by allowing larger aggregators, such as embedded network owners and operators to sign up many customers and deliver their combined power to the network.

AEMO contends that the above aggregation approach can provide services like peaking generation, which increase competition and lowers costs for all customers[3] and, by deploying these resources,

[2] Australian Energy Market Operator and Energy Networks Australia, *Open Energy Networks*, *consultation paper* [online], available from: https://www.aemo.com.au/-/media/Files/Electricity/NEM/DER/2018/OEN-Final.pdf [accessed 15 May 2023].
[3] Ibid.

embedded network operators enhance the overall reliability, resilience, and capacity of the network.

b) Investment in energy infrastructure

Energy Locals plays a crucial role in investing in energy infrastructure, driving the development and expansion of efficient and sustainable systems. We recognise the significance of robust infrastructure to ensure reliable energy supply to consumers and make strategic investments in a range of energy infrastructure, including distribution networks, renewable generation facilities and energy storage systems.

We actively seek opportunities to upgrade and modernise infrastructure, incorporating advanced technologies that enable better monitoring, control, and optimisation of energy flows. Furthermore, these investments support the integration of renewable energy sources, enabling greater flexibility and enabling the transition to a low-carbon energy system. By proactively investing in energy infrastructure, we, and other embedded network operators, contribute to the long-term sustainability and efficiency of the network, while also meeting the evolving energy needs of our consumers and reducing cost pressures on distributors.

This contribution is recognised by the requirement of distributors under the National Electricity Rules to pay avoided transmission use of system payments to embedded generators in that distributor's network to acknowledge the saving that the distributor makes as a result of an eligible embedded generator being connected to its distribution network.

c) Innovation and access to renewable energy

Embedded networks play a pivotal role in fostering innovation and increasing access to renewable energy sources. By establishing localised energy systems that connect multiple energy consumers within a specific area, embedded networks enable the efficient deployment and integration of renewable energy technologies. This setup encourages innovation as it creates a conducive environment for the development and implementation of cutting-edge solutions. Within these networks, participants can collaboratively explore and experiment with new renewable energy solutions, such as solar panels and energy storage systems, which might not have been feasible or economically viable on an individual scale. Additionally, embedded networks facilitate the sharing and exchange of surplus energy among participants, further optimising resource utilisation and reducing wastage.

This cooperative model not only promotes a culture of innovation but also enhances access to renewable energy by enabling cost-effective deployment and equitable distribution of clean power within the network, thereby contributing to a more sustainable and resilient energy future.

3. Consistency with the NEO

The National Energy Objective (**NEO)** seeks to promote efficient investment in, and operation and use of, electricity services for the long-term interests of consumers with respect to price, quality, safety, reliability and security of supply of electricity. The AEMC states that successful application of the NEO[4] "considers the prospects for having the right mix of resources, to produce the

[4] AEMC, *Applying the energy market objectives*, 8 July 2019, p14.

maximum amount for the minimum cost, over time. Such markets are characterized where there are no barriers to innovation, the exit of technology or the uptake of new technology and efficient long-term investment." ENs contribute meaningfully towards this objective.

a) Efficient Investment

ENs promote efficient investment in electricity infrastructure and services by investing significantly in assets for the distribution of electricity within their respective networks. These investments typically include the last mile infrastructure, distributed energy resources (DER) like solar PV systems, battery storage, EV chargers, and other energy-saving technologies. End-use customers are not well placed to build, own, operate and maintain such assets. Neither apartment occupants (especially renters) or commercial building tenants have strong incentives or capabilities to invest in onsite DER assets relative to specialised embedded network operators. DER operators also have strong incentives and ability to innovate [redacted] EV charging infrastructure (both for residents and potentially for public access at our embedded network sites) is another business model we are investigating. Embedded network operators have far lower barriers to innovate in these areas given they can achieve scale efficiencies across multiple sites and leverage combined infrastructure and bundled service models.

b) Operation and Use

ENs facilitate the efficient use of electricity services by managing the localised distribution of electricity within their network. This is achieved through demand management strategies and operation of DER assets which, in turn, promotes the use of renewable energy and reduces the overall demand on the DNSPs, thereby contributing to network efficiency.

4. FTI Report

We have commissioned FTI Consulting to produce a report assessing the Regulatory Proposals. This report is attached to this submission at Annexure A and its key findings are as follows:

- The proposed EN tariffs are not cost reflective, will discourage service innovation, and negatively impact dynamic efficiency and will introduce inappropriate price discrimination that is inconsistent with the NEO and best practice network regulation.
- To the extent tariff arbitrage for high density residential developments is an issue, it should be addressed by increasing tariff segmentation for residential customers. In particular, introducing a new residential tariff category for high density (unit) dwellings that reflects any lower cost to serve.
- Any issues with equitable treatment of customers should be limited to the treatment of customers within an existing customer segment and not to equity between different customer cohorts taking different services.

In addition to the findings set out in the FTI Consulting report, Energy Locals argues that the purpose and methodology for calculation of the proposed embedded network tariff is in direct conflict with the National Electricity Rules (**NER**) Pricing Principles and we have elaborated more on this position below.

5. Our response to the Ausgrid and Endeavour Energy 2024-29 Regulatory Proposals

Energy Locals strongly objects to Ausgrid and Endeavour Energy's proposal to introduce a new tariff category to apply specifically to embedded networks (**ENs**) for the 2024 to 2029 period. We submit that the Regulatory Proposals:

- misrepresent the impact that embedded networks have on distribution networks in terms of the peakiness of the EN load shape versus other large customers;
- mischaracterise the counterfactual as serving disaggregated customers at lower voltage levels across many meters when the correct counterfactual should be serving other large customers at the same voltage level via a single meter consistent with non-discriminatory pricing principles;
- do not sufficiently justify claims of higher cost, the basis of adjustments in the proposed tariffs or the impact on customers;
- do not assess the extent to which ENs are cost reflectively priced under current tariffs; and
- ignore the extent to which charging large customers on a discriminatory and non-cost reflective basis is inconsistent with the NEO, specifically with regard to creating barriers to DER investment, higher levels of demand response and wider innovation in high density ENs.

a) Cost reflective pricing

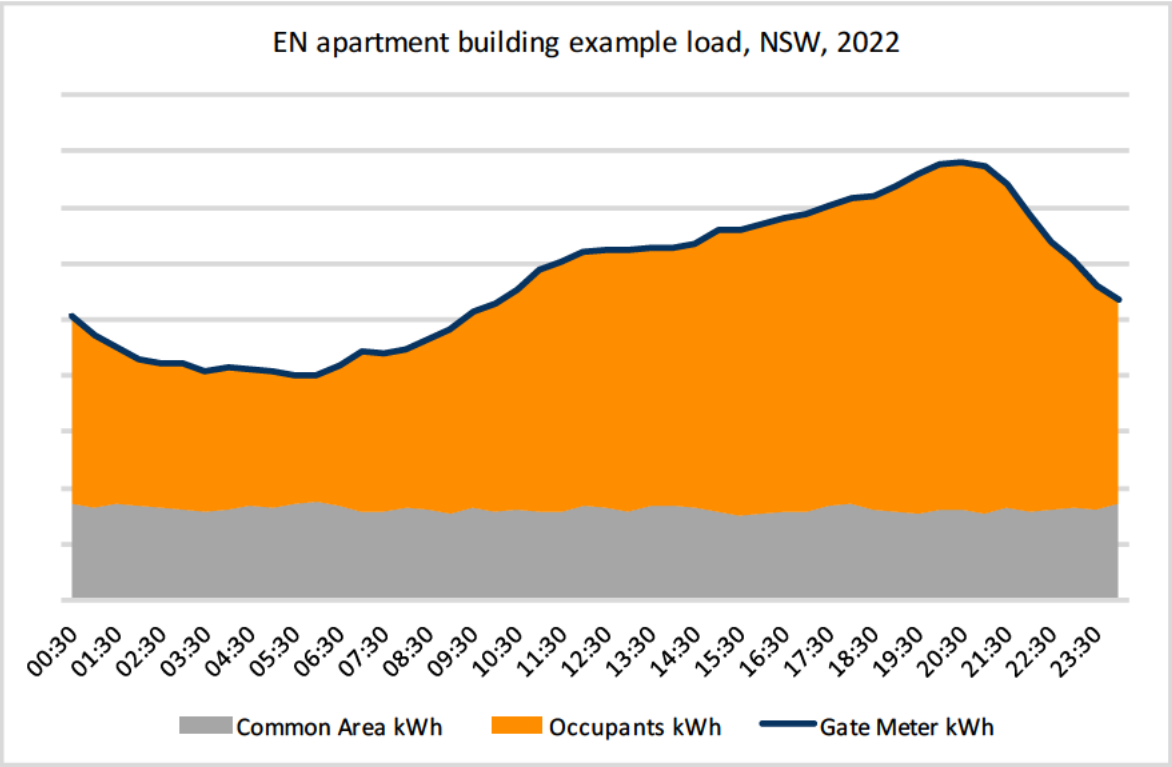
We argue that in most cases ENs are lower cost to serve from the perspective of the distributor relative to the distributor serving the constituent end-users individually. This is consistent with Endeavour stating "[s]ome of these savings reflect the lower costs imposed on the network by an embedded network".[5]

We believe it is lower cost for the following reasons:

- the distributor serves a single parent meter at the LV or HV level that serves the entire EN. In the alternative case, the distributor is responsible for 10s or 100s of individual customer meters and last mile infrastructure;
- peak load is more predictable at the parent meter connection. Peaks and troughs in demand across customers, especially at apartment blocks, cancel at the aggregate level making the load shape and maximum demand of the aggregate EN more predictable than the constitute loads. EN operators bear all risks behind the gate meter;
- for most ENs, especially apartments, common area loads flatten the aggregate load shape. Apartment blocks run lighting, elevators, pool pumps, HVAC and numerous other loads that serve to flatten the raw residential consumption profile of the occupants. On Energy Locals' NSW sites, common area load typically makes up 20-30% of total site load and substantially reduces the site load factor relative to a 'pure' residential shape (see Figure 1). It is this gate meter load factor that the DNSP serves; and
- EN operators have much stronger incentive and ability to deploy DER and respond to demand/capacity charges on existing tariff structures.

[5] Endeavour Energy, *Tariff Structure Explanatory Statement*, January 2023, page 47.

Figure 1 Energy Locals' apartment building EN example load shape, NSW 2022.



We note Ausgrid focused on the relative peakiness of EN load shapes versus other large customer shapes[6]. FTI have highlighted that the load shapes presented by Ausgrid reflect materially different total energy volumes. The actual relative peakiness of EN load is more accurately shown if Ausgrid's shapes are normalised to an average value of 1 MW as shown in Figure 2 and Figure 3. This shows that EN load shapes are peakier than the average shape on the same tariff, but not extremely so.

[6] Ausgrid, *Our TSS Explanatory Statement for 2024-29*, January 2023, page 22.

Figure 2 Ausgrid load shape normalised to average value of 1 MW, Apartments

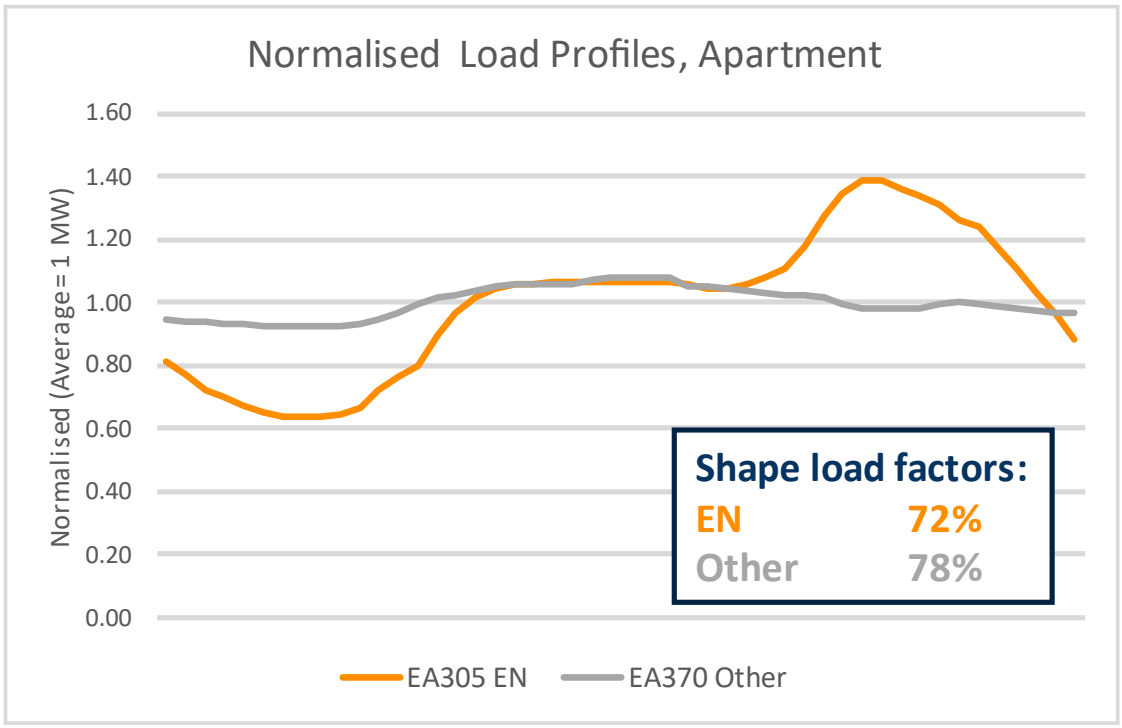
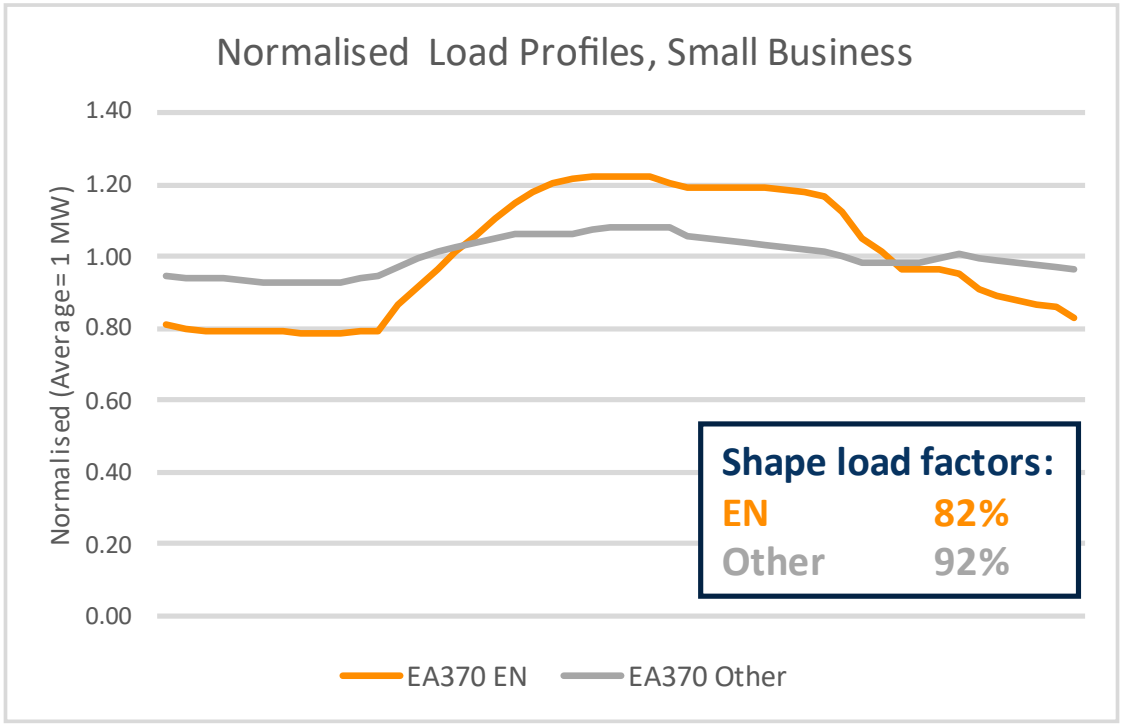


Figure 3 Ausgrid load shape normalised to average value of 1 MW, Apartments



FTI's report highlights that "A key mechanism in ensuring economic efficiency and satisfying the NEO with respect to the long-term interests of consumers of electricity is that network charges should be cost reflective." Embedded networks are in most cases peakier than other large customers on the same existing tariff, *however this does not mean that they are non-cost reflective, mispriced or under contributing.* Under Ausgrid's EA310 tariff, Ausgrid's proposal shows 60% of the total network charge arising from the capacity charge component. This component is charged on a maximum kW or KVA basis. On the EA310 tariff, more than half the total cost recovery is tied to maximum demand usage on the site, with the effect that the peakier EN load shape is charged more. All existing tariffs have significant demand or capacity charges that should account for the peakiness of any large customer on the existing tariffs on a cost reflective basis.

Endeavour states that "The core of the issue with our current approach is that an embedded network is assigned to a large customer tariff based on the aggregate annual energy consumption of its "child" connection points. We do not believe this is equitable, since the embedded network is not an individual business or industrial customer, it is a collection of SME businesses and residential customers."[7]

We disagree. Most ENs, including ours, have the following properties:

- Connection at a single parent meter, at higher voltage and consumption levels consistent with other large customers.
- A single entity (the EN operator) procuring wholesale power in bulk for the site and bearing wholesale risk and operating risks on EN assets.
- EN operators can more easily build own and operate site level DER assets in order to better respond to demand and capacity network tariff signals.
- A mixture of common area and individual users of the power and differing terms under which power is on-sold within the EN. All of our sites have a common area meter load to power shared facilities on site (lights, lifts, garage doors, EV chargers, HVAC, etc) that comprises 20-30% of total site load. In many cases this common meter alone is >160 MWh per annum. This common load materially alters the aggregate site load shape compared to an aggregation of 'pure' residential customers (as shown in Figure 1).

In fact, we strongly agree with Endeavour's other statement "There are a range of network benefits – and so network tariff savings – that can be obtained by an embedded network, in comparison to directly connected customers. Some of these savings reflect the lower costs imposed on the network by an embedded network while others result from taking advantage of our current tariff design".[8] It logically follows that there is nothing "inequitable" about large customers that impose lower costs on the network, and which are more demand responsive, contributing less to overall network costs.

We believe pricing under the existing tariffs are cost reflective, non-discriminatory and equitable. We do not believe that Ausgrid or Endeavour have evidenced their claims to the contrary. We would suggest that if Ausgrid and Endeavour think their existing tariffs are not cost reflective across all customers who connect at the applicable voltage level and with applicable annual consumption,

[7] Endeavour Energy, *Tariff Structure Explanatory Statement*, January 2023, page 67.
[8] Endeavour Energy, *Tariff Structure Explanatory Statement*, January 2023, page 47.

then the existing tariff should be modified for all current large customers.[9] There appears little basis for the introduction of a new and discriminatory tariff that applies only to ENs[10] and seeks to charge as if they are small customers.

FTI have suggested that any issue may sit not on the large customer side, but rather on the residential side in that residential customers are too highly aggregated across high density (lower cost to serve) and low density (higher cost to serve) segments. We leave the AER to consider FTI's point.

b) Reflection of costs

Per rule 6.18.5(g)(1) of the NER, the revenue expected to be recovered from each tariff must reflect the distribution network service provider's total efficient costs of serving the retail customers that are assigned to that tariff.

In its TSS Explanatory Statement for 2024-29 (**Explanatory Statement**), Ausgrid states that the introduction of tariffs for embedded network operators will better reflect the costs that these customers impose on their network. However, in making this argument, Ausgrid fails to point to what these costs actually are. Arguably, embedded network operators reduce costs incurred by distributors by investing in the infrastructure that would otherwise be installed at the distributor's cost and having more ability and incentive to provide demand response. This is acknowledged by Endeavour "[s]ome of these savings reflect the lower costs imposed on the network by an embedded network".[11]

c) Impact on customers

Rule 6.18.5(h) of the NER requires a distributor to consider the impact on retail customers of changes in tariffs, the extent to which retail customers can choose the tariffs to which they are assigned and the extent to which these customers are able to mitigate the impact of changes in tariffs through their decisions about usage of services.

Ausgrid and Endeavour Energy provide only minimal assessment of regarding the impact of the proposed tariffs. Energy Locals strongly suggests that further investigation and preparation is required to assess and mitigate impacts on customers before these proposed tariffs can be introduced. In particular, we suggest that the AER require distributors to:

- engage in customer consultation processes to gather feedback from embedded network customers on the proposed tariffs. This should include conducting surveys and establishing advisory panels to ensure that this customer group has a platform to voice their concerns and provide input on these proposed changes;
- consider implementing further measures to mitigate the likely adverse effects of these proposed tariffs on embedded network customers. This should involve providing longer transitional periods, support programs, energy efficiency initiatives, or financial assistance for customers facing affordability challenges; and

[9] NER clause 6.18.4(a)(2) – Retail customers with a similar connection and distribution service usage profile should be treated on an equal basis.
[10] Ibid
[11] Endeavour Energy, *Tariff Structure Explanatory Statement*, January 2023, page 47.

- undertake periodic reviews of tariff structures during the regulatory period to ensure they remain fair and reasonable.

d) Inconsistency with the NEO

We believe that proposals are inconsistent with the NEO and the NER pricing principles in several ways:

- They are inconsistent with the principle of cost reflective pricing in that charging large customers a network tariff with the intent to recovery an amount approaching that of small customers as opposed to the efficient cost to serve.
- The proposals are discriminatory in that they explicitly carve only large ENs out of the existing tariff classes. This is despite the fact that ENs and other large customers have a similar connection and distribution service usage profile should be treated on an equal basis.[12]
- To the extent non-cost reflective and discriminatory tariff structures are applied to ENs, we believe this will creates barriers to future investment in DER and other infrastructure by EN operators. This will also create a barrier to product and service innovation.

6. Next steps

Our first preference is that the proposals are denied on the grounds that they are not consistent with the NEO, or the principles outlined in the National Electricity Rules, Chapter 6.

To the extent that the proposals are adopted in part or in whole, we would request:

- That any changes should be transitioned over 5 years (as per Ausgrid's amended proposal), not over 2 years (as per Endeavour's proposal) or immediate (as per Ausgrid's initial proposal).
- Ausgrid and Endeavour should engage more directly with residents and tenants of ENs on the changes, particularly price impact.
- Grandfathering should apply to avoid asset stranding. Many EN operators have made significant investments into EN equipment and services such as EV chargers, solar PV, battery storage, etc. Our preference would be that any new EN tariffs only apply to EN exempt sites from a future cut-off date.

In conclusion, this submission to the AER highlights the benefits of embedded networks and the positive impact that they can have on the ongoing energy transition. It emphasises the importance of a balanced approach to determining tariffs that encourages investment, promotes efficient and reliable energy distribution, and safeguards the interests of customers. We urge the AER to encourage distributors to revisit the Regulatory Proposals with the intention to better incorporate the Pricing Principles set by the NER.

[12] NER clause 6.18.4(a)(2) – Retail customers with a similar connection and distribution service usage profile should be treated on an equal basis.

We would like to take this opportunity to thank the AER for the opportunity to provide this submission.

Yours faithfully,

Adrian Merrick
Chief Executive Officer
Energy Locals Pty Ltd

Annexure A FTI Report

19 May 2023

Review of Proposed Embedded Network Charges

This report reviews the Ausgrid and Endeavour Energy proposal to introduce new embedded network charges

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Glossary

Term	Definition
AUD	Australian dollar
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
C&I	Commercial and industrial
DER	Distributed energy resources
DNSP	Distribution Network Service Provider
EN	Embedded network
MWh	Megawatt hour
NEM	National Electricity Market
NER	National Electricity Rules
NEO	National Electricity Objective
USD	United States dollar

Executive Summary

In their regulatory proposals to the Australian Energy Regulator (AER) for the 2024 to 2029 regulatory period, Ausgrid and Endeavour Energy have proposed the introduction of a new tariff category to apply specifically to embedded networks (ENs).

ENs refer to a localised group of energy consumers that connect to the electricity grid via a single connection (termed a parent connection). From this parent connection electricity is delivered across the EN to each individual consumer connection (termed a child connection). For an EN, the DNSPs electricity distribution service is to the parent connection with the distribution network service provider (DNSP) having no role or responsibility for distribution services that occur between the parent and child connections.

Currently, EN tariffs are set based on the electricity demand at the parent connection point with the applicable tariff being that applied to similarly sized commercial and industrial (C&I) connections.

This reflects the aims in the National Electricity Rules (NER) for economically efficient pricing that is cost reflective. Broadly, per unit of energy, network prices decrease as customer size increases reflecting the scale efficiencies networks face in servicing larger customers compared to smaller customers. This is particularly apparent when considering the cost to serve residential customers in detached dwellings where electricity connection density is low and DNSPs must build out large low-voltage networks in order to provide distribution services.

ENs and similarly sized C&I connections provide a consolidated demand point that requires much lower investment in low voltage distribution assets than residential customers in low density housing.

Ausgrid and Endeavour Energy propose to change this pricing arrangement so that ENs will pay substantially more than an equivalent C&I customer. The argument for this change appears to be based on three key arguments:

- that ENs are not paying cost reflective network charges
- that current EN tariffs provide a tariff arbitrage opportunity that may result in developers utilising ENs where, absent that tariff arbitrage opportunity, they would not

- that current charging provides an inequitable advantage to customers in ENs who, at the child connection point, are taking a service similar to small customers (<100MWh a year) who are not part of an EN.

Cost reflective pricing

An overarching theme in the DNSPs arguments supporting the introduction of an EN specific tariff is that the impact of ENs on the network is different from other C&I customers on the same tariff.

That is, that ENs are not paying an appropriate fee reflecting the cost impact they apply on the network.

FTI believes that the focus of a DNSP in pricing should be on the impact that loads at network connection points have on the cost of the network to that point. To the extent that it is suitable to have different categories of network tariffs, they should reflect the system costs of loads at a connection point and should be indifferent to the nature of the activity behind that connection point.

Doing otherwise results in price discrimination based on some factor other than the cost impact the customer places on the network. This is inconsistent with the regulatory framework which is based on DNSPs having monopoly power and the need to mitigate that monopoly power through pricing principles such as requiring cost reflective pricing.

FTI is of the view that the proposed EN tariffs are not cost reflective, will discourage service innovation and negatively impact dynamic efficiency and will introduce inappropriate price discrimination that is only possible given the monopoly nature of the DNSP service.

FTI does not believe that either Endeavour Energy or Ausgrid have provided sufficient evidence that the proposed EN tariffs are consistent with either the NER or the NEO and as such, the proposed EN specific tariffs should be rejected.

Tariff arbitrage

The DNSPs have argued that current tariff structures encourage inefficient tariff arbitrage on the part of developers. Ausgrid argued that:

> a development's choice to connect to our network as an EN instead of connecting each individual energy user may be partly driven by a reduction in the total network bill (known as tariff arbitrage)."[1]

This argument hinges on whether tariff arbitrage (to the extent it exists) is the result of EN customers responding to price signals within the current tariff structure that are the result of structural issues with tariffs (in terms of customer segmentation), and whether such arbitrage is economically inefficient.

FTI is of the view that, to the extent tariff arbitrage for high density residential developments is an issue, it should be addressed by increasing tariff segmentation for residential customers. In particular, introducing a new residential tariff category for high density (unit) dwellings.

As such, the proposed adoption of an EN specific tariff is the wrong response to address any concerns with tariff arbitrage and therefore, the proposed EN specific tariffs should be rejected.

Customer equity

The DNSPs have argued that current tariff structures are inequitable in that a residential customer that is connected via an EN is likely to pay less than a similar residential customer not connected to an EN.

FTI is of the view that, any issues with equitable treatment of customers should be limited to the treatment of customers within an existing customer segment and not to equity between different customer cohorts taking different services.

The equity issues identified by the DNSPs should be dealt with through reassessing the degree of customer segmentation to ensure that prices are cost reflective. For example, by differentiating residential customers into low density and high-density categories to reflect the different impact these different living options have on network costs.

Further, addressing broader customer equity impacts (including affordability concerns) should be the responsibility of the Government to deliver on social

[1] Ausgrid, Our TSS Explanatory Statement for 2024-29, January 2023, Figure 4, p.22

policies and not the role of the DNSP. As such, FTI considers that, on equity grounds, the proposed EN specific tariffs should be rejected.

Conclusion

FTI is of the view that neither Ausgrid nor Endeavour Energy have provided sufficient evidence as to why a new tariff class for ENs is justified under the National Electricity Objective (NEO).

FTI believes that the introduction of a new EN tariff category is not consistent with the NEO as it is not cost reflective, will discourage service innovation and negatively impact dynamic efficiency and, therefore, the proposal to introduce EN specific network tariffs should be rejected.

1. Introduction

FTI Consulting (Australia) Pty Ltd (FTI) has prepared this report at the request of Energy Locals. This report assesses the regulatory proposals put forward by Ausgrid and Endeavour Energy to the Australian Energy Regulator (AER) for a new customer pricing category to be used by distributed network service providers (DNSPs) for embedded networks (ENs).

The report is structured around the following areas:

- The role of DNSPs.
- The role of cost reflectivity in DNSP pricing under the National Electricity Rules (NER).
- What are ENs.
- Current tariff structures for ENs by Ausgrid and Endeavour Energy.
- Proposed tariff structures for ENs by Ausgrid and Endeavour Energy.
- An assessment of the proposed EN tariffs.

2. The role of distribution network service providers

DNSPs provide electricity distribution services to residents and businesses throughout the National Electricity Market (NEM). They are the businesses that own and control the hardware of the distributed energy network such as the poles, wires, transformers, and substations that support the supply of electricity across defined geographic supply areas.

Across the NEM there are different, and often multiple, DNSPs within each State. DNSPs make significant investments to develop and build the infrastructure required to deliver electricity. The costs of these investments are recovered through the network tariffs they charge to retailers who then recover the full cost of electricity supply from customers.

By the nature of services provided, there is limited, if any, competition for the services provided by DNSPs, thus they form natural monopolies. As a result, DNSPs are subject to a comprehensive economic and technical regulatory framework aimed at ensuring safe, consistent quality and the efficient supply of services, as well as efficient pricing.

The AER is the economic regulator of the electricity and gas supply chains in the NEM. It is a part of the Australian Competition and Consumer Commission and enforces the rules established by the Australian Energy Market Commission (AEMC). The AER regulates the network tariffs of DNSPs so that consumers pay no more than necessary for safe and reliable electricity services.

3. Cost-reflective pricing

In 2014, the AEMC made a rule requiring regulated network companies to structure their prices to better reflect the consumption choices of individual consumers[2] (see Box 1). Under the revised rules, network tariffs are to be structured to reflect the costs of providing network services to customers with different patterns of consumption over time. This is known as a 'causer-pays' method of charging, and it is considered economically efficient as it provides price signals that incentivise the least-cost provision of a given service.

Box 1: AEMC's cost-reflective pricing determination

In its 2014 Final Determination, the AEMC noted:

- Network prices should signal to consumers the future costs of providing network services. This allows consumers to alter their electricity demand profile through informed decision-making. Consumers who move their consumption away from peak periods face lower prices as they reduce the peak demand on the network, minimising the need for future peak demand-driven investment.
- Consumer decisions to move away from peak demand incentivise DNSPs to design network price structures that reward those decisions. If consumers can relate their usage decisions to price structures, they will be able to make better informed decisions about when and how they consume their energy.
- Prices charged to consumers should allow DNSPs to recover the total efficient cost of providing network services. If DNSPs cannot efficiently and reliably recover costs, they are incentivised against future network investment that may enhance network reliability, security, and sustainability. This outcome would be inconsistent with the National Energy Objectives (NEO), which aim to achieve dynamic efficiency in the NEM.
- Cost reflective pricing should be based on long run marginal costs and revenues recovered should reflect the DNSP's total efficient costs of providing their services.

In the context of electricity tariffs, customers who, through their usage of the network (principally by consuming electricity), place a greater cost burden on the

[2] https://www.aemc.gov.au/news-centre/media-releases/new-rules-for-cost-reflective-network-prices

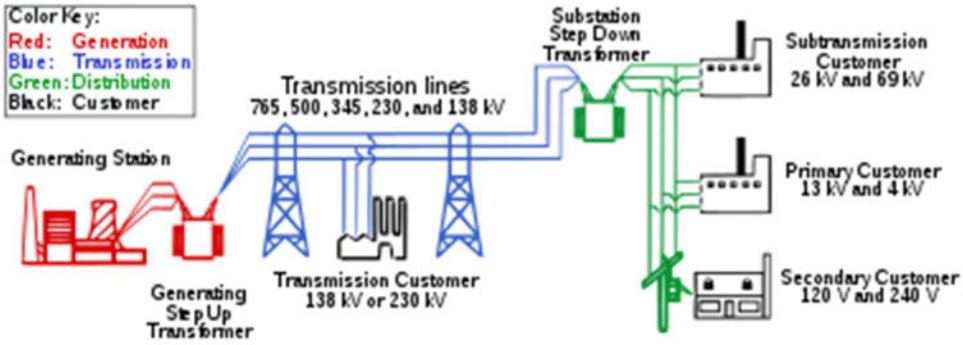
network should be charged proportionally more than those who impose a lesser cost burden.

Key elements of a customer's impact on the distribution network will include assessment of their share of relevant coincident peak demand[3] and the (voltage) level at which their connection is made to the network.

A customers share of coincident peak demand determines the share of network capacity that must be reserved to ensure that service quality and reliability requirements can be met. In aggregate, coincident peak demand determines the necessary investment in network capacity.

The issue of the voltage level a customer takes supply at relates to the nature of the electricity supply chain whereby DNSP's take high voltage supply from the upstream transmission network and progressively stepdown the voltage to the level required to meet the energy demands of customers. This is highlighted in the following highly simplified graphic (Figure 1).

Figure 1 Simplified electricity supply chain



From Figure 1, it can be seen that the impact of particular customer groups on network costs can be determined by looking back up the electricity supply chain to determine the share of network assets that need to be reserved to ensure the appropriate quality and quantity of supply to that customer group. For example, it would be inappropriate, from a cost reflectivity perspective, for a primary customer

[3] This refers to consumption during the time interval when the local electricity supply system has its maximum demand interval.

to be required to pay for the lower voltage assets required to service secondary customers.

Similarly, low voltage large demand customers generally have lower cost reflective charges than residential customers reflecting the fact that the amount of low voltage network assets required to service high demand customers is much lower than for residential customers especially those in low density housing.[4]

The move to cost reflective pricing is expected to result in tariffs that incentivise consumers to use more energy during low-cost (generally low-demand and/or high-supply) periods and less energy during high-cost (generally high-demand and/or low-supply) periods. The AEMC noted that this may mean, for example, transitioning from single-rate (flat, fixed) usage tariffs to 'time-of-use' tariffs that reflect use at different peak and off-peak times. Similarly, an increased reliance on capacity charges (peak demand) is also consistent with cost reflective pricing.

Cost reflective pricing is not only expected to provide economically efficient signals for electricity use, such that the customer's load shape will reflect the least cost impact on the system for a given level of consumption, but also to provide the most efficient level of investment in, and integration of, new technologies, such as solar PV, behind-the-meter storage (batteries) and electric vehicles (EVs).

Enhanced cost reflective pricing will encourage more efficient use of networks, which helps reduce the need for additional investment and/or the amount of network infrastructure that needs to be maintained. As customers ultimately pay for these upgrades, tariff reform that encourages a more efficient use of the network will lead to lower network costs for all customers.

The importance of efficient, cost reflective, price signals to minimise overall system cost is likely to further increase as transport electrification introduces new loads to the grid and penetration of distributed energy resources (DER) continues. These ongoing and rapid changes to the nature of both demand and supply are best matched with pricing that reflects their impacts on the network.

[4] Data from the 2016 Census indicates that separate (detached) houses still account for 72% of all dwellings. https://aifs.gov.au/research/research-reports/families-then-now-housing

It is important to note that network tariffs are charged to retailers who package them with other costs, such as wholesale energy costs, in their service offerings to electricity customers. As such, the final prices faced by end use consumers may not directly reflect the network tariff.[5]

While this may dilute incentives faced by consumers associated with cost reflective network tariffs, it can provide a necessary separation of the cost elements of supply, and a bundling of prices to the consumer in a way that balances cost and complexity. If a network operator prices efficiently according to network costs, and a retailer receiving those prices then charges efficiently to the end use customers based on their (retail) cost to serve, the incentives and resulting efficiencies should flow through to the consumer in the most practically optimal way.

4. Embedded networks

ENs are a localised group of energy consumers that connect to the electricity grid via a single connection (termed a parent connection). From this parent connection, electricity is delivered across the EN to each individual consumer connection (termed a child connection).

The operator of the parent connection point pays the relevant fixed and variable charges to the DNSP based on the characteristics of that parent connection point. The EN operator then charges the child connections in order to recover the total costs of providing electricity services including a share of the parent connection costs, the EN costs and retail electricity costs.

Examples of ENs are apartment blocks, retirement villages, caravan parks, and shopping centres, where the electrical system is configured in such a way as to enable the owner of the EN to provide electricity supply services to all embedded customers.

Over time there is likely to be increasing use of ENs as developers look at innovative solutions to develop green, climate change responsive, development projects using environmental solutions integrating elements such as precinct and building design, integrated energy services including DER and innovative water and sewerage solutions.

5 https://www.aer.gov.au/networks-pipelines/network-tariff-reform

The owner of a site with an EN usually buys wholesale energy and then 'on sells' the energy to the individual consumers at the site (for example, individual residents and the owners corporation). In some situations, ENs hold a retail licence thereby providing National Electricity Retail Rules (NERR) compliant retail electricity services.

Outside of ENs that hold a retail licence or partner with a retailer, entities who sell energy in ENs are known as exempt sellers because they do not need to be registered with the AER as an energy retailer. However, they do need to hold a valid exemption from the AER and to follow certain rules relating to the rights of consumers noting that these rules are less strict than those mandated for licensed retailers under the NERR.[6]

ENs are often developed as a logical response to issues and goals faced by developers. For example, the developer or site owner may have a business model based on providing a particular service such as the transient location service provided by caravan parks, or the consistent and controlled location service for retail businesses provided by shopping centres.

Increasingly, ENs are being flagged as a key element in establishing green development precincts where the developer can control all elements of the provision of utility services in such a way as to ensure consistent, high quality, environmentally sustainable services.

Ausgrid argues that one reason why developers may choose to develop ENs is that this may result in a reduction in the total network bill and that such tariff arbitrage is inefficient.[7] This issue is addressed further below.

5. Current Ausgrid and Endeavour Energy EN tariffs

The current Ausgrid and Endeavour Energy approaches to network tariff arrangements for ENs are described in this section.

Ausgrid

Currently, ENs face the same tariffs as other similarly sized (in terms of annual demand) network users as shown in Table 1.

[6] https://www.aer.gov.au/consumers/consumers-in-embedded-networks

[7] Ausgrid, Our TSS Explanatory Statement for 2024-29, January 2023, p.22.

Table 1: Current Ausgrid network tariffs

Customer category	Tariff	Network access (c/day)	Energy charge (c/kWh)			Capacity (c/kVA/day)
			Peak	Shoulder	Off-peak	Peak
Low voltage, 160-750MWh per annum	EA305	1639.1031	5.3970	1.0806	0.7098	40.1690
Low voltage, >750MWh per annum	EA310	3302.4031	4.5138	1.0806	0.7098	43.4952
High voltage	EA370	5130.0237	2.7127	1.7255	1.1327	21.9950

Note: All prices are GST exclusive

Source: Ausgrid Network Price List 2022-2023

The Ausgrid customer categorisations are based on customer size and type in terms of whether they are a high voltage customer or a low voltage small or large customer.

Endeavour Energy:

It is understood that, currently, EN customers of Endeavour Energy are on tariff N19 (Low Voltage Seasonal Time of Use Demand Tariff). This tariff applies to customer connection services supplied to connection points where total electricity consumption per financial year is greater than 160MWh. The current pricing of tariff N19 is shown in Table 2.

Table 2: Current Endeavour Energy network tariffs (N19)

Network access (c/d)	Energy charge			Demand charge	
	High season peak (c/kWh)	High season peak (c/kWh)	High season peak (c/kWh)	High season (c/KVA/day)	Low season (c/KVA/day)
2864.00	4.2883	3.6717	2.1951	34.3685	29.0885

Note: All charges are GST exclusive

Source: Endeavour Energy 2022, Network Price List: Network Tariffs 2022-2023, May 2022

6. Proposed Ausgrid and Endeavour Energy EN tariffs

This section discusses the proposed approaches to network tariff arrangements for ENs submitted to the AER by Ausgrid and Endeavour Energy for the period 1 July 2024 to 30 June 2029.

Ausgrid[8]

Ausgrid proposes to introduce three tariffs for ENs:

- ENs connected to Ausgrid's low voltage network using between 160-750MWh per annum (for ENs currently on tariff EA305).
- ENs connected to Ausgrid's low voltage network using more than 750MWh per annum (for ENs currently on tariff EA310).
- ENs connected to the high voltage network (for ENs currently on tariff EA370).

The proposed tariffs for the ENs are shown in Table 3.

[8] Ausgrid, *Our TSS Explanatory Statement for 2024-29*, January 2023

Table 3: Ausgrid proposed tariffs for ENs[9]

Load type	Fixed charge (c/day)	Energy charge (c/kWh)	Capacity charge (c/KVA/day)
2024-25			
EA314 (Low voltage network, 160-750 MWh p.a.)	1,877.61	3.73	49.76
EA315 (Low voltage network >750 MWh p.a.)	3,772.86	1.90	50.45
EA365 (High voltage connection)	5,856.42	1.71 (0.65 off-peak)	24.06
2025-26			
EA314 (Low voltage network, 160-750 MWh p.a.)	1,916.57	3.98	56.80
EA315 (Low voltage network >750 MWh p.a.)	4,019.19	2.02	60.11
EA365 (High voltage connection)	6,454.15	1.71 (0.65 off-peak)	28.76
2026-27			
EA314 (Low voltage network, 160-750 MWh p.a.)	1,956.10	4.23	64.84
EA315 (Low voltage network >750 MWh p.a.)	4,215.71	2.15	70.51
EA365 (High voltage connection)	7,103.02	1.71 (0.65 off-peak)	34.32
2027-28			
EA314 (Low voltage network, 160-750 MWh p.a.)	2,000.36	4.51	74.16
EA315 (Low voltage network >750 MWh p.a.)	4,383.34	2.29	82.00
EA365 (High voltage connection)	7,969.24	1.71 (Off-peak: 0.65)	41.76
2028-29			
EA314 (Low voltage network, 160-750 MWh p.a.)	2,035.04	4.80	84.38
EA315 (Low voltage network >750 MWh p.a.)	4,583.55	2.44	95.90
EA365 (High voltage connection)	8,752.51	1.71 (Off-peak: 0.65)	49.74

9 Ausgrid, *2024-29 Regulatory Proposal, Attachment 8.15 – Indicative pricing schedule DUOS*, January 2023

Ausgrid proposes that these new tariffs apply to all connections identified as ENs in the Market Settlements and Transfers System that use above 160MWh of electricity per annum. This would allow small ENs, such as caravan parks and small retirement villages, to be exempt from the proposed changes.[10]

Ausgrid argues setting the tariff at a level to exclude caravan parks and small retirement villages is in accordance with NER clause 6.18.5(h), which requires DNSPs to consider the impact on retail customers of changes in tariffs. However, to the extent that this argument has any merit, it applies equally to existing customers in EN residential unit blocks who would be subject to a significant increase in network charges.

Ausgrid proposes that these tariffs have the same fixed and variable energy charges as the equivalent medium or large business tariff but include an increased capacity charge, where this is uplifted over five years to smooth bill impacts such that the EN tariffs reach the proposed levels by July 2029.

Figure 2 Ausgrid analysis of tariff change impact on ENs[11]

Table 3: Comparative analysis of network charges for a residential EN with 315 sub-metered customers

	Normal customer billing (315 units on EA116)	Embedded network on EA310	With proposed embedded network tariff
Consumption per NMI, (kWh)	3,143	-	-
Total consumption, (kWh)	989,913	-	-
Fixed – network access charges	$45,480	$12,054	$12,054
Energy consumption charge	$22,176	$13,745	$13,745
Capacity charge	$100,268	$43,153	$64,730
Total network bill (per annum)	$167,924	$68,952	$90,529
Difference ($)		**-$98,972**	**-$77,396**
Difference (%)	-	-59%	-46%

On the basis of Ausgrid's impact analysis, Figure 2 suggests that a representative 989MWh per annum EN customer would currently pay around $69,000 per annum

[10] Ausgrid, Our TSS Explanatory Statement for 2024-29, January 2023, p. 23.

[11] Ibid.

increasing to over $90,000 per annum under the proposed charging approach. This is an increase of some 31%.

Ausgrid's reasons for introducing new tariffs for ENs are:

- The load profiles of the ENs in Ausgrid's network are different to the load profiles of the tariff classes to which the ENs are currently assigned.[12] Ausgrid cites, for example, that the average EN has a peakier load shape and a peak that occurs later in the day as compared to an average customer on its low voltage EA305 tariff, a medium business using between 160-750MWh per annum (see Figure 3 below which reproduces Ausgrid's example).
- Ausgrid's claims that its current tariff structure results in lower network bills for EN customers than for customers on its residential and small business tariff rates. To illustrate this point, Ausgrid prepared comparative analyses showing that under its current tariffs, energy network charges for an EN are significantly less than the total charges their sub-metered customers would pay if they were billed individually (see Figure 2). Ausgrid infers that this has created the opportunity for 'tariff arbitrage', meaning that a development's choice to connect to its network as an EN, rather than creating separate connections for each individual energy user on that EN, may be partly driven by the total network bill savings of doing so. Ausgrid states that these savings accruing to ENs must be recovered from other customers and may encourage the growth of ENs, and that such outcomes result in less equitable recovery of residual costs and distorts efficient price signals, inconsistent with NER clauses 6.18.4(a)(2) and 6.18.5.

Ausgrid's reasoning for its proposed structuring of the EN tariffs is that an increased capacity charge component is an efficient way to address the load profiles it has observed among ENs, as this charging component would be applied to the maximum peak demand[13] over the prior 12 months. Additionally, Ausgrid considers that a higher capacity charge would scale better and be fairer and more practical across a wide range of EN customers compared to a higher fixed charge. These arguments are addressed in Section 7.

[12] Ausgrid currently assigns ENs to tariffs designed for medium or large businesses.

[13] Defined as peak demand occurring in the peak period window, 2pm-8pm on working weekdays.

The structure of the example charges developed by Ausgrid as shown in Figure 2, have been reproduced in Table 4 with the addition of simple analysis of share of cost recovery by tariff element.

Table 4: Analysis of Ausgrid EN charging example (990MW/yr.)

Element	Residential EA116 $/yr.	Residential %	Current EN EA310 $/yr.	Current EN %	Proposed EN $/yr.	Proposed EN %
Fixed – network access charges	45,480	27%	12,054	17%	12,054	13%
Energy consumption charge	22,176	13%	13,745	20%	13,745	15%
Capacity charge	100,268	60%	43,153	63%	64,730	72%
Total	167,924		68,952		90,529	

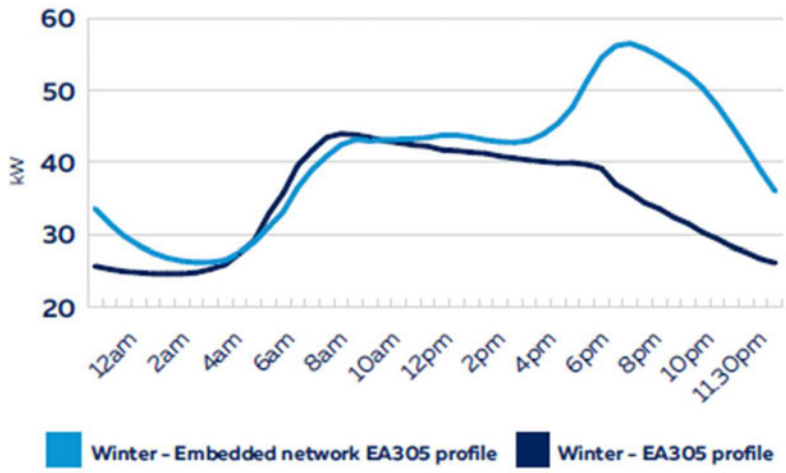
Table 4 highlights the importance of the capacity charge in Ausgrid's tariff structure with 60% or more of total annual charges coming from the capacity charge. Under Ausgrid's proposed EN tariff, this would increase to some 72% of the new (larger) total annual charge or around 94% of the current total.

The existing high reliance on capacity charges suggests that there is already strong recognition by Ausgrid that the primary driver for cost reflective charging is the capacity charge. Charging on this basis captures the impact of the customer on the share of network capacity that must be reserved for that customer to provide a reliable service, that is, upstream network capacity from the parent connection towards the high voltage transmission connection point.

This high reliance on the capacity charge already ensures that an EN customer under the current EA310 tariff category would pay substantially more than a similarly sized (990MWh) with a much less peaky demand profile.

Figure 3 reproduces an Ausgrid chart showing a comparison of the winter profile for an average low voltage EA305 tariff customer (with total demand between 160MWh and 750MWh) with the average profile of an EN customer on the same EA305 tariff.

Figure 3 Ausgrid example EN winter network profile vs other customers on same tariff (EA305)[14]



It should be noted that Figure 3 overstates the difference between EN and other EA305 tariff customers due to the area under the EN demand profile being larger (indicating a higher MWh customer) and therefore representing a larger demand customer than the non-EN average. Nevertheless, it highlights how an EN customer may have a peakier demand profile than a non-EN customer. As noted above, the heavy reliance of Ausgrid's tariff structure on capacity charges means that the EA305 EN customer would pay substantially more than a similar sized non-EN customer with a less peaky demand profile consistent with cost reflectivity pricing. Indeed Figure 3 suggests that an EN customer on the EA305 tariff has a peak demand around one third higher than a non-EN customer on the EA305 tariff. Using a 60% weighting for the capcity charge would suggest the EA305 EN customer would currently pay around 20% more than the average EA305 tariff customer.

If, even after allowing for the current heavy reliance of the current tariff structure on capacity charges, the current balance between the charging parameters is not cost reflective, then it should be adjusted to ensure that it is cost reflective based on logical customer segmentation. Creating a new tariff class based on the nature of the business operating behind the meter, i.e. because the connection point is to an

[14] Ausgrid, Our TSS Explanatory Statement for 2024-29, January 2023, Figure 4, p.22

EN, moves away from cost reflectivity and being customer agnostic towards price discrimination aimed at some other goal that Ausgrid has not clearly articulated.

Endeavour Energy

Like Ausgrid, Endeavour Energy has proposed to implement a large low voltage EN tariff (N20) that includes an additional demand charge to the standard demand-based tariff (N19). Endeavour proposes to introduce the new demand charge over a two-year period to mitigate the adjustment impact on EN customers. Also, like Ausgrid, Endeavour is proposing to exempt smaller customers such as holiday parks with consumption less than 160MWh per annum.

The quantum of Endeavour Energy's proposed new demand charges for ENs is shown in Table 5. To illustrate the difference in demand charge between general large low voltage network users (N19) and EN large low voltage network users (N20), the proposed tariff charges for tariff N19 are also shown.

Endeavour Energy's reasoning for proposing the new demand charge is like that of Ausgrid. It argues that under the current tariff charges, where ENs are assigned to a 'large customer' tariff based on the aggregate annual energy consumption of their constituent 'child' connection points, the customers in an EN make a lower contribution (per end user) to the recovery of network costs than they would otherwise make absent the EN. Endeavour Energy considers that the current tariff charges give rise to an inequitable outcome between its customers, which is inconsistent with the NER clauses 6.18.3(d) and 6.18.4(2).

Table 5: Endeavour Energy proposed tariffs for large low voltage (N19) and EN (N20) customers[15]

	Fixed charge (c/day)	High season peak (c/kWh)	Low season peak (c/kWh)	Off-peak (c/kWh)	High season demand (c/kVA)	Low season demand (c/kVA)
2024-25						
N19	3,639.05	5.72	4.97	3.19	40.74	34.35
N20	3,639.05	5.72	4.97	3.19	45.48	39.09
2025-26						
N19	3,911.62	5.87	5.13	3.34	40.87	34.48
N20	3,911.62	5.87	5.13	3.34	50.36	43.97
2026-27						
N19	3,931.33	6.00	5.25	3.46	41.07	34.65
N20	3,931.33	6.00	5.25	3.46	50.56	44.14
2027-28						
N19	3,970.64	6.16	5.40	3.59	41.47	34.98
N20	3,970.64	6.16	5.40	3.59	50.96	44.47
2028-29						
N19	4,010.35	6.32	5.56	3.72	41.89	35.33
N20	4,010.35	6.32	5.56	3.72	51.38	44.82

7. Assessment and conclusions

This section addresses Ausgrid and Endeavour Energy's major arguments supporting the introduction of EN specific tariffs. The key DNSP arguments appear to revolve around the following issues:

- cost reflectivity
- tariff arbitrage
- customer equity.

In assessing each of these major drivers for change, we have utilised the following assessment structure:

- identify Ausgrid and Endeavour Energy specific arguments used to support the introduction of a new EN specific tariff
- assess the merits of these arguments

[15] Endeavour Energy, *Regulatory Proposal 2024-2029, Attachment 0.18 - SCS Indicative Price Schedule*, January 2023.

- provide FTI's conclusions on whether those arguments are consistent with the NEO and NER.

Cost reflectivity

Argument

An overarching theme in the DNSPs arguments supporting the introduction of an EN specific tariff is that the impact of ENs on the network is different from other C&I customers on the same tariff.

That is, that ENs are not paying an appropriate fee reflecting the cost impact they apply on the network.

Assessment

A key mechanism in ensuring economic efficiency and satisfying the NEO[16] with respect to the long-term interests of consumers of electricity is that network charges should be cost reflective. DNSP services (and therefore costs) are related (and limited) to meeting end-use customer demands for electricity. Any costs incurred behind the connection point are irrelevant to the DNSP and are for the customer to bear.

In other words, DNSPs should look to recover the costs of the services they provide 'upstream' from their customers.

Network costs vary by location (and therefore the assets required to support service delivery will vary), together with customer size and demand profile. Small residential customers are almost universally amalgamated into a single tariff group using some form of postage stamp (or uniform) pricing reflecting the benefits of both cost averaging and simplicity in setting prices within a defined geographic region.

A key defining characteristic of most residential customers is that they are serviced using large amounts of low voltage distribution infrastructure. That is, customer density is low and therefore the assets required to support service delivery is quite

[16] The NEO is "to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers of electricity with respect to:

- price, quality, safety and reliability and security of supply of electricity
- the reliability, safety and security of the national electricity system."

high. Larger C&I customers (for example >160MWh/year) do not have a similar reliance on extensive low voltage assets to provide distribution services and as such are categorised and priced differently.

Postage stamp pricing across customer groups with similar demand on the network is typically used for most customer groups other than very large (high voltage) customers who may be subject to individually calculated prices. For these limited number of very large customers the costs and complexity of calculating an individual customer price can be justified by the benefits of the accurate cost reflective pricing that results from this process.

For all smaller customers, there is an increasingly large pool of similar customers (normally defined by magnitude of demand in MW and/or MWh) for which a postage stamp or average price will be set.

This is the current case for ENs, where the tariff these customers face is the same as for any other similarly sized connection.

However, both Ausgrid and Endeavour Energy's arguments seem to be that tariffs should move away from cost-reflectivity (based on the characteristics of the connection point) to postage stamp pricing applied to a broader group of customers with the customer segmentation based on the nature of the end user rather than their impact on network costs.

An argument proffered is that the load profiles of ENs are different to the average load profiles of the tariff classes to which the ENs are currently assigned. However, this is not an argument for a new tariff class but rather an argument for cost-reflective pricing *within* tariff classes.

The focus of a DNSP in pricing should be on the impact that loads at network connection points have on the cost of the network to that point. To the extent that it is suitable to have different categories of network tariffs they should reflect the system costs of loads at a connection point and should be indifferent to the nature of the activity behind that connection point.

Doing otherwise results in price discrimination based on some factor other than the cost impact the customer places on the network. This is inconsistent with the regulatory framework which is based on DNSPs having monopoly power and the

need to mitigate that monopoly power through pricing principles such as requiring cost reflective pricing.

Conclusions

FTI is of the view that the proposed EN tariffs are not cost reflective, will discourage service innovation, and negatively impact dynamic efficiency and will introduce inappropriate price discrimination that is only possible given the monopoly nature of the DNSP service.

FTI does not believe that either Endeavour Energy or Ausgrid have provided sufficient evidence that the proposed EN tariffs are consistent with either the NER or the NEO and as such, the proposed EN specific tariffs should be rejected.

Tariff arbitrage

Argument

The DNSPs have argued that current tariff structures encourage inefficient tariff arbitrage on the part of developers. Ausgrid argued that:

> a development's choice to connect to our network as an EN instead of connecting each individual energy user may be partly driven by a reduction in the total network bill (known as tariff arbitrage)."[17]

Assessment

This argument hinges on whether tariff arbitrage (to the extent it exists) is the result of EN customers responding to price signals within the current tariff structure that are the result of structural issues with tariffs (in terms of customer segmentation), and whether such arbitrage is economically inefficient.

Current DNSP tariff categories attempt to balance the transaction costs associated with establishing highly granular pricing structures with the reduced cost reflectivity associated with broader (less granular) customer pricing categories and the associated impact of average or postage stamp pricing.

Ideally, every customer would face a price directly related to their individual impact on network costs. However, this is completely infeasible in practice and therefore,

[17] Ausgrid, Our TSS Explanatory Statement for 2024-29, January 2023, Figure 4, p.22

DNSPs rely on customer segmentation to ensure an appropriate balance between the cost of calculating network tariffs and the accuracy of the resulting price signals.

The DNSPs appear to be arguing that their current highly aggregated pricing categories for residential customers results in an incentive for developers to utilise ENs even where, absent the pricing incentives, they would not have done so.

If this is truly an issue, it suggests that DNSP pricing categories are too aggregated and fail to reflect the underlying cost of service, therefore, they are not consistent with the NEO and NER.

The solution would appear to be to increase pricing granularity for residential customers by, for example, establishing a separate (lower cost) tariff for high density residential customers rather than by singling out ENs as a new tariff category. Given that detached residential dwellings represent some 72% of all occupied residential dwellings (with high density dwellings representing only a share of the balance), the individual customer price impact on low density residential customers of such a change would be relatively minor.[18]

Conclusions

FTI is of the view that, to the extent tariff arbitrage for high density residential developments is an issue, it should be addressed by increasing tariff segmentation for residential customers. In particular, by introducing a new residential tariff category for high density (unit) dwellings.

As such, the proposed adoption of an EN specific tariff is the wrong response to address any concerns with tariff arbitrage and therefore, the proposed EN specific tariffs should be rejected.

Customer equity

Argument

The DNSPs have argued that current tariff structures are inequitable in that a residential customer that is connected via an EN is likely to pay less than a similar residential customer not connected to an EN.

[18] Data from the 2016 Census indicates that separate (detached) houses still account for 72% of all dwellings. https://aifs.gov.au/research/research-reports/families-then-now-housing

Assessment

This argument is specious in that any pricing structure based on price averaging will result in some customers paying more than their underlying efficient cost to serve while other customers benefit from paying less than their efficient cost to serve.

Currently, due to the nature of the definition of DNSP exclusive licenced geographic service areas, there will be customers potentially adjacent to each other receiving the same network service at a materially different cost due to being serviced by a different DNSP.

The key argument for equity must be that customers (of a particular DNSP) getting a similar service, pay a similar price (i.e., are not subject to price discrimination). The service provided by a DNSP to EN customers is a service to the parent connection point only. That is, child connections will pay for both DNSP costs and EN costs. It is entirely possible that for some types of existing or emerging ENs that the aggregate DNSP and EN costs are already equivalent to the charges currently borne by small customers.

If Endeavour Energy and Ausgrid are seeking better equity for residential customers, they should consider differentiating residential customers into low density and high-density categories to reflect the different impact these different living options have on network costs. This would send an efficient, accurate, price signal to encourage increased high density living with the potential for commensurate environmental benefits.

Conclusions

FTI is of the view that, any issues with equitable treatment of customers should be limited to the treatment of customers within an existing customer segment and not to equity between different customer cohorts taking different services.

Any equity issues should be dealt with through reassessing the degree of customer segmentation to ensure that prices are cost reflective. Further, addressing broader customer equity impacts (including affordability concerns) should be the responsibility of the Government to deliver on social policies and not the role of the DNSP.

As such, FTI considers that, on equity grounds, the proposed EN specific tariffs should be rejected.

Conclusion

FTI is of the view that neither Ausgrid nor Endeavour Energy have provided sufficient evidence as to why a new tariff class for ENs is justified under the National Electricity Objective (NEO).

FTI believes that the introduction of a new EN tariff category is not consistent with the NEO as it is not cost reflective, will discourage service innovation and negatively impact dynamic efficiency and, therefore, the proposal to introduce EN specific network tariffs should be rejected.

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