evoenergy

Attachment 7: Proposed Tariff Structure Statement

Regulatory proposal for the ACT electricity distribution network 2024–29

January 2023

Contents

List of tables

List of figures

7.1 Introduction and overview

Evoenergy owns and operates the electricity network in the Australian Capital Territory (ACT) and gas networks in the ACT and surrounding New South Wales (NSW) areas. Within the ACT, Evoenergy operates and maintains a network of poles, wires, transformers and other equipment to distribute electricity safely and reliably to consumers. The Evoenergy network is an essential part in the process of moving electricity from where it is generated to where consumers use it.

This proposed Tariff Structure Statement (TSS) provides Evoenergy consumers and stakeholders with clear and accessible information on proposed reforms to Evoenergy's current network tariffs. Appendix 7.1 contains a more detailed explanation of this proposed TSS, and is referred to as the tariff structure explanatory statement (TSES). The National Electricity Rules (NER)[1] require network businesses such as Evoenergy to develop a TSS that clearly shows how the pricing principles have been applied to develop pricing structures and indicative price levels, typically for a five year regulatory period.

This is Evoenergy's third TSS. Once approved by the Australian Energy Regulator (AER), the TSS will remain in place for the entire regulatory period (1 July 2024 to 30 June 2029) unless an event occurs that is beyond the reasonable control of the distribution business and could not reasonably have been foreseen, and the AER approves a change. This third TSS continues to transition Evoenergy's network tariff structure along the cost-reflective spectrum.

In preparation for this TSS proposal, Evoenergy considered the expected future use of the ACT electricity network and consulted widely with the ACT community, retailers and the ACT Government about their preferences regarding network tariffs. In conclusion, Evoenergy has developed a series of tariff reform proposals suitable for the 2024–29 regulatory period. These reforms are presented in Table 1 below.

7.1.1. Tariff reforms proposed for 2024–29

Table 1 Proposed tariff reforms 2024–29

Tariff	Tariff reforms proposed for 2024–29
Residential	
Proposed Time-of-use (TOU) tariff	• Introduce a 'solar soak' low charge during the middle of the day to soak up solar that is exported to the electricity network. • Introduce an inclining block charge overnight to signal that high demand (e.g., electric vehicle (EV) fast re-charging) could lead to new peak demands that impose higher network costs due to required network upgrades. • No morning peak period as the network is not typically constrained in the morning.
Proposed demand tariff	• Introduce a 'solar soak' low charge during the middle of the day to soak up solar exported to the electricity network. • Introduce an off-peak demand charge between 8pm and 9am. • Introduce a seasonal peak demand charge with higher demand prices in the high season (winter months from 1 June to 31 August), and lower charges in other months.
Export tariff	• Secondary tariff (added to a consumer's primary tariff). • Export tariff includes an export rebate (5pm–8pm) and a low export charge (11am–3pm) above a basic export limit of 5 kW.

[1] Clause 6.18.1.

	• Gradual transition of customers to a secondary tariff over the 2024–29 regulatory period.
Trigger Events	• Objectively defined trigger events that prompt a review of the need for pre-specified changes that strengthen Evoenergy's residential tariff reforms.
Low voltage (LV) commercial	
kVA capacity tariffs	• Provision to review capacity charges in extenuating circumstances, as negotiated between Evoenergy and individual consumers.
Streetlighting tariff Small unmetered loads tariff	• Remove fixed charge; only apply energy consumption charge.
Large-scale battery tariff	• New tariff for large-scale, stand-alone batteries connected to distribution network. • Different peak and off-peak time periods depending on the large-scale batteries' location (residential or commercial area).
High voltage (HV) commercial	
All tariffs	• Provision to review capacity charges in extenuating circumstances, as negotiated between Evoenergy and individual consumers.
Large-scale battery tariff	• New tariff for large-scale, stand-alone batteries connected to distribution network. • Different peak and off-peak time periods depending on the large-scale batteries' location (residential or commercial area). • (Different prices to LV commercial large-scale battery tariff, above.)

Note: All times refer to Australian Eastern Standard Time (AEST).[2]

During the current regulatory control period (2019–24), Evoenergy trialled a residential battery tariff and a large-scale battery tariff. These tariffs were refined throughout the trial period. Lessons learnt from the residential battery tariff trial have been incorporated into the revised demand and TOU tariffs. The large-scale battery tariff trial is proposed for introduction to Evoenergy's network tariff structure in the 2024–29 regulatory period.

Evoenergy proposes to use the tariff trial mechanism in the upcoming regulatory period (2024–29) to trial a tariff suitable for public electric vehicle charging stations in the ACT. The tariff structure to be trialled will be finalised closer to the time of the proposed trial commencement on 1 July 2025. Evoenergy intends to engage with EV public charging proponents, other stakeholders including retailers, and garner lessons learnt for other jurisdictions.

The tariff structures and assignment contained in the AER approved TSS will form the basis of Evoenergy's annual pricing proposals for the financial years 2024/25 to 2028/29. The AER will conduct a review process for annual prices to check consistency with the TSS, compliance with pricing principles, and other requirements such as the control mechanism under the AER's distribution determination.

[2] AEST is the time zone 10 hours ahead of Coordinated Universal Time (UCT+10hours). AEST is used in the ACT from the first Sunday in April to the first Sunday in October. Australian Eastern Daylight Time (AEDT) is used during the remainder of the year (UTC +11hours). TOU times will therefore advance by 1 hour from the first Sunday in October until the first Sunday in April each year.

7.2 Tariff classes and allocations

Evoenergy serves approximately 206,000 residential and commercial electricity consumers[3] assigned to three groups – called tariff classes – based on their characteristics. Tariff classes are important for consumers because they determine the selection of tariffs available to them. The NER requires tariff classes to be established by grouping retail customers on an economically efficient basis and avoiding unnecessary transaction costs. Evoenergy groups consumers into tariff classes based on the following two features that reflect how they use Evoenergy's network.

- The nature of their connection – residential or commercial.
- The level of the network to which they connect – low voltage (LV) or high voltage (HV).

Customers connected to the LV network connect at less than 11,000 volts (11kV). Commercial and residential customers can connect to the LV network; hence there are two tariff classes for the LV network – LV residential and LV commercial.

Customers connected to the HV network connect at or above 11 kV. These customers are required to make a capital contribution towards their connection assets and transformers. These customers also have the option of owning and operating their own HV assets. There is only one tariff class for the HV network because only commercial customers can connect to that part of the network. On this basis, Evoenergy proposes to continue to have three tariff classes, listed below.

1. LV residential customers.
2. LV commercial customers.
3. HV commercial customers.

[3] Evoenergy, 2024-29 Regulatory Proposal.

7.3 Complying with pricing principles

This section outlines Evoenergy's overarching, two-step approach to setting the price levels for each tariff component of each tariff.

7.3.1. Two-step framework

Evoenergy determines the prices for each tariff using the following two-step methodology.

1. Calculate the total level of revenue to be recovered from each tariff, which must be equal to the total efficient cost of serving those customers.
2. Set the price of each tariff component so that, based on expected customer numbers and network use, Evoenergy expects to recover the amount calculated in step one from each tariff.

Step 1: Estimate total efficient cost

Evoenergy calculates the level of revenue it expects to recover from each tariff[4] equal to the total efficient cost of serving the customers that are assigned to that tariff. This is so that when summed with the revenue it expects to recover from all other tariffs, Evoenergy can expect to recover the level of revenue approved by the AER.

In practice, Evoenergy achieves this result by estimating the level of revenue recovered from the price signals in each tariff that is based on efficient, long run marginal cost (LRMC) estimates. It then allocates the remainder of its approved revenue (residual costs) across tariffs based on the previous year's allocation and the current year's forecast consumption, as described in section 7.2 of the TSES.

This allocation methodology for residual costs accounts for the effect on retail customers of tariff changes from the previous regulatory year.[5] This is because the allocation of costs to customers is a key driver of customer bill impacts. Evoenergy presents its assessment of customer bill impacts in section 12 of the TSES.

The total efficient cost of serving customers on each tariff is then equal to the revenue expected to be recovered from an efficient, LRMC-based price signal and the residual costs allocated to that tariff.

To avoid cross-subsidies between customers in different tariff classes, Evoenergy checks that the revenue recovered from the customers in each tariff class is[6]:

- higher than the costs that could be avoided if it did not provide network services to those customers (the avoidable cost); and
- lower than the cost of providing network services to those customers only (the standalone cost).

Evoenergy explains the concepts of standalone and avoidable cost in more detail in section 7.6.

Table 2 presents Evoenergy's estimates of the standalone and avoidable cost of providing services to each tariff class, in comparison to the revenue it expects to recover from distribution use-of-system (DUOS) charges in 2024/25.

[4] NER, clause 6.18.5(g)(i)-(ii)
[5] NER, clause 6.18.5(h).
[6] NER, clause 6.18.5(e).

Table 2 Avoidable and standalone costs, 2024/25 ($'000)

	Avoidable cost	DUOS charges	Standalone cost
Residential	$18,995	$80,341	$162,145
LV commercial	$13,394	$82,486	$156,544
HV commercial	$2,611	$14,480	$145,761

Step 2: Set prices that recover the total efficient cost

The second step is to set a price for each tariff component that recovers the level of revenue allocated to that tariff in step one, having regard to Evoenergy's forecast of customers numbers and consumption. Evoenergy's tariffs are based on the LRMC of providing network services to the customers assigned to those tariffs.[7] The LRMC is the future network costs that could be avoided by a change in a customer's use of the network, and its estimation is explained in section 7.1 of the TSES.

Evoenergy typically sets the peak demand and/or peak energy price in a tariff based on the LRMC of providing import network services. Given that additional exports can also impose costs on the network in the middle of the day, Evoenergy bases export prices on the LRMC of providing export services. Importantly, these LRMC based prices apply only to exports above the basic export level, which is described in section 7.6 below.

Evoenergy's estimates of the LRMC of providing import and export services are presented in Table 3 and

Table 4, respectively. Evoenergy derived these estimates using the average incremental cost approach, as explained in section 7.1 of the TSES.

Table 3 LRMC of import services by tariff class (2024-25, $2024)

Tariff class	Long run marginal cost
Residential	$125 per kW per annum
LV commercial	$60 per kW per annum
HV commercial	$46 per kW per annum

Table 4 LRMC of export services by tariff class (2024-25, $2024)

Tariff class	Long run marginal cost
Residential	$23 per kW per annum
LV commercial	0

[7] NER, clause 6.18.5(f).

HV commercial	0

Since these LRMC-based prices reflect only future costs, and the majority of Evoenergy's costs are historical costs, Evoenergy then sets other fixed and variable charges in the tariff so that it expects to recover the total efficient cost of serving those customers, as determined in step one.

Evoenergy describes key reforms to the structure of its tariffs in section 7.4 below and in section 9.1 of its TSES. These reforms include the introduction of a secondary export tariff for certain residential exporting customers and a transition strategy for gradually assigning customers to this export tariff. Evoenergy's approach to introducing export charges and rewards is described in section 7.6 below and in section 11 of the TSES.

Throughout this process Evoenergy analyses the effects on customer network bills, and tailors its approach to avoid unacceptable bill impacts.[8] Evoenergy presents its assessment of customer bill impacts in section 12 of the TSES. In evaluating the effect on customers, Evoenergy also ensures that its prices comply with the side constraint specified in the NER.

The consequence of Evoenergy's two-step approach to setting prices is that its tariffs reflect the efficient cost of providing services to its customers, consistent with the network pricing objective.

7.3.2. Compliance

Evoenergy's two-step approach to setting prices and how it complies with each pricing principle is described in more detail in sections 6 and 7 of Appendix 7.1 (TSES).

By way of a broad summary of the six pricing principles in the NER, Evoenergy's approach ensures that:

- the revenue it expects to recover from each tariff is equal to the total efficient cost of serving the customers that are assigned to that tariff, and that it expects to recover its AER-approved revenue;
- the revenue recovered from each tariff class lies between the standalone and avoidable cost of serving customers in that tariff class;
- each tariff is based on the LRMC of providing services to customers assigned to that tariff;
- the structure of each tariff is reasonably capable of being understood by customers;
- its proposed reforms and cost allocation does not give rise to any unacceptable customer bill impacts; and
- it complies with all rules and applicable regulatory instruments, including jurisdictional obligations.

Evoenergy's approach to introducing export charges and rewards is described in section 7.6 below, and in more detail in section 11 of Appendix 7.1.

[8] NER, clause 6.18.5(h).

7.4 Tariff structures

Evoenergy's proposed network tariff reforms are targeted at more effectively signalling the future cost of providing network services while simplifying tariff structures and enabling the management of the network bill impacts. This section describes Evoenergy's proposed tariff reforms for each tariff class.

Evoenergy describes its existing tariff structures and charging parameters in section 4.4 of its TSES.

7.4.1. Residential tariff reforms

As described in section 2 of the TSES (Appendix 7.1), Evoenergy expects increased uptake of solar, batteries, EVs and home energy management systems (HEMS) during the 2024–29 regulatory period. The network load associated with these technologies will differ considerably from the current network load. The proposed tariff reforms, therefore, address the times and seasons at which the network is expected to peak in the future.

Evoenergy proposes to introduce a new residential TOU tariff and a new residential demand tariff from 1 July 2024 that reflect:

- key learnings from Evoenergy's residential trial tariff during the 2019–24 regulatory period;
- forecast use of the network in the 2024–29 regulatory period; and
- extensive consumer engagement on tariff design.

Evoenergy proposes to maintain the existing residential demand (codes 025 and 026) and TOU (codes 015 and 016) tariffs as some customers on these tariffs do not have smart meters and therefore cannot be assigned to more cost reflective tariffs. In addition, it avoids imposing tariff changes on customers already assigned to cost reflective tariffs.

Proposed new residential demand tariff

Evoenergy proposes to improve its residential demand tariff offering based on the findings of the analysis described above, the learnings from its residential battery tariff trial during the 2019–24 regulatory period, and extensive stakeholder engagement.

Evoenergy, therefore, proposes to introduce a new residential demand tariff with the following key amendments:

- introduce a relatively low solar soak energy charge between 11am and 3pm AEST;
- introduce an off-peak demand charge between 8pm and 9am AEST; and
- set a lower peak demand price outside of winter months (June, July and August).

The structure of the proposed residential tariffs has been informed by detailed network analysis, described below.

Solar Soak period

Evoenergy proposes to apply a solar soak period between 11am and 3pm (AEST) to provide a price signal that network costs are relatively low at this time of the day. That is, electricity is typically generated by household solar photovoltaic (PV) systems and exported into the electricity network creating a potential surplus of electricity in the network.

With the ongoing uptake of solar, Evoenergy must plan to manage increased levels of reverse power flows onto the ACT electricity network. Introducing a solar soak charge into key residential network tariffs aims to encourage the absorption of some of those reverse power flows, thereby constraining the need for additional capital and network maintenance expenditure.

The anticipated benefits of a solar soak charge are that it has the potential to:

- shift some network demand to meet the additional energy supplied by solar generation;
- help the network efficiently integrate technologies such as EVs and batteries as recharging these technologies may be shifted to the middle of the day when it is relatively cheap to use the electricity network;
- shift some consumption away from the peak evening period; and
- help prevent voltage issues associated with solar-driven reverse flows on the network.

Off-peak demand charge

Evoenergy is acutely aware of the potential for the uptake of renewable technologies with very peaky loads to create new import peaks outside the peak window (5pm to 8pm AEST). This could, for example, materialise from concentrated fast charging of EVs overnight. Hence, Evoenergy proposes to introduce an off-peak demand charge between 8pm and 9am AEST to signal that high demand levels could lead to the formation of new peak demands requiring network upgrades (to accommodate the new peak demand level). The off-peak demand charge is designed to signal the network cost associated with the potential new peak demand levels.

The proposed introduction of an off-peak demand charge will achieve the dual purpose of creating an incentive to smooth new peaky loads overnight while also providing a price signal during the former morning peak period. The persistence of this relatively weak price signal until 9am will help manage the low but relevant risks presented by the electrification of gas heating in the mornings, as discussed in the previous section.

In summary, the inclusion of an off-peak demand charge is designed to send a price signal about the network costs associated with the potential formation of new peak demands that may occur with the advent of new renewable technology (particularly EV fast charging). The charge also aims to encourage consumers to monitor network usage throughout the off peak period. The proposed reform will render the newt residential demand tariff more cost reflective than the existing residential demand tariff (025, 026), which sends no price signal outside the peak demand period.

Seasonal peak demand charge

Evoenergy's existing residential demand tariff has a seasonal structure, but Evoenergy has not actioned this seasonal structure by using differential prices. This has enabled ACT retailers and customers time to adjust to the concept of demand charging.

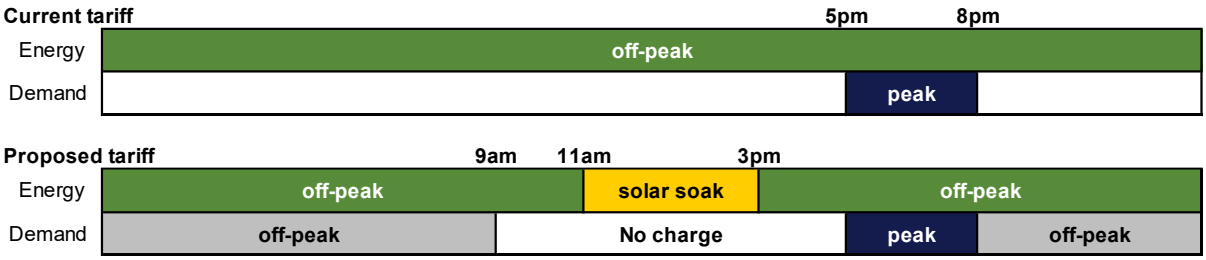
The charging window analysis (above) indicates that peak demand on the residential network continues to persist between 5pm and 8pm AEST daily. The analysis also indicates peak demand typically occurs in June, July and August. Evoenergy, therefore, proposes to apply a relatively lower peak demand price outside of winter months (June, July and August).

This will improve the efficiency of the peak demand price signal in winter months and, at the same time, benefit customers in the short term through a lower peak demand price in non-winter months.

Proposed charging windows

Figure 1 summarises the charging windows in Evoenergy's current and proposed residential demand tariffs.

Figure 1 Current and proposed residential demand tariff



The charging windows for the proposed residential demand tariff are presented in Table 5 below.

Table 5 Charging windows for proposed residential demand tariff

Demand tariff	Charging windows (AEST)
Peak demand	5 pm to 8 pm every day (The peak demand price will be lower outside of June, July and August)
Off-peak demand	8pm to 9am every day
Off-peak consumption	3pm to 11am every day
Solar soak consumption	11am to 3pm every day

Proposed new residential TOU tariff

Evoenergy proposes to introduce a new residential TOU tariff based on the findings of the analysis described above, the learnings from its residential battery tariff trial during the 2019–24 regulatory period, and extensive consumer engagement.

In comparison to the existing residential TOU tariff (015, 016), the new residential TOU tariff (017, 018) includes the following key features.

- A solar soak period between 11am and 3pm AEST.
- No morning peak period between 7am and 9am AEST.
- No shoulder periods between 9am and 5pm, and between 8pm and 10pm AEST.
- Extension of the off-peak period to between 8pm and 11am, and between 3pm and 5pm AEST.
- An inclining block structure to the off-peak period between 8pm and 9am AEST.

Evoenergy's reasons for introducing a solar soak period are the same as the proposed residential demand tariff.

Peak period

In the proposed residential TOU tariff, Evoenergy proposes to maintain the evening peak period between 5pm and 8pm AEST daily. This is because the charging window analysis indicates that peak demand on the residential network continues to persist between 5pm and 8pm AEST daily. This is also consistent with the peak period applied in the existing and proposed residential demand tariffs.

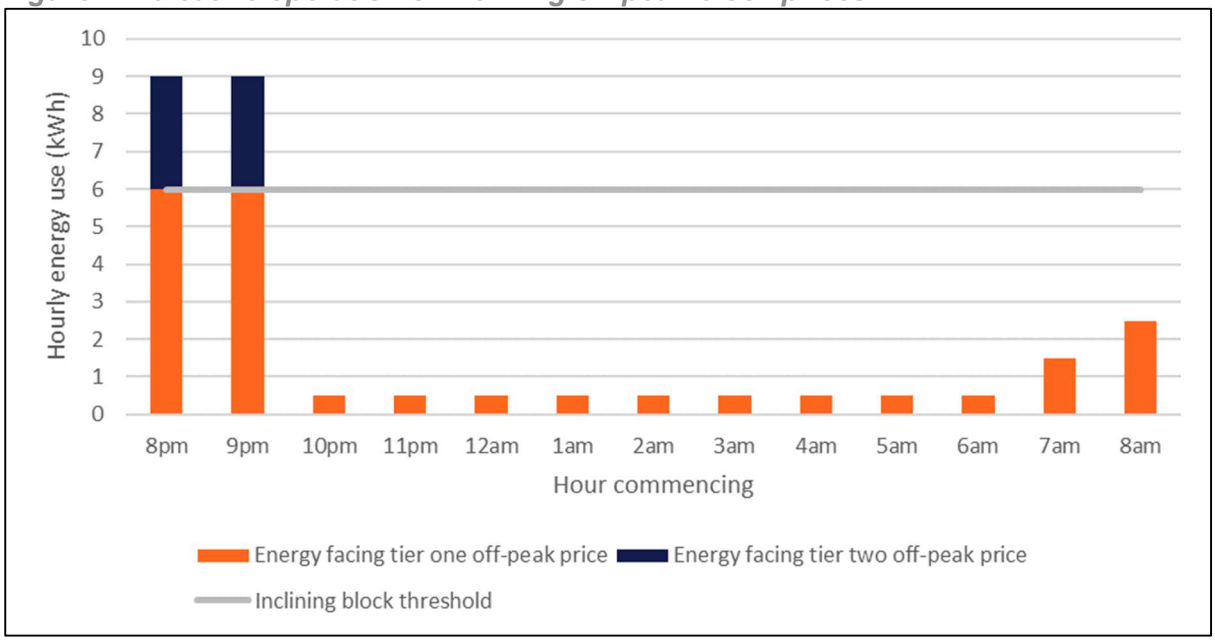
Evoenergy is not proposing to introduce seasonality in the evening peak period for the 2024–29 regulatory period to retain the simplicity of this tariff and its role as an opt-out 'protection' mechanism for customers that prefer simpler tariffs. However, it is important to acknowledge that Evoenergy plans to introduce seasonality in the proposed residential TOU tariff in the 2029–34 regulatory period once retailers and customers have had time to prepare for this change in the 2024–29 regulatory period.

Inclining block (or tiered) off-peak period

For the same reasons that Evoenergy is proposing to introduce an off-peak demand period in its proposed residential demand tariff between 8pm and 9am AEST (as described above), it is proposing to apply an inclining block off-peak charge over the same period in the proposed residential TOU tariff. This will involve applying a low off-peak energy charge when hourly consumption is below 6 kWh between 8pm and 9am AEST and a higher off-peak charge when hourly consumption is above 6 kWh between 8pm and 9am AEST.

In practice, this means that during the first hour (8pm to 9pm AEST), a customer's total consumption of up to 6kWh will attract the low tier one charge. Any consumption beyond 6kWh in that hour will attract the tier two charge. The customers' consumption will be reset (on the hour) for the next hour (i.e. 9pm to 10pm AEST). In each hour within the 8pm to 9am AEST window, the consumption level will be reset on the hour,[9] to apply the inclining block tariff structure. Figure 2 shows how the inclining block charge would apply to a hypothetical customer with a very peaky load between 8pm and 10pm. In this case, the tier two charge would apply only to the 3kWh of energy consumption above the 6kWh (grey line), as indicated by the blue portions of the bars. It follows that this customer would face an incentive to smooth their overnight energy use so that it remains below 6kWh in each hour between 8pm and 9am.

Figure 2 Indicative operation of inclining off-peak block prices



[9] The first hour period commences at 20:00:01 and ends at 21:00:00 AEST, and subsequent one-hour periods follow the same approach.

Evoenergy proposes to set the second tier price similar to the first tier price in the first year of the 2024–29 regulatory period. This will reflect that overnight electricity use does not currently impose costs on the network as excess capacity is available. Over time, the price differential will increase (either by raising the second tier or lowering the first tier price) to signal the network cost associated with the potential for new peaks emerging overnight. This could materialise if EV fast charging occurs around the same time overnight.

Evoenergy's proposed introduction of an inclining block structure between 8pm and 9am is a direct response to the additional load expected to arise from the rapid uptake of EVs. If Evoenergy's assignment policy was amended so that all customers with an EV are assigned to the demand tariff (without an opt-out provision), the inclining block structure could be removed from this TOU tariff.

Removing the inclining block structure in this specific circumstance would better align the proposed residential TOU tariff with its role as a relatively simpler, opt-out tariff for customers that do not want to engage with a demand tariff, as explained in section 7.5. Evoenergy intends to monitor the response to the proposed demand and proposed TOU tariffs during the 2024–29 regulatory period to provide informed analysis on this matter into the proposed TSS for the 2029–34 regulatory period

Removing shoulder period

A key theme of the feedback Evoenergy received from customers was their preference for simple network tariffs. Evoenergy, therefore, proposes to remove the two existing shoulder periods[10] in the proposed TOU tariff.

A higher price is no longer appropriate in the middle of the day because the residential load is often very low during that time, enabling capacity for additional load. Furthermore, generation from solar PV during the middle of the day adds to the capacity available on the network. Hence, removing shoulder periods aims to encourage (rather than discourage) usage during the middle of the day.

Evoenergy's proposed inclining block off-peak structure (as described above) will provide flexibility to address any peaky loads between 8pm and 9am AEST.

Removing the morning peak period

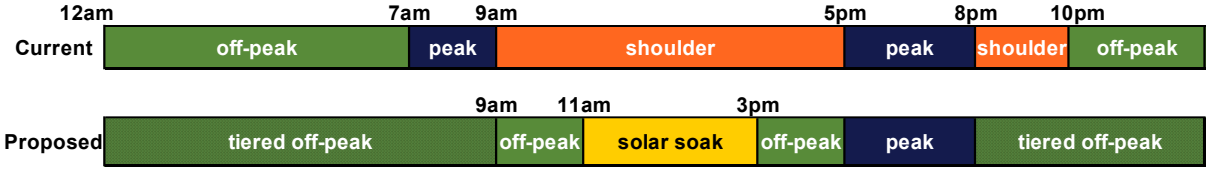
The proposed removal of the morning peak period reflects that, although residential demand is high in the mornings, it is significantly lower than the evening peak. A morning peak period, therefore, unnecessarily discourages customers from using the network when, in fact:

- there is excess capacity on the network; and
- exports from solar PV systems are commencing.

Proposed TOU tariff structure

Figure 3 below summarises the charging windows in Evoenergy's current residential TOU tariff, and the charging windows for the proposed TOU tariff, as described above.

Figure 3 Current and proposed residential TOU tariff



Importantly, the proposed reforms for the TOU tariff align the charging windows in the TOU and kW demand tariffs, as summarised in the proposed charging windows presented in Table 6 below.

[10] Shoulder periods in the current TOU tariff are 9am to 5pm and 8pm to 10pm.

Table 6 Charging windows for proposed residential TOU tariff

	Charging windows (AEST)	Same as kW demand tariff
Peak period	5pm to 8pm every day	✓
First tier off-peak	8pm to 11am; 3pm to 5pm every day	
Second tier off-peak	8pm to 9am every day	✓
Solar soak consumption	11am to 3pm every day	✓

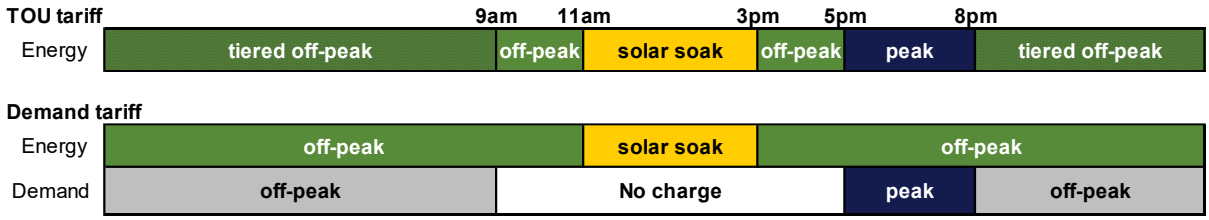
Alignment between proposed residential demand and TOU tariff structures

In response to consumer and retailer feedback about simplifying the network tariff structure, the proposed residential demand and TOU tariffs are aligned in their charging windows. That is, Evoenergy has deliberately set these key residential tariffs as follows.

- **Peak period**: both tariffs are set at 5pm-8pm AEST daily.
- **Solar soak period**: both tariffs are set at 11am-3pm AEST daily.
- **Tiered off-peak energy and off-peak demand**: both tariffs are set at 8pm–9am AEST daily.
- **Tariff components designed to encourage network use**: both tariffs contain price signals to encourage usage 9am-5pm AEST daily.

This alignment between the tariffs is outlined in Figure 4.

Figure 4 Proposed residential TOU and demand tariffs



Eligible ACT residential customers will have the opportunity to receive consistent network price signals when/if they choose to switch between the proposed residential demand and proposed TOU network tariffs,[11] thereby improving the simplicity of the network tariff structure.

Proposed export tariff (Secondary tariff)

In addition to introducing new residential demand and TOU tariffs, Evoenergy is also proposing to introduce an export tariff for residential customers who export electricity to Evoenergy's network ('exporting customers'). Only customers with a smart meter will be eligible for the export tariff because smart meter technology will be required to measure export volumes across time. Given that residential customers with a smart meter are assigned to the demand or TOU tariff, these customers will be eligible for the export tariff.

[11] Residential customers are only eligible to switch to an alternative residential tariff once in a 12 month period.

Evoenergy's customers were generally supportive of introducing an export tariff, and their feedback shaped the design and conservative introduction of the proposed export tariff, which is described in detail in section 7.6.

Key benefits of Evoenergy's proposed export tariff arise from signalling to exporting customers the costs that could be avoided.

In the middle of the day, costs could be avoided by:

- shifting their load to increase their self-consumption and reduce exports; and/or
- storing their solar PV generation in a behind the meter battery.

In the evening peak period, costs could be avoided by:

- orientating their solar PV panels to face west; and/or
- storing and then exporting solar PV generation from earlier in the day.

Evoenergy's proposed (secondary) export tariff comprises the following tariff components.

- An export reward (cents per kWh) for exports during the evening peak period (5pm-8pm AEST).
- An export charge (cents per kWh) for exports during the solar soak period (11am-3pm AEST) above the basic export level (5 kW each hour).

This tariff is described in detail in section 7.6, which presents Evoenergy's transition strategy to two-way pricing. The customer bill impacts for residential customers are also presented in section 7.6.

Proposed trigger mechanism for new residential tariffs

Evoenergy's tariff strategy is explicitly targeted at facilitating a range of difficult-to-forecast, customer driven responses to climate change, such as the uptake of EVs and the transition to full electrification. Evoenergy has, therefore, carefully balanced the trade-off between future-proofing its tariffs and introducing reforms that are unnecessarily complex or that have unnecessary customer bill impacts.

Although Evoenergy's tariff strategy is based on up-to-date and robust forecasts, it is still possible that the rate of change is higher than expected and may shift the appropriate balance of emphasis between the considerations noted above. Evoenergy, therefore, proposes establishing three objectively defined trigger events that would prompt a review of specific features of its tariff structure, as noted in the discussion below. When a trigger event occurs, Evoenergy would notify the AER and engage in relation to Evoenergy's proposed response. Any resultant changes would be included in an annual pricing proposal for approval by the AER.

The inclusion of these triggers has enabled Evoenergy to err on the side of conservatism in its tariff strategy. For example, Evoenergy has adopted a relatively high threshold for its inclining block off-peak charge in its proposed residential TOU tariff.

It is not possible to reliably estimate the effect on demand of strengthening these elements of Evoenergy's tariff structure. Since Evoenergy's proposed capital expenditure program is based on the same forecasts as its tariff strategy, these same triggers would necessitate revisiting key elements of its proposed capital expenditure, as described in Appendix 1.17.

The tariff changes driven by trigger events affect only the newly proposed residential demand and TOU tariffs. This is because Evoenergy expects the majority of residential customers to be assigned to these tariffs in the future.[12]

[12] For example, most customers on the current residential TOU tariff (code 015 and 016) will eventually have their meter replaced with a smart meter and therefore be assigned to the proposed residential demand (or TOU) tariff.

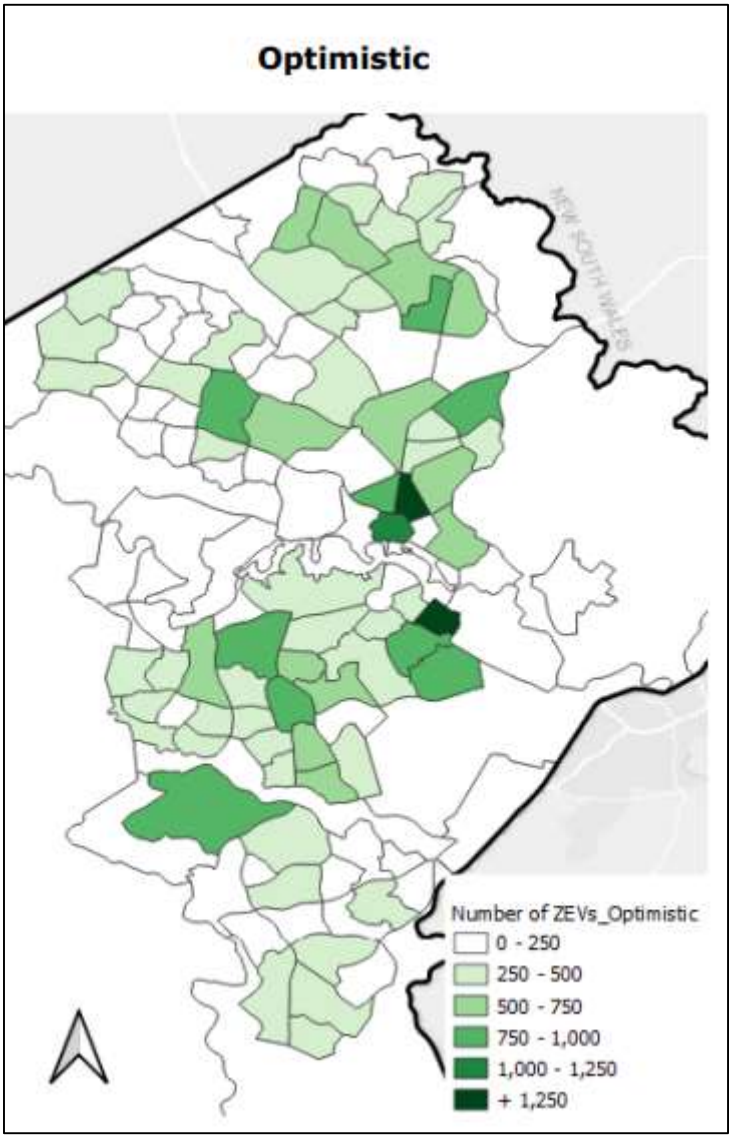
Trigger events

Evoenergy proposes that any of the below events would trigger a review of specific features of Evoenergy's network tariffs.

1. **Higher-than-forecast demand**: Recorded demand at one or more of Evoenergy's substations within 90 per cent of the peak demand (N-1)[13] capability of that/those substations for at least four consecutive half hour periods, or the peak demand forecast exceeds the emergency rating within the next five years (from the submission date).
    - The realisation of this trigger event would represent a material deviation from the forecast used in Evoenergy's 2024–29 regulatory proposal, indicating that demand is heading off the forecast demand levels to which the capital expenditure program is designed.
2. **Observed EV take-up rate**: Projections of future EV sales and observed garaging locations differ substantially from those assumed in the demand forecasts used in Evoenergy's 2024–29 regulatory proposal.
    - Evoenergy's tariff strategy for the 2024–29 regulatory period is based on the ACT Government's optimistic EV uptake scenario, which reflects a rapid rate of growth in the number of EVs (see section 3 of Appendix 7.1). However, the rate of EV uptake is uncertain and could be higher than the level that formed the basis of Evoenergy's tariff strategy. A materially higher than expected uptake of EVs would increase the emphasis on managing EV load, which would, in turn, require strengthening key elements of Evoenergy's tariff strategy.
    - Evoenergy has designed its capex program to address the expected EV uptake by location.Figure 5 provides a heat map showing that EV uptake is expected to be highest in central ACT, with the uptake in other ACT locations varying. Preparations to upgrade the network are based on this analysis. If the locational uptake of EV load varies from this forecast, it will trigger the need for a change to the tariff structure.
3. **Gas to electricity switching**: This occurs at a faster rate than forecast.
    - Evoenergy has forecast the rate at which ACT customers are expected to switch from gas to electricity as the ACT moves towards full electrification to meet its net zero emission target. If the rate of switching varies from the forecast, it will trigger a requirement to review the tariff structure.

[13] This is the continuous rating of the zone.

Figure 5: Expected EV uptake heat map



Source: Deloitte Access Economics, Zero Emission Vehicle Charge Rollout report for ACT Government, October 2021. Figure iv. Available here: https://www.environment.act.gov.au/__data/assets/pdf_file/0016/2031046/22_33787-Document.pdf

Tariff changes

If any one of the above events occurs, it will trigger a review of the following elements of Evoenergy's proposed network tariff structure.

1. **Proposed residential demand and TOU tariff**: Residential peak period extended from 5pm – 8pm to 5pm – 9pm AEST.

    - The residential peak period is currently set between 5pm–8pm AEST. The charging window analysis outlined in section 9.1 of the TSES shows this is reasonable, given that residential demand is consistently higher during this time period than at any other time of the day.
    - As more ACT customers purchase an EV, many will choose to recharge during the convenient and lower priced (off-peak) overnight period. This means there is the possibility that any one of the above triggers could see residential peak demand occurring between 8pm–9pm AEST. Hence, Evoenergy proposes extending the residential peak charging window from 5pm–8pm to 5pm–9pm AEST (within the proposed demand and proposed TOU tariffs) if any of the above events are triggered.

2. **Proposed residential TOU tariff**: Inclining block off-peak threshold (between tier one and two) will be reduced.

    - The proposed residential TOU tariff includes an inclining block off-peak charge between 8pm–9am AEST. The threshold between the first and second tier of this charge is proposed to be set at 6kW per hour (as described in section 9.1 of the TSES). If any one of the above events were to occur, this would prompt a review of the proposed residential TOU inclining block threshold from 6kW per hour to a lower threshold.

3. **Tariff assignment for EV customers**: EV customers to default to the proposed new residential demand tariff on a mandatory basis (i.e., remove opt-out provision).

    - Under the proposed tariff assignment policy, all residential customers with a smart meter will be assigned (by default) to the proposed residential demand tariff with an opt-out provision to the proposed residential TOU tariff. Evoenergy considers this tariff assignment policy provides tariff choice while nudging ACT customers (with suitable metering technology) towards cost reflective tariffs.
    - ACT residential customers with an EV (and smart meter) will also have the choice to switch between the proposed demand and proposed TOU tariffs.[14] This is because both tariffs have been designed to address high-peaking loads (such as EV fast recharging) during the off-peak (overnight) time period. However, the off-peak demand charge (in the proposed demand tariff) is more cost-reflective than the inclining block off-peak charge (in the proposed TOU tariff). Hence, if any one of the above events occurs, it will trigger a change to the tariff assignment policy (for residential customers) such that those with an EV cannot opt-out to the proposed TOU tariff (nor any other residential network tariff).

7.4.2. Commercial tariff reforms

Evoenergy focussed on progressing the cost reflectivity of commercial tariffs with significant reforms introduced in the 2019–24 regulatory period. Since Evoenergy's LV and HV commercial tariffs are now highly cost-reflective, with most tariffs including TOU consumption charges, peak demand charges, and (in some cases) capacity charges, Evoenergy is proposing relatively minor amendments to the commercial tariff structure in the 2024–29 regulatory period. This aligns with the feedback received from commercial consumers, where Evoenergy heard they are not seeking changes to the existing tariff structure.

The commercial tariff reforms proposed for the 2024–29 regulatory period continue refining the cost reflectiveness of ACT network tariffs. The commercial tariffs that Evoenergy proposes to structurally change are the Streetlighting and Small unmetered tariffs. Minor amendments are also proposed for commercial tariffs containing a capacity charge. The reforms also aim to address emerging renewable technology trends, including the anticipated introduction of stand-alone, grid-scale batteries, including community batteries. Hence, Evoenergy is proposing the introduction of a new tariff targeted at large-scale batteries that connect to the ACT distribution LV or HV network. The proposed changes reflect:

- key learnings from Evoenergy's large-scale battery trial tariff during the 2019–24 regulatory period;
- forecast use of the network in the 2024–29 regulatory period; and
- consumer engagement on tariff design.

The structure of the proposed commercial tariffs is detailed below.

[14] Once in a 12-month period.

New tariffs targeted at large-scale batteries

A variety of large-scale batteries are expected to connect to the ACT electricity network in the coming years, especially in respect of the ACT Government committing to 250 MW of batteries.[15] Evoenergy, therefore, trialled a tariff designed for large-scale batteries during the 2019–24 regulatory period, which provided Evoenergy with the opportunity to test customer response to the highly cost reflective price signals and refine the tariff in a trial setting. The trial was particularly important given that large-scale batteries generally respond to a range of price signals (including wholesale prices and Frequency Control Ancillary Services (FCAS)), not only network price signals. Evoenergy engaged significantly with large-scale battery operators and other stakeholders throughout the trial period to ensure the learnings from the trial were fully incorporated into the network tariff which is now proposed for introduction in the 2024–29 regulatory period.

Evoenergy proposes to introduce four large scale battery tariffs to refine the price signals according to customers' network connection (i.e. low or high voltage) and location (i.e. primarily residential or commercial). The tariff codes associated with these proposed tariffs are outlined in Table 7 below.

Table 7 Tariff codes for new tariffs targeted at large-scale storage

	Residential areas	Commercial area
LV connection	108	109
HV connection	123	124

The structure of these tariffs will be identical, except for the application of different charging windows depending on whether the connection is in a predominantly residential or commercial area (as determined by Evoenergy). Further, the price level of each tariff will differ depending on whether the battery is connected to the LV or HV network.

The structure of these new tariffs is summarised in Table 8 below, and then described in more detail in the remainder of this subsection. It is also relevant to note that customers assigned to this tariff may be eligible for a reimbursement of avoided TUOS costs and/or subject to a payment of incurred TUOS costs. The avoided/incurred TUOS will be settled, between Evoenergy and the battery operator, externally to the tariff structure.

Table 8 Proposed tariff structure targeted at large-scale batteries

Tariff component	Description
Seasonal peak demand charge	Based on a customer's maximum demand (kVA) in a 30 minute interval in the billing period (typically one calendar month) between: • 5pm and 8pm daily AEST for connections in primarily residential areas • 7am and 5pm weekdays AEST for connections in primarily commercial areas. This charge has the following seasonal element: • Lower charge applies during the 'low season' of winter and autumn months • Higher charge applies during the 'high season' of summer and spring months

[15] ABC (2020), *'ACT Labor promise Canberra-wide network of renewable energy batteries if* elected', https://www.abc.net.au/news/2020-09-30/biggest-renewable-battery-promised-act-labor-election/12715314?nw=0

Net consumption charge	Applied to total electricity imported less total electricity exported
Capacity charge	This is based on a customer's maximum half-hourly demand (kVA) over the previous 13 months, including the current billing month.
Critical export rebate	Applied to exports during a critical peak export rebate event. Evoenergy will notify customers of up to six critical peak rebate events in a financial year and at least 48 hours before one commences. The maximum duration of each critical peak event is three hours. Customers who export during the critical peak event will receive a rebate based on the level of electricity exported (measured in kVAh) within the critical peak rebate event.
Critical export charge (only in predominantly residential areas)	Only batteries that connect in predominantly residential areas are subject to a critical export charge. Applied to exports during a critical peak event. Evoenergy will notify customers of up to six peak charge events in a financial year, and at least 48 hours before one commences. The maximum duration of each critical peak event is three hours. Customers who export during the critical peak event will pay the critical peak export charge based on the level of electricity exported (measured in kVAh) within the critical peak period, with a Basic Export Level of zero.

Seasonal peak demand charge

The seasonal peak demand charge signals the cost of importing electricity during peak periods when additional imports can contribute to a need to expand the network. Given that network expansions increase network costs, the peak demand charge is designed to reflect the cost associated with future network upgrades. Specifically, the peak demand charge is based on the LRMC of providing import services at the level of the network to which the battery connects, i.e., LV or HV. The demand charges also recover a portion of residual costs, as batteries are utilising the network when they import during peak demand periods.

The demand charge is applied to the customers' maximum half-hourly demand (measured in kVA) during the peak period of each calendar month. The definition of the peak period depends on whether the battery is connected in a primarily residential or commercial area of Evoenergy's network as follows.

- If the customer is located in a primarily residential area, the peak period is 5pm to 8pm AEST daily all year-round.
- If the customer is located in a primarily commercial area, the peak period is 7am to 5pm AEST on weekdays all year-round.

The demand charge varies with the season, reflecting the different costs imposed on the network at different times of year.

This ensures that Evoenergy signals its costs to large-scale batteries at a time that coincides with the periods when additional demand is expected to cause additional costs in the relevant area of the network.

Net consumption charge

Due to energy losses, large-scale batteries operate with a round-trip efficiency of less than 100 per cent. A battery will export (to the grid) less electricity than it imports (from the grid). From the perspective of the distribution network, the energy losses represent 'net consumption' of electricity by the battery (electricity imported minus electricity exported). This net consumption incurs a jurisdictional scheme charge, and there is no distribution or transmission charge because these network costs are reflected in the other tariff components.

Under ACT legislation, Evoenergy is obligated to make various jurisdictional scheme payments, which it recovers from customers through network tariffs.[16] Jurisdictional charges are ultimately recovered from charges applied to the electricity consumed by customers. Since energy is lost during the process of a battery importing and then exporting electricity, it is appropriate for a battery to pay for the jurisdictional scheme charges that would otherwise have been recovered from the consumption of the lost electricity.

Failing to recover these costs from large-scale batteries would create a cross-subsidy between large-scale batteries and other customers. Therefore, the large-scale battery tariff includes a net consumption charge to recover jurisdictional scheme charges.

Export critical peak rebate/charge

The export critical peak rebate and charge are designed to send a price signals to the operator about the costs and benefits of exporting during nominated critical peak events. This charge/rebate recognises the ability of the large-scale battery to assist the distribution network by either reducing its export loads on the network at times of high solar output or increasing its exports when the network is experiencing high demand. The battery can also assist the network during times when there are generation shortages, however, such events are rare.

Under this arrangement, a large-scale battery operator will be notified of the timing of a 'critical peak' (CP) event up to 48 hours in advance. Depending on the type of critical peak event, the large-scale battery may receive a notification for either of the following.

- A **critical peak export charge (only in predominantly residential areas)** – designed to discourage exports during critical peak events. This can help address rising voltage issues due to increased solar exports in residential areas and is expected to apply primarily during the middle of the day in spring and summer. During the critical peak charge event window, the battery will pay a charge for any exports (measured in kVAh). If the battery does not export during this period, then the export charge will be zero and therefore avoided.
- A **critical peak rebate** – designed to encourage exports during critical peak events. This can help address periods of high network demand and is expected to apply primarily during the morning and evening periods in summer. During the nominated period, the battery will receive a rebate from Evoenergy for any exports (measured in kVAh). If the battery does not export during this period, it will not receive any rebate.

The number of critical peak events will be limited to a maximum of six export charge events and six rebate events per financial year. The duration of any event will be limited to a maximum of three hours. This helps provide greater operational certainty to battery operators and more fairly share critical peak risk between the battery and Evoenergy.

Capacity charge

The capacity charge is designed to recover a portion of the residual network costs attributable to a battery's operation, irrespective of when the battery imports or exports. A capacity charge is more equitable than a fixed charge because it is scaled to the battery's size/capacity rather than applied uniformly (via a fixed charge).

[16] The jurisdictional schemes currently include an Energy Industry Levy, Utilities Network Facilities Tax, and Feed-in Tariffs for small, medium, and large scale generators.

The capacity charge for the large-scale battery tariff is calculated based on the battery's highest demand (measured in kVA), at any time of day, during the previous 13 months. The capacity charge incentivises large-scale batteries to monitor their network load throughout the year.

Avoided/incurred TUOS charge

Evoenergy is required to pay TUOS fees to transmission network operators.

Under the NER, Evoenergy is required to make avoided TUOS payments to certain embedded generators over 5MW. This tariff extends avoided TUOS payments to all eligible large-scale batteries, even below the 5MW threshold. Evoenergy is proposing a symmetric arrangement where large-scale batteries also pay for incurred TUOS costs. This is because, unlike traditional embedded generators (such as solar and wind farms), large-scale batteries typically import and export electricity and can therefore increase or decrease Evoenergy's TUOS costs.

Under Evoenergy's existing suite of network tariffs, TUOS charges are recovered by spreading the costs across the customer base rather than charging each customer based on their actual incurred TUOS. This is because Evoenergy's customer base is relatively diversified, meaning it is difficult to identify when or if a particular customer contributes to Evoenergy's highest transmission demand. This also allows for a simpler charging structure that is easier for customers to understand and provides greater predictability of network bills.

Large-scale batteries have a significantly different relationship with the distribution network. They respond to market price signals to optimise energy imports and exports and actively participate in the wholesale electricity market. This allows large-scale batteries to be highly responsive to price signals and contribute to improving network efficiency. Their relatively large size and active participation in energy markets mean that large-scale batteries can increase or decrease maximum transmission demand directly impacting Evoenergy's TUOS bill. Therefore, large-scale batteries will be charged based on their actual incurred or avoided TUOS costs as follows.

- If the battery reduces maximum transmission demand, Evoenergy passes the TUOS saving to the battery via an avoided TUOS payment.
- If the battery increases maximum transmission demand, the battery is charged based on the incremental increase in TUOS payments made by Evoenergy.

If the battery does not contribute to peak transmission demand in a given month, it will not pay the incurred TUOS charge. Similarly, if the battery does not reduce transmission demand, it will not receive an avoided TUOS payment. The accumulated monthly avoided/incurred TUOS payments will be reconciled and paid/received annually.

To account for uncertainty as to the effects of the battery's operation on Evoenergy's TUOS bill, the avoided/incurred TUOS charges will be calculated retrospectively at the end of each calendar month. This is because it is not possible to determine, at any point in time, whether the battery is contributing to an increase or decrease in the monthly maximum transmission demand. This also helps to ensure an equitable outcome for battery operators, who will be billed based on actual TUOS incurred or avoided. This approach is the most cost-reflective way to account for TUOS charges and rebates and avoids potential cross subsidies between batteries and other customers.

Capacity charge review mechanism

Evoenergy's commercial tariffs for HV connections and the TOU kVA Capacity tariff (code 103) for LV commercial customers include a capacity charge used to recover residual network costs. The capacity charge is specified in cents per kVA per day and is applied to a customer's maximum demand over the previous 13 months (inclusive of the current month). The capacity charge promotes the equitable recovery of Evoenergy's residual costs by scaling a customer's contribution to the recovery of those costs (up or down) based on its maximum use of the network. That is, relatively more residual costs are recovered from customers with relatively higher maximum demand.

There are select instances in which a customer has a rare, one-off, spike in demand. For example, an unusual spike in demand may be due to the testing of new equipment that is not representative of

their typical network use. The affected customer has historically paid a higher capacity charge within their network bill, potentially for the next 13 months. While the capacity charge reflects the customers' actual use of the network, it does not reflect their typical use of the network.

Evoenergy, therefore, proposes to introduce a capacity charge review mechanism that customers can use in extenuating circumstances to mitigate the effect of the capacity charge on their network bill. Evoenergy has carefully designed this review mechanism to ensure its application is limited to extenuating circumstances rather than being routinely used by a customer to reduce their network bill.

A 'capacity charge review event' will only be triggered if Evoenergy approves the customers' written application. The application must be provided at least six weeks before the commencement of the capacity review window, allowing Evoenergy four weeks to review the application and notify the customer. This will allow two weeks between the final decision and commencement of the capacity review period. The application criteria and eligibility criteria are set out in Table 9 below.

Table 9 Application and eligibility criteria for capacity charge review

Application criteria	Eligibility criteria
The length of the nominated capacity review period.	The nominated capacity charge review event period must be no longer than two weeks.
Description of the extenuating circumstance that has led to the application.	Must be deemed by Evoenergy to be a reasonable motivation for the application.
The nominated maximum demand during the capacity review period.	Nominated maximum demand during the review period must be less than their maximum allowable capacity included in their connection agreement.
Inclusion of previous applications for capacity charge review.	Customer must not have been the subject of a capacity review event in the previous 24 months.
Application must be submitted to Evoenergy at least 6 weeks before commencement of the capacity charge review period.	Customer has submitted completed application at least 6 weeks before the commencement of capacity charge review.

Notwithstanding these four criteria, Evoenergy retains absolute discretion to accept or reject a capacity charge review. However, provided a customer meets the above criteria, Evoenergy will endeavour to approve the capacity charge review event.

Further, Evoenergy will endeavour to confirm whether a customer has met the criteria for a 'capacity charge review' in advance of the event to provide certainty to the customer and, if necessary, to work together to arrange a different capacity review window.

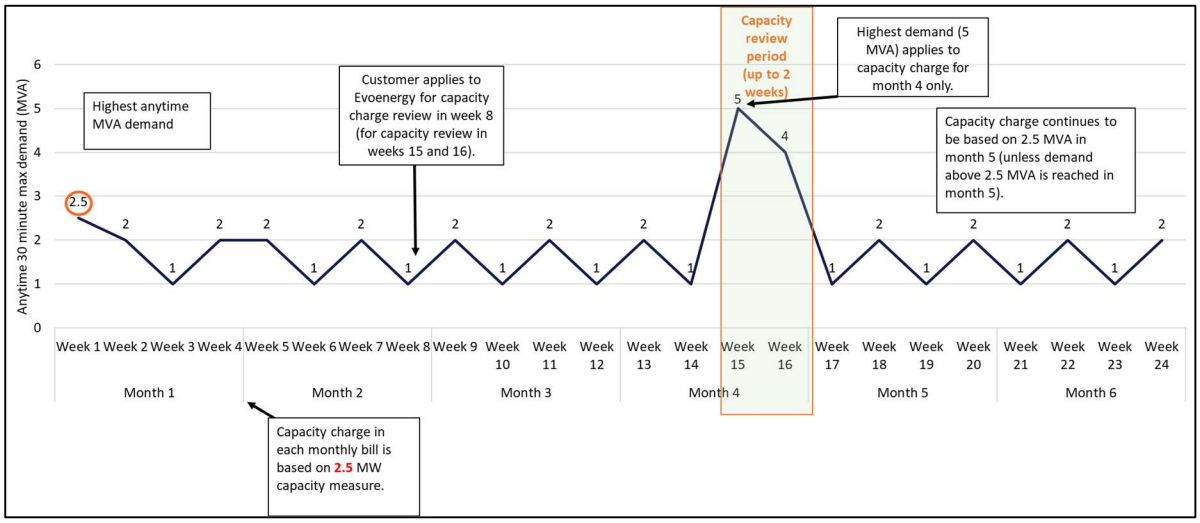
Charging arrangements

If Evoenergy approves the application for a capacity charge review, the capacity charge that applies to the customer during the review period will be based on the customer's highest half-hourly demand recorded (by the customer) during the review period. In the month following the capacity review period, the customers' capacity charge will revert to their maximum demand in the previous 13 month period, *including* the month following the review period and *excluding* the review period. In this way, the maximum demand level that is reached during the review period only applies to the capacity charge during the month of the review period. It does not continue to apply for the following 13 months (as per the current arrangements).

In Figure 6, a hypothetical customer reaches a maximum demand of 2.5 MVA in week one, so their capacity charge is based on this level of demand in months one, two, and three. This customer intends to test new equipment in month 4, which will cause a spike in their demand; hence, they apply to Evoenergy for a capacity charge review. Evoenergy reviews the customer's its application against the eligibility criteria (see Table 9) and approves the application.

In the approved capacity review period (shaded in weeks 15 and 16), the hypothetical customer's maximum demand reaches 5 MVA. In month four, the customers' capacity charge is based on 5 MVA. After the review period (from month five), this customer's capacity charge reverts to being based on 2.5 MVA until a higher peak demand occurs.

Figure 6 Capacity charge review example



It is possible the two-week review period occurs across two calendar months. In this case, the date on which the highest demand occurs (within the review period) will determine which month the capacity charge review is based on. In the example above, if the capacity review period occurred during weeks 16 and 17 (rather than weeks 15 and 16), the capacity charge in month four would be based on 5 MVA, and the capacity charge in month five would be based on 2.5 MVA.

Removing network access charge for streetlighting and small unmetered loads

The Streetlighting tariff (code 080) and Small unmetered loads tariff (code 135) both currently include a network access charge and anytime energy consumption charge. For both tariffs, Evoenergy proposes to remove the network access charge from 1 July 2024.

The network access charges are applied per National Metering Identifier (NMI). Each streetlighting and small unmetered load NMI may have multiple (possibly thousands) connection points. The number of connection points varies significantly for each NMI. Hence, applying a network access charge does not capture the true connection costs. For example, one unmetered load NMI may have 10 connection points, while another may have 10,000 connection points. Yet, they currently pay the same network access charge, resulting in an inequitable tariff outcome. Assigning all revenue recovery to the energy consumption charge will resolve this.

Evoenergy has reviewed the network revenue recovered from these tariffs (Table 10) and finds the network access charge is less than one percent of the total revenue recovered from these tariffs. In light of this revenue analysis, Evoenergy expects the customer impact associated with the removal of the network access charge to be trivial. Furthermore, Evoenergy has discussed this proposal with retailers and consulted via the draft electricity distribution network determination 2024-29 (EN24) plan and has not received any negative feedback about this proposal.

Table 10 Revenue forecast analysis for 2022/23

Tariff	Forecast revenue from fixed charge	Forecast revenue from consumption charge	Fixed charge as a percentage of total tariff revenue
Streetlighting tariff (080)	$2,737	$2,413,309	0.1%
Small unmetered loads tariff (135)	$4,187	$767,364	0.5%

Source: Evoenergy 2022/23 annual pricing proposal.

7.5 Tariff assignment

This section outlines the proposed tariff assignment policy for Evoenergy's network tariffs in the 2024–29 regulatory period. The proposed policy for residential customers is followed by the proposed policy for LV and HV commercial connections.

7.5.1. Residential

Primary tariff assignment

In the current (2019–24) regulatory control period, residential ACT consumers with a smart meter are assigned by default to the residential demand tariff and can opt-out to the residential TOU tariff.

In the upcoming 2024–29 regulatory period, Evoenergy proposes to continue the theme of this assignment policy with the proposed residential demand and proposed TOU tariffs, as described in section 7.4. Specifically, residential consumers with smart meters will be assigned by default to the proposed residential demand tariff (023, 024), with the choice to opt-out to the proposed residential TOU tariff (017, 018).

From 1 December 2017, the Residential Basic, Residential 5000, and Residential with Heat Pump tariffs have been closed to new Evoenergy customers because these tariffs are not sufficiently cost reflective. Customers assigned to these tariffs can remain on them until they have a smart meter installed.[17]

From 1 July 2024, the existing residential demand tariff (025, 026) and TOU tariff (015, 016) will also be closed to new Evoenergy customers. Customers assigned to these tariffs can remain on them, or can opt-in to the newly proposed residential demand (023, 024) or TOU tariff (017, 018). Given the Australian Energy Market Commission's (AEMC's) proposed roll out of smart meters, all Evoenergy residential customers will eventually be assigned to a residential demand tariff or TOU tariff.

Secondary tariff assignment

In the 2024–29 regulatory period, residential customers can continue to opt into one of the two controlled load ('off-peak') network tariffs. The Off-peak tariffs (codes 060 and 070) apply to controlled loads to encourage electricity usage at off-peak times.

In the 2024–29 regulatory period, an export tariff will also be offered as a secondary tariff (110). The export tariff is provided for residential customers who can export electricity into the distribution network (e.g., via solar PV, batteries, or vehicle-to-grid EVs).

While existing residential customers who can export electricity into the network will be eligible to opt-in to the proposed export tariff, residential customers who install new export capacity from 1 July 2025 will default to the export tariff without an opt-out provision. This means customers installing any of the following from 1 July 2025 will be mandatorily assigned to the proposed residential export tariff (110).

- New solar PV system
- New home battery
- Changes to existing solar PV or home battery systems (e.g., expansions)
- EVs that are capable of exporting to the distribution network
- Any other technology capable of export electricity to Evoenergy's electricity network

[17] Customers who install a smart (Type 4) meter can wait up to 12 months before being assigned to the proposed residential demand tariff. This initiative was introduced through the AER's final determination for Evoenergy in the 2019–24 regulatory period.

Summary of assignment policy for residential customers

Table 11 outlines Evoenergy's proposed residential tariff assignment policy for the 2024–29 regulatory period.

Table 11 Residential tariff assignment policy

	Default	Opt-out options	Opt-in options
Residential – primary tariff			
New connection Customer initiated meter replacement Replacement meter customers (e.g., due to meter failure)*	Proposed residential demand tariff (code 023, 024)	Proposed residential TOU tariff (code 017, 018)	
Residential – secondary tariff			
Existing export consumers (from 1 July 2024)			Export tariff (code 110)
New export consumers (from 1 July 2025)**	Export tariff (code 110)	None – mandatory default	
All residential customers			Off-peak 1 and 3 (codes 060, 070)

Notes: Customers are ineligible to switch to one of these tariffs if they have been on the tariff in the previous 12 months.

When requested by retailers, under specific scenarios, Evoenergy offers to backdate a proposed demand tariff to a proposed TOU tariff once per connection in a 12-month period. Evoenergy reverses and reissues the network bill for no more than 120 calendar days for residential sites. This process applies to the proposed residential demand tariff only.

*Customers who install a smart (Type 4) meter can wait up to 12 months before being assigned to the proposed residential demand tariff. This initiative was introduced through the AER's final determination for Evoenergy in the 2019–24 regulatory period.

**A new exporting consumer is defined as one who, after 1 July 2025, installs either a new solar PV system, a new home battery, changes their existing solar PV or home battery systems, has an EV capable of exporting or any other technology capable of export electricity to Evoenergy's electricity network.

Consistent with the AER's draft decision for Evoenergy in the 2019–24 regulatory period,[18] customers who receive a smart meter as a replacement for a Type 5 or 6 meter can remain on their existing tariff for 12 months before moving to a more cost-reflective network tariff.[19]

Under this arrangement, customers with new connections or customer-initiated meter replacements will be assigned to the proposed residential demand tariff when their smart meter is installed (with the option to opt-out to the proposed residential TOU tariff). However, when a smart meter is installed for any other reason, the shift to a more cost reflective tariff (i.e., the proposed residential demand tariff)

[18] AER, *Draft Decision – Evoenergy Distribution Determination 2019 to 2024*, Attachment 18, September 2018, pp 18-17 to 18-18.
[19] That is, defaulting to the proposed demand tariff with the option to opt-out to the proposed TOU tariff.

will be delayed by 12 months. These customers are able to opt-in to the proposed demand or proposed TOU residential tariffs within the first 12 months of their smart meter installation.

7.5.2. LV Commercial

Refinements to the LV commercial tariff assignment policy were implemented from 1 July 2019. Specifically, customers with Current Transformer (CT) meters[20] are assigned by default to the LV kVA TOU demand tariff, while customers without a CT meter (i.e., with a whole current meter) are assigned by default to the LV kW demand tariff. Both customer types (those with and without CT meters) have cost-reflective opt-out options, as shown in Table 12.

The LV kW demand tariff is designed for smaller commercial customers (i.e., customers who generally do not have CT meters) who share common assets. These customers tend to have peakier loads than large commercial customers, but because of the diversity of their peaks, these customers are expected to have a lower demand charge. The LV kW demand tariff is better suited to small-medium commercial customers.

LV commercial customers without smart meters can remain on their existing tariff until their meter is replaced with a smart meter. The General Network tariff closed to new connections from 1 December 2017 and will eventually become obsolete as customers receive smart meters and are placed onto more cost-reflective tariffs.

The exception to the above assignment policy is for small unmetered loads (code 135) and streetlighting (code 080). These tariffs do not vary with usage or load profile, and therefore there is no need to transition these loads onto a more cost-reflective tariff as consumers on these tariffs are unlikely to respond.

For the 2024–29 regulatory period, Evoenergy proposes removing the provision for LV commercial customers with a CT meter to opt-out to the General TOU tariff. This is because it is not designed for large LV commercial customers. The provision to opt-out to the General TOU tariff was a transitionary measure in the 2019–24 period because all LV commercial customers were assigned by default to the General TOU tariff before the commencement of that regulatory period. Hence, the option to return to the General TOU tariff was still available during the 2019–24 regulatory period. Evoenergy now proposes to close the General TOU tariff to new LV commercial customers with a CT meter in the 2024–29 regulatory period.

Large-scale, stand-alone batteries connected to Evoenergy's distribution LV network will be assigned to tariff code 108 or 109 based on where they are located as follows.

- Large-scale batteries located in predominantly residential areas will be assigned to tariff code 108.
- Large-scale batteries located in predominantly commercial areas will be assigned to tariff code 109.

Evoenergy will determine whether the battery's location is defined as residential or commercial on a case-by-case basis. This will ensure that the price signals faced by the large-scale battery reflect the circumstances that apply in the particular area of the network to which it connects. For example, an area covered by a zone substation that serves primarily residential customers may include pockets of the network with commercial customers and commercial load characteristics.

To be eligible for an LV large-scale battery tariff (codes 108, 109), a customer must:

- be an LV commercial customer;[21]
- have a stand-alone grid-connected battery; and

[20] CT meters are used to measure a proportion of the current passing through a connection. A multiplier is then applied to the measure to estimate the total kWh. Connections to Evoenergy's network that are rated at 100Amps or greater have CT's and the appropriate compliant metering installed.
[21] As defined under Evoenergy's Statement of Tariff Classes and Tariffs.

- have a minimum battery size of 200kVA.

Customers on the large-scale battery tariff can opt-out to an LV commercial tariff at any time in accordance with Evoenergy's tariff assignment policy.

For completeness, Table 12 shows Evoenergy's proposed LV commercial tariff assignment policy for the 2024–29 regulatory period.

Table 12 LV commercial tariff assignment policy

	Default	Opt-out
LV commercial without a CT meter	LV kW Demand (106, 107)	LV kVA TOU Demand (101, 104) LV kVA TOU Capacity (103, 105) General TOU (090, 091)
LV commercial with a CT meter	LV kVA TOU Demand (101, 104)	LV TOU kVA Capacity (103, 105)
LV commercial operating a large-scale battery in a residential area*	Large-scale battery – residential area (108)	None – mandatory default
LV commercial operating a large-scale battery in a commercial area*	Large-scale battery – commercial area (109)	None – mandatory default

Notes: Customers are ineligible to switch to one of these tariffs if they have been on the tariff in the previous 12 months.

LV commercial customers with a replacement smart meter can remain on their existing network tariff until 12 months after their smart meter is installed; however, they can opt-out to a cost-reflective LV commercial tariff according to the assignment policy above.

*Residential and commercial areas are determined by Evoenergy.

Consistent with the approach for residential customers, customers who have their Type 5 or 6 meter replaced by a smart (Type 4) meter may remain on their existing tariff for 12 months before moving to a more cost-reflective network tariff.[22]

Under this arrangement, customers with new connections or customer-initiated meter replacements continue to be assigned to their existing tariff. When a smart meter is installed for any other reason, the customer is assigned to the default tariff, as per Table 12. These customers are able to opt-in to more cost reflective LV commercial tariffs within the first 12 months of their Type 4 meter being installed.

[22] AER, *Draft Decision – Evoenergy Distribution Determination 2019 to 2024*, Attachment 18, September 2018, pp 18-17 to 18-18.

7.5.3. HV commercial

Evoenergy proposes to continue to assign all new HV commercial connections, by default, to the HV TOU demand network – Customer HV and LV tariff (code 122), see Table 13.

On this tariff, the customer owns and is responsible for the LV and HV assets at their premises, which are on the customer side of the connection point to the network.

From 1 July 2019, tariff 111 and tariff 121 were closed to new connections. Existing customers assigned to those tariffs can remain on them or switch to tariff 122 following consultation with Evoenergy.

Large-scale, stand-alone batteries connected to Evoenergy's distribution HV network will be assigned to tariff code 123 or 124 based on where they are located.

- Consumers located in predominantly residential areas will be assigned to tariff code 123.
- Consumers located in predominantly commercial areas will be assigned to tariff code 124.

Evoenergy will determine whether the battery is located in a residential or commercial area.

To be eligible for a HV large-scale battery tariff (codes 123, 124), a customer must:

- be a commercial high voltage (HV) customer;[23]
- have a stand-alone grid-connected battery; and
- have a minimum battery size of 200kVA.

Customers on the large-scale battery tariff can opt-out to the HV tariff code 122 at any time in accordance with Evoenergy's tariff assignment policy.

Table 13 HV commercial tariff assignment policy

Tariff	Export charge	Export reward
HV commercial	HV TOU demand network – Customer HV and LV (122)	None – mandatory default
HV commercial operating a large-scale battery in a residential area*	Large-scale battery – residential area (123)	None – mandatory default
HV commercial operating a large-scale battery in a commercial area*	Large-scale battery – commercial area (124)	None – mandatory default

*Residential and commercial areas are determined by Evoenergy.

[23] As defined under Evoenergy's Statement of Tariff Classes and Tariffs.

7.6 Export tariff transition strategy

In recent years, the imbalance between the supply and demand of electricity has been widening. This typically arises in residential areas in the middle of the day when electricity demand is relatively low, and exports from rooftop solar PV are typically high. As the imbalance continues to widen (primarily due to increased uptake of solar), additional network investment will be required to manage voltage fluctuations on the network.

In response to these new challenges for networks, the AEMC made changes to the NER that aim to integrate DER more efficiently into the network.[24] Among other things, this NER change:

- clarified that networks can use negative prices to reward customers for decisions that reduce network costs;
- removed the former prohibition on charging customers for exporting energy onto the network; and
- provided that export charges can be levied only on exports above a basic export level (BEL) set by the network.

Evoenergy proposes introducing export tariffs for some residential customers and large-scale batteries, as summarised in Box 1 below.

Box 1 – Summary of residential and large battery tariffs containing export prices

Evoenergy proposes introducing a **residential export tariff** as a secondary tariff that applies alongside eligible residential customers' existing (primary) tariff. Using a secondary tariff allows residential customers to remain on their existing (import) tariff, which promotes simplicity. Simplicity is further enhanced by using a single export tariff structure, with a single basic export level and consistent price levels for all residential customers.

The (secondary) export tariff for residential customers will comprise two prices.

1. An export reward (negative price) that applies to all exports during the evening peak period (5pm–8pm AEST).
2. An export charge that applies only to exports above 5 kW per hour (the BEL) during the solar soak period (11am–3pm AEST).

The export reward will be based on import LRMC, and the export charge will be based on export LRMC.

Evoenergy's proposed new **tariffs for large-scale batteries** will also include export rewards and an export charge for batteries in predominantly residential areas. However, each of these tariff components will be "critical event" charges, i.e., they each only apply for up to three hours, up to six times a year, and when notified by Evoenergy. All critical price signals are based on the applicable LRMC.

These critical charges are described in more detail in in section 7.4

The remainder of this section describes Evoenergy's strategy for introducing export charges and rewards and the considerations that underpin that strategy. In particular, it:

- explains the network requirements that underpin the need for export tariffs;
- highlights stakeholder's response to proposed export tariffs;
- describes the export tariff for residential customers; and
- explains the export tariff components of the proposed large-scale battery tariffs.

[24] AEMC, *Access, pricing and incentive arrangements for distributed energy resources*, Rule determination, 12 August 2021.

7.6.1. Network requirement for export tariffs

Evoenergy's customers are engaging in new and innovative uses of the network that give rise to new flows on the network. The driving force behind these new flows is unprecedented growth in the uptake of solar PV generation and the resulting flows of electricity to *and* from customers (two-way flows).

Evoenergy now experiences peaks in exports in residential areas in the middle of the day when:

- demand from residential customers is typically low; but
- supply from rooftop PV generation is typically high due to the high level of solar irradiance.

This analysis was demonstrated in section 9.1 of Appendix 7.1. The resulting imbalance between supply and demand creates new challenges and opportunities for Evoenergy. The solar soak period with a relatively low network charge, is one such opportunity that Evoenergy is proposing to help manage this imbalance.

into the solar soak period may be insufficient to entirely offset the rising imbalance between residential demand and supply during the middle of the day. Evoenergy, therefore, developed a DER integration expenditure program for the 2024–29 regulatory control period to facilitate exports on its network, as summarised in Table 14 .[25] More than 77 per cent of Evoenergy's community panel supported an uplift in costs to enable DER integration.

Table 14 DER integration expenditure (2024–29)

Expenditure	Type	Cost over 2024–29 period
Quality of Supply (QoS) Augmentation Expenditure	Capex	$2 million
Secondary Systems (Network Monitoring and Voltage Regulation Upgrades)	Capex	$4.28 million
Advanced DER Management System	Capex	$3.04 million
Information Communication Technology (ICT) Uplift	Capex	$2.81 million
Community Battery Trial	Capex	$2.36 million
	Total capex	**$14.5 million**
DER Integration Program (Opex step change)	Opex	$11.61 million
Quality of Supply Expenditure	Opex	$12.09 million
	Total opex	**$23.7 million**

[25] See: Attachment 6.1 to Evoenergy's proposal for the 2024/29 regulatory period, entitled DER Integration Program Business Case.

The ‘step change’ increase in operating expenditure (‘opex’) will improve the network’s capability to efficiently provide export services and ensure DER assets operate within the bounds of the network’s capacity. The increase in operating expenditure is more significant than the increase in capital expenditure, accounting for 37 per cent of the total step-change increase in operating expenditure over the upcoming (2024–29) regulatory control period and over 3 per cent of total operating expenditure each year.

Evoenergy anticipates that DER integration expenditure will increase markedly in subsequent regulatory periods as DER integration continues to increase in line with the ACT target of net zero emissions by 2045.

Export tariffs are therefore required to signal the future costs associated with DER integration, thereby providing an opportunity to avoid or defer future DER integration costs if there is a significant response to the export tariff price signals.

Specifically, signalling these future DER integration costs through network charges will empower exporting customers[26] to decide whether there is a cheaper, non-network solution, which may arise from:

- increasing their self-consumption of solar PV generation and decreasing exports;
- investing in a behind-the-meter battery; or
- participating in community battery initiatives.

At the same time, introducing export rewards will help exporting customers fully realise the value of rooftop solar PV and/or batteries.[27] Rewarding customers for exporting electricity during the evening peak import period (from 5pm to 8pm AEST), based on the future costs that can be avoided at that time, presents a new source of return on investment for exporting customers.

Export rewards also promote efficient investments in solar PV systems and other DER by encouraging:

- the installation of west-facing solar PV panels, which increase exports in the early evening (and has the added benefit of lowering exports in the middle of the day when there is already a high concentration of solar-generated exports); and/or
- the storage of solar generation in behind-the-meter batteries for export during the evening.

Why now?

Customers are increasingly making investments in export-capable DER (such as solar PV systems) that give effect to step-changes in their network use. The most significant example to date is the unprecedented uptake of solar PV (see section 3) and the corresponding decrease in customer imports in the middle of the day, thereby avoiding network charges in the middle of the day.

The breadth of investments that help customers take control of their energy use, and the rate of uptake, are expected to increase markedly with advancements in technology and the societal focus on transitioning to clean energy sources.

These lumpy investments include rooftop solar PV systems, behind-the-meter batteries, HEMS and smart appliances that enable load scheduling. A key theme across these investments is their ability to manage a customer’s energy use while having no effect on the amenity customers receive from energy appliances.

Evoenergy expects responses to two-way pricing will principally occur through customer investment decisions. When an ACT customer invests in a solar PV system after 1 July 2025, they will automatically default to the proposed network export tariff, as described below in section 7.6.3.

[26] This assumes retailers pass through the network price signals to end customers.
[27] Ibid

Their response to the export tariff may result through:

- *The nature of their investment* – such as whether the solar PV system:
  - has the capability to be limited to the basic export level (to avoid the export charge); and
  - is west-facing, which reduces exports in the middle of the day and increase exports in the evening, when exports are rewarded.
- *Their behaviour* – such as whether the customer can shift load to the middle of the day by:
  - scheduling smart appliances; or
  - investing in a HEMS to monitor import and export of electricity with the aim of avoiding the export charge and optimising the export reward.

It follows that Evoenergy's customers are increasingly making lumpy and costly investment decisions that will have long-lasting effects on the way they use the network and, in turn, on Evoenergy's DER integration costs.

ACT customers will therefore make investment decisions over the 2024–29 regulatory control period that face network prices beyond 2029 reflecting very different circumstances, i.e., higher levels of DER integration expenditure. In Evoenergy's view, it is important to provide investment certainty to these customers by introducing export tariffs sooner rather than later so that their investment decisions better reflect the price signals that are likely to apply over the life of their investments. In other words, export tariffs allow ACT customers to make investment decisions based on information (network prices) that more accurately reflects the circumstances expected to apply over the life of those long-term investments.

Similarly, the longer Evoenergy waits to implement export tariff reforms, the more challenging it will be to introduce meaningful two-way tariff reforms while managing the effects on customers (who may have already made irreversible decisions based on different expectations).

Evoenergy discussed these issues with customers and received general support for the conservative introduction of export tariffs in the 2024–2029 regulatory period.

7.6.2. Customers generally supportive of export tariffs

Evoenergy's process for engaging with customers, the feedback it received from customers, and how that feedback shaped its proposal are described in detail in sections 5 and 11 of the TSES. In relation to export tariffs, the key themes that arose from stakeholder feedback are outlined below.

- Support for the introduction of export tariffs in the 2024–29 regulatory period.
- A preference for an export tariff with both a charge and a reward.
- Customers value simplicity.
- Support for the mandatory assignment of new exporting customers to the export tariff, and opt-in arrangements for existing export customers.
- Mixed views on whether export pricing improves fairness/equity.

This feedback has significantly shaped Evoenergy's proposed export tariff for residential customers.

Given the context described above and mixed views from customers on whether export pricing improved fairness, Evoenergy has taken a conservative approach to introduce an export tariff for residential customers. This conservative approach is reflected in a generous basic export level, a low export charge (above the basic export level), and an export reward.

Subsection 7.6.3 explains the basis for the residential export tariff, which draws on the feedback received from customers, as described in sections 5 and 11 of Appendix 7.1. The customer bill impacts associated with export tariffs are then presented in section 12.1 of Appendix 7.1 to demonstrate that these features of Evoenergy's approach combine to produce relatively minor impacts for exporting customers.

Evoenergy also found, through the development and operation of its tariff trials, that large-scale battery customers were also receptive to export charges and rewards. Section 7.6.4 outlines the

relevant features of the export charge and reward of the tariff designed for large-scale batteries, which is described in more detail in sections 9.2 and 11 of Appendix 7.1.

7.6.3. Residential export tariff

This section describes the key features of Evoenergy's proposed residential export tariff. It is separated into subsections that describe the following.

- Overview of the residential export tariff.
- The BEL for residential customers.
- The low export charge that applies to residential customers' exports above the BEL.
- How customers benefit from an export reward.
- How using a secondary tariff with only two price signals promotes simplicity.
- The staged assignment of residential customers to this export tariff.

Residential export tariff

Evoenergy proposes introducing the residential export tariff as a secondary tariff, which applies alongside their existing (primary) tariff.

Using a secondary tariff allows residential customers to remain on their existing import tariff, which promotes simplicity. Simplicity is further enhanced by using a single export tariff structure, with a single basic export level and consistent price levels for all residential customers.

As described below, the (secondary) export tariff for residential customers will comprise two prices.

- An export reward (negative price) that applies to all exports during the evening peak period (5pm – 8pm AEST).
- An export charge that applies to exports above 5 kW in each hour (the BEL) during the middle of the day (11am – 3pm AEST).

The export reward will be based on import LRMC, and the export charge will be based on export LRMC.

Basic export level

The residential export tariff includes a BEL, which is the threshold below which customers will not be charged for exports.[28] In other words, a customer will only be charged for exports above their BEL. The key quantitative inputs to Evoenergy's BEL are:

- the network's 'intrinsic hosting capacity', which is the capacity of the network – as it stands today – to facilitate exports with no further network investment;[29] and
- expected demand for export services.

Evoenergy engaged an external consultant to estimate the total intrinsic hosting capacity at each distribution substations, of which it has more than 4,000, as of the start of the 2024–29 regulatory control period.

Evoenergy then considered how to translate these estimates of total intrinsic hosting capacity into a BEL for each customer on a reference tariff while striking an appropriate balance between:

- Efficiency – noting that a customer's exports can cause additional network costs, irrespective of whether their exports are above or below a broadly specified BEL at a particular time.

[28] AER, *Export Tariff Guideline – Explanatory Statement*, May 2022, p 3.
[29] The intrinsic hosting capacity of the network reflects that the network can accommodate some exports without incurring any additional investment. Put another way, the intrinsic hosting capacity reflects a baseline from which an expansion of export capacity is developed. See: AER, *Export tariff guidelines*, May 2022, p 12.

- Complexity – noting that customer feedback reflected a strong preference for simple price signals.
- Fairness and equity – noting that Evoenergy received mixed views on whether it was fair to charge customers for exports.

Evoenergy found there is significant diversity in the 'intrinsic hosting capacity per customer' across the distribution substations in Evoenergy's network. However, Evoenergy considered that, at this early stage, the benefits of implementing location-specific BELs are far outweighed by the negative implications of complexity and customer perceptions of what is fair. Evoenergy, therefore, proposes to apply a single BEL to all residential customers.

Evoenergy sets the BEL equal to the 10th percentile in the range of values across its network so that 90 per cent of residential customers can export up to the BEL without any risk of an export constraint. Since the BEL is specified on a 'per customer' basis, Evoenergy needed to convert its estimate of total intrinsic hosting capacity at each distribution substation into a per customer value. One option would be to calculate the BEL based on the assumption that all customers have rooftop solar PV, i.e., to divide total intrinsic hosting capacity by the total number of customers (including customers that don't currently have export capacity). This approach would produce a BEL equal to approximately 2.4 kW.

A 2.4 kW BEL at this very early stage in the export tariff transition strategy may mean that customers are charged for exports when there is still a significant level of export capacity available on the network because not all customers have the capability to export. On the other hand, setting a BEL that instead distributes total intrinsic hosting capacity across the current number of customers with solar PV would mean that the BEL has to increase each year, as total hosting capacity is shared across an increasing base of exporting customers. Evoenergy's view is that regular decreases in the BEL would be detrimental to investment certainty for customers contemplating material investments in long-lived export capacity.

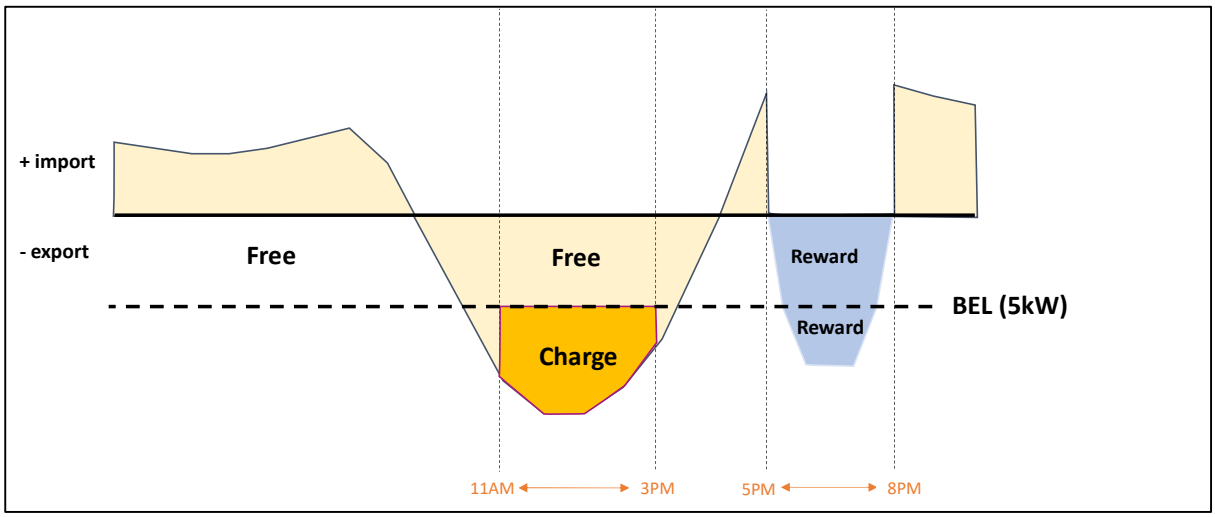
In light of these competing considerations, Evoenergy proposes to set the BEL by reference to the expected number of exporting customers when the BEL is no longer required in 2034. Evoenergy, therefore, proposes to adopt an initial BEL equal to 5 kW per hour, per customer for all residential customers. However, this relatively generous approach is contingent on a review of the BEL in the second and fourth year of the regulatory control period for potential adjustment in its annual pricing proposal for the third and fifth years (i.e., 2026/27 and 2028/29) of the regulatory period.

It is important to highlight that there is a range of different, reasonable approaches to deriving a BEL. Evoenergy has selected this methodology in light of the particular circumstances that apply at this stage of the export tariff transition strategy.

A BEL equal to 5 kW per residential customer will limit the effects of export tariffs on customers in the early stages of export pricing. This approach aligns with the views conveyed to Evoenergy through consumer engagement. A BEL of 5kW is also consistent with Evoenergy's current export limit for single phase connections (5kW). All exports above 5kW in a single hour will therefore be subject to an export charge.

Figure 7 below illustrates how the BEL will operate so that only exports above 5kW, measured hourly between 11am and 3pm AEST (s per the analysis in section 9.1), will be subject to an export charge. It also shows that the BEL has no effect on the rewards that will be received for exports during the peak import period.

Figure 7 Illustration of export reward and charge (with 5kW BEL)



A low export charge

In addition to a relatively high BEL, Evoenergy proposes to apply a low export charge (in cents per kWh). The export charge will apply to exports above the BEL within the solar soak window (11am to 3pm AEST). Since it is an energy-based charge, the export charge will apply to exported energy above 5kWh in each hour between 11am and 3pm AEST.

Evoenergy will set a cost-reflective export charge based on the LRMC of providing export services, the estimation of which is described in section 11.3 of the TSES. The LRMC of providing export services is significantly lower than the LRMC of providing import services, reflecting the efficiency of Evoenergy's proposed DER integration expenditure, and the contribution of customer load to managing export growth in exports.

Evoenergy describes the limited customer bill impacts of its export tariff for residential customers in section 12 of the TSES. Evoenergy's assessment of a sample of 822 exporting residential customers indicated that:

- 92 per cent of customers with maximum exports less than 7.5 kW will be better off on the export tariff;
- 98 per cent of customers will experience a network bill impact of less than $20 per annum; and
- those few customers with a network bill impact of more than $20 per annum have very high levels of export capacity (typically above 10kW).

These bill impacts include the benefit that arises from the export reward discussed below.

An export reward

Evoenergy proposes introducing export rewards alongside export charges in the 2024–29 regulatory control period for residential customers assigned to the secondary export tariff.

Additional exports from residential customers during the peak demand window frees up additional capacity on higher levels of the network and therefore mitigates the need to invest in additional capacity or potentially defers investment to future years. The costs that can be avoided or deferred are reflected in Evoenergy's estimate of import LRMC, as discussed in section 7 of the TSES.

Signalling to residential customers the network costs that can be avoided or deferred by exporting energy during the evening peak period will promote economic efficiency by providing efficient incentives:

- to install west-facing solar PV panels, which increase exports in the early evening (and has the added benefit of lowering exports in the middle of the day); and/or
- to store solar PV generation in behind-the-meter batteries for export during the evening.

Export rewards also opens a new revenue stream for exporting customers and, in so doing, allows them to fully realise the value of their DER investment to the network. It also smooths the introduction of export charges due to the offsetting effect on network bills.

In practice, Evoenergy will provide export rewards in the form of a negative price applied to the amount of energy exported during the evening peak period (5pm – 8pm AEST). This negative price will be based on Evoenergy's estimate of import LRMC.

Evoenergy includes a summary of the basis on which it proposes to set export charges and rewards for residential and commercial customers in section 7.4.

Staged assignment

Evoenergy's proposed assignment of residential customers to export tariffs is directed at managing the effects on customers that have already invested in DER (i.e., solar PV) while not delaying the introduction of export tariffs for customers that invest in new export-capable technology during the 2024–29 regulatory period. Consistent with the NER, Evoenergy proposes to assign residential customers with export capability as follows.

- Residential customers with exporting capacity **before** 1 July 2025:
  - can opt-in to the export tariff during the 2024–29 regulatory period; and
  - will be mandatorily assigned to the export tariff from 1 July 2029.
- Residential customers with exporting capacity **from** 1 July 2025:
  - will be mandatorily assigned to the export tariff from 1 July 2025.

Evoenergy's proposed assignment of residential customers to the secondary export tariff is summarised in Table 15. The table includes the proposed tariff assignment for both the 2024–29 and 2029-34 regulatory periods to provide a long-term outlook of Evoenergy's anticipated export tariff assignment policy.

Table 15 Assignment of residential customers to export tariff (secondary tariff)

	1 July 2024 to 30 June 2029	1 July 2029 onwards
Residential customers exporting before 1 July 2025	Opt-in	Mandatory
Residential customers that begin exporting after 1 July 2025	Mandatory	Mandatory

Note: The NER states that export-capable customers cannot be mandatorily assigned to an export tariff before 1 July 2025.[30]

[30] AEMC, NER, Clause 11.141.11(a)

7.6.4. Large-scale battery tariff

This subsection explains that Evoenergy's newly proposed LV and HV large-scale battery tariffs include the following.

- In predominantly residential areas:
  - a critical export charge, that applies for a maximum of three hours, up to six times a year; and
  - a critical export reward, that applies for a maximum of three hours, up to six times a year; and
- In predominantly commercial areas:
  - a critical export reward, that applies for a maximum of three hours, up to six times a year; and
  - no export charge.

This subsection also highlights that the export reward component of these tariffs depends on whether they are connected in predominantly residential or commercial areas of the network, as determined by Evoenergy. Either way, all charges, and rewards will be based on the applicable LRMC estimates.

Export charges do not apply in predominantly commercial areas due to the lower levels of rooftop solar PV and higher levels of commercial load during the middle of the day when solar irradiance is typically highest. This means that exports to the network during the middle of the day are generally consumed by (commercial) connections in these areas.

The critical nature of export charges for large-scale batteries necessitates a different approach to the BEL compared to residential customers. During the critical charge periods described in 0, the BEL is set equal to zero, whereas, at all other times, the BEL is set equal to the customer's export capacity, such that they do not face export charges.

7.6.5. Summary of the basis for export prices

Table 16 contains a summary of the basis on which each export charge and reward is to be determined in Evoenergy's residential and commercial export tariffs.

Table 16 Basis of export charges and rewards

Tariff	Export charge	Export reward	Comments
Residential export tariff Tariff code 110	Export LRMC	Import LRMC (LV residential)	
LV large-scale battery (Residential area) Tariff code 108	Export LRMC	Import LRMC (LV residential)	Same as residential export tariff
LV large-scale battery (Commercial area) Tariff code 109	None	LV import (LV commercial)	No export charge due to no low-load events in commercial areas
HV large-scale battery (Residential area) Tariff code 123	Export LRMC	Import LRMC (HV)	Export LRMC used because managing exports may involve HV investments in the future
HV large-scale battery (Commercial area) Tariff code 124	None	Import LRMC (HV)	No export charge due to no low-load events in commercial areas

7.7 Alternative Control Services

The AER has classified Evoenergy's Network Ancillary Services, Type 5 and Type 6 metering services, Public Lighting Service[31], Enhanced connection service, and Connection and application management services as Alternative Control Services (ACS) for the 2024–29 regulatory period.[32]

The form of control mechanism applied to ACS under the NER must have a basis stated in the distribution determination and may (but need not) use elements of Part C of clause 6.26 of the NER (with or without modification).

Evoenergy's ACS proposal will benefit consumers through cost-reflective prices, set transparently and subject to a defined price path over the regulatory period. Customers will only bear the costs of these services if and when they are required. ACS are often customer specific or requested and are billed on a per service basis to individual customers.

Evoenergy accepts the AER's determination in its framework and approach paper that the form of control mechanism for ACS will be price caps on individual services. Clause 6.2.6(b) of the NER provides that the control mechanism must have a basis stated in the distribution determination.

Evoenergy proposes the following basis for the control mechanisms to be the most appropriate when assessed against the criteria set out in clause 6.2.5(d) of the NER (discussed further below). These are:

- for metering services, a limited building block approach, consistent with the approach in the 2019–24 regulatory period; and
- for network ancillary services, a cost build-up approach, consistent with the approach in the 2019–24 regulatory period.

A full description of alternative control services is documented in Attachment 6.

7.7.1. Metering Services (Types 5 and 6)

For the 2024–29 regulatory period, the AER has retained the ACS classification and the individual price cap form of control. Evoenergy accepts the AER's classification of the following metering services as ACS.

- Types 5 and 6 metering data services, which includes collection, processing, storage, and delivery
- scheduled meter reads
- maintaining and repairing meters and load-control equipment
- meter testing during business hours (refunded to customer if meter proves faulty); and
- special meter reading or check (refunded to customer if original reading was incorrect).

Evoenergy proposes to apply a building block approach to determine the price caps for all metering services. Evoenergy's proposed approach to metering is effectively a continuation of the approach used in the 2019–24 control period, with the same post-tax revenue model (PTRM), roll-forward model (RFM), and tax asset base in place, with changes that reflect the AER's inflation review final position published on 17 December 2020 and the AER's regulatory tax approach review findings published on 17 December 2018.

Under clause 6.8.2(c)(3)) of the NER, Evoenergy is required to include in its regulatory proposal 'for direct control services classified under the proposal as alternative control services – a demonstration of the application of the control mechanism, as set out in the framework and approach paper, and the

[31] Note Evoenergy doesn't provide a public lighting service.
[32] AER, Framework and Approach for Evoenergy, July 2022, p. 6

necessary supporting information.' The formula for metering services, as set out in the Framework and Approach paper, is presented in Box 2.

Box 2 – Formula for metering services

$\bar{p}_t^i \geq p_t^i$ i=1,...,n and t=1, 2, … ,5

$\bar{p}_t^i = \bar{p}_{t-1}^i \times (1 + \Delta CPI_t) \times (1 - X_t^i) + A_t^i$

where:

$\bar{p}_t^i$ is the cap on the price of service i in year t.

p_t^i is the price of service i in year t. The initial value is to be decided in the distribution determination.

$\bar{p}_{t-1}^i$ is the cap on the price of service i in year t–1.

t is the regulatory year with t = 1 being the 2024-25 financial year.

ΔCPI_t is the annual percentage change in the Australian Bureau of Statistics (ABS) Consumer Price Index (CPI) All Groups, Weighted Average of Eight Capital Cities from the December in year t–2 to the December in year t–1. For example, for the 2024–25 year, t-2 is December 2022 and t-1 is December 2023. If the ABS does not, or ceases to publish the index, then CPI will mean an index which the AER considers is the best available alternative index.

X_t^i is the X-factor for service i in year t. The X-factors are to be decided in the distribution determination.

A_t^i is the sum of any adjustments for service i in year t and is to be decided in the distribution determination.

Evoenergy will demonstrate compliance with the control mechanism by multiplying the price for each service in the previous year by CPI–X (rounded to the same number of decimal places as currently applied) and comparing that to the proposed price. Prices equal to or less than equal to the calculated price are compliant. Evoenergy will demonstrate this compliance in the annual network pricing proposal to be submitted to the AER.

7.7.2. Ancillary services

In the Framework and Approach paper, the AER classified Evoenergy's ancillary services as ACS for the 2024–29 regulatory period. It determined that the control mechanism would be price caps on individual services. Evoenergy accepts this classification and proposes to adopt a cost build-up approach to determining the price caps for individual ancillary services.

The cost of ancillary services is largely comprised of labour, with limited use of materials or equipment and vehicles in most cases. Evoenergy proposes increasing the labour rates per the escalation rates sourced from BIS Oxford Economics.

Evoenergy proposes to set the prices for quoted services using the formula in Box 3.

Box 3 – Formula for quoted services

Price = Labour + Contractor services + Materials + Margin + Tax

Where:

- **Labour** (including on-costs and overheads) – consists of all labour costs directly incurred in the provision of the service which may include but is not limited to labour on-costs, fleet on-costs and overheads, and other associated delivery costs including overheads. The labour cost for each service is dependent on the skill level and experience of the employees involved, time of day the service is undertaken, travel time, number of site visits, and crew size required to complete the service.
- **Contractor services** – reflect all costs associated with the use of external labour including overheads and any direct costs incurred. The contracted service charge applies the rates under existing contractual arrangements. Direct costs are passed on to the customer.
- **Materials** (including overheads) – reflects the cost of materials directly incurred in the provision of the service, material storage and logistics on-costs and overheads.
- **Margin** – reflects a return commensurate with the regulatory and commercial risks involved in the provision of a service.
- **Tax** – reflects taxation costs arising from the provision of services that are capitalised for accounting purposes.

Price caps apply to the labour rates used in this formula. Evoenergy will demonstrate compliance with the formula by providing its annual calculation of labour rates to the AER in its annual pricing proposal. The AER will review the rates as part of the annual network pricing approval process.

Price caps only apply to labour costs, rather than all cost inputs, which helps reduce administrative costs, as Evoenergy will not be required to identify for AER approval, every input cost that may be required to perform a quoted service. This approach will also result in cost-reflective charges.

Inclusion of a margin component in the quoted services price cap formula

Evoenergy proposes to include a margin component in the quoted services price cap formula for the 2024–29 regulatory period. The inclusion of a margin is consistent with the principle of competitive neutrality, with margins included in prices that would be observed for similar services in a competitive market.

The AER's final Framework and Approach paper included a margin component for quoted services, which has been accepted in other jurisdictions in recent regulatory determinations.[33]

Including a margin is consistent with the revenue and pricing principles in the National Electricity Law (NEL), where 'a price or change for the provision of a direct control network service should allow for a return commensurate with the regulatory and commercial risks involved in providing the direct control network services to which that price or change relates'.[34]

Inclusion of a tax component in the quoted services price cap formula

Evoenergy proposes to include a tax component in the quoted services price cap formula for the 2024–29 regulatory period. Including a tax component will allow quoted services to be more cost-reflective and is consistent with the approach outlined by the AER in its Framework and Approach paper.[35]

When providing quoted services, Evoenergy often incurs tax obligations arising from the capital-intensive nature of the work undertaken for customers. Costs to cover these tax obligations have not

[33] AER, Framework and approach for Evoenergy, July 2022, p. 36
[34] NEL section 7A (5)
[35] AER, Framework and approach for Evoenergy, July 2022, p. 37

been recovered from customers because they have not been included in the quoted services pricing formula approved by the AER. Evoenergy proposes to estimate the tax component in the same way it is estimated for standard control services. That is, the tax component reflects an estimate of the tax payable based on revenue less expenses and applying the company tax rate. Currently, the company tax rate applied to Evoenergy is 30 per cent.

Itemised quotes for customers

Evoenergy supports greater transparency of quoted services. As is current practice, Evoenergy will continue to provide customers with itemised quotes showing each cost component to demonstrate compliance with the control mechanism formula.

This approach will allow customers to compare price offerings across providers over time and provide transparency in the pricing of quoted services.

Glossary

Term	Meaning
ABS	Australian Bureau of Statistics
ACS	Alternative Control Services
ACT	Australian Capital Territory
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
AEST	Australian Eastern Standard Time
BEL	Basic Export Level
c	Cents
Capex	Capital Expenditure
CP	Critical Peak
CPI	Consumer Price Inflation
CT	Current Transformer
DER	Distributed Energy Resources
DNSP	Distribution Network Service Provider
DUOS	Distribution Use of System Charges
EN24	Electricity Distribution Network Determination 2024-29
EV(s)	Electric Vehicle(s)

Term	Meaning
FCAS	Frequency Control Ancillary Services
HEMS	Home Energy Management Systems
HV	High Voltage
ICT	Information Communication Technology
kVA	Kilo Volt Ampere
kVAh	Kilo Volt Ampere hour
kW	Kilo Watt
kWh	Kilo Watt Hour
LRMC	Long Run Marginal Cost
LV	Low Voltage
MVA	Mega Volt Ampere
MW	Mega Watt
MWh	Mega Watt Hour
NEL	National Electricity Law
NER	National Electricity Rules
NMI	National Metering Identifier
NSW	New South Wales
Opex	Operating Expenditure

Term	Meaning
PV	Photovoltaic
QoS	Quality of Supply
TOU	Time of Use
TSES	Tariff Structure Explanatory Statement
TSS	Tariff Structure Statement
TUOS	Transmission Use of System