



Ref: 20220228JL:CB

28 February 2022

Dale Johansen
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

Email: [REDACTED]

Dear Dale,

Intention to introduce grid-connected battery tariff trials and large business customer tariff trials for the remainder of the 2019-24 regulatory period

This letter outlines Essential Energy's intention to utilise clause 6.18.1C in the National Electricity Rules (NER) in relation to introducing:

- > a tariff for bi-directional distribution support assets (batteries at this stage) as part of a trial project for the remainder of the 2019-24 regulatory period
- > yet to be determined tariff(s) for short or seasonally peaky load large customers to trial for the remainder of the 2019-24 regulatory period

This is in addition to the proposed small customer sub-threshold tariff trials already proposed by Essential Energy in our [previous letter dated 28 February 2021](#).

Essential Energy will ensure that each tariff trialled does not recover more than one percent of the annual revenue requirement and that, together, all our tariff trials do not recover more than five percent of revenue each year, in accordance with clauses 6.18.1C (a)(1) and 6.18.1C (a)(2) respectively.

Tariff principles

The Essential Energy tariff principles are: Avoid bill shock, Easy to understand, Fair, Integrate renewables and Effective. These principles were developed in conjunction with customers and stakeholders as part of our small customer tariff design engagement and were slightly tweaked, following input from our large, peaky load customer working group and our Stakeholder Collaboration Collective (SCC) – our primary stakeholder reference group for our 2024-29 regulatory proposal. A visual of these principles can be found in Attachment 1.

Alignment with Tariff Structure Statement (TSS) strategy

The electricity industry is undergoing rapid change driven by changes in the way customers source and use energy, the push to decarbonise energy supply, and the increased decentralisation of the energy supply chain. Tariff trials are essential to Essential Energy successfully designing and testing network charges that recognise the characteristics of both our network and our customers.

Our 2019-24 Tariff Structure Statement indicated that we would be looking to trial tariffs over the 2019-24 period. The trials and associated learnings will form a large part of our engagement program for our 2024-29 TSS with any proposed changes having the support of customers and stakeholders.

The remainder of this letter summarises each of these trials with more details contained in the AER's tariff trial notification templates in Attachments 2 and 3.

Overview of the bi-directional distribution support tariff project

Essential Energy appreciates that storage technologies connected directly to the distribution network, rather than behind-the-meter, have the potential to become a valuable complement for electricity customers, as well as assisting with the management of the distribution network and providing support to the wider electricity system. Essential Energy's proposed tariff adopts a technology neutral approach to cost and benefit attribution, which will:

- > incentivise operation of such technologies in a manner that recognises the potential costs and benefits to Essential Energy and its customer base, and
- > achieve a fair and efficient level of network cost recovery which recognises how such grid-connected assets will use and benefit from the distribution and transmission systems.

It also aligns with our tariff principles of being Easy to understand, Fair, Integrating renewables and Effective.

We believe the proposed tariff reflects the views of the Australian Energy Market Commission (AEMC) in its draft rule and final determination on the Australian Energy Market Operator (AEMO) rule change for integrating storage into the National Electricity Market (NEM) which found that:

- > exempting storage from Transmission Use of System (TUoS) and Distribution Use of System (DUoS) charges would not be technology neutral
- > charging storage for TUoS and DUoS is consistent with the AEMC's proposed changes to the non-energy cost framework¹ which seeks to allocate costs on a consistent and technology neutral basis to the user of the service.

It is important to note that this trial does not encompass larger storage technologies where, to encourage efficient location decisions, Essential Energy may seek to provide a locational pricing signal on a case-by-case basis, either in the way TUoS charges are recovered or in an individually calculated tariff for DUoS.

The network problems this trial aims to solve

The behavioural incentives intended by the trial tariff will target storage operation that inversely responds to the network cost drivers being imposed by other customers — that is, consuming at times of distribution system daily minimum demand and exporting at times of distribution system daily maximum demand.

More background on Essential Energy's tariff principles and the network problems that tariffs can help solve can be found in our 2021 [intention to introduce sub-threshold tariffs letter](#) to the AER.

Proposed bi-directional distribution support tariff structure

The proposed structure and pricing will combine elements of Essential Energy's existing large customer low voltage demand tariff with the Sun Soaker and export charge tariff developed for the small customer tariff trials

Recognising the high degree of control that bi-directional storage technologies have around the pace at which they consume or export energy, demand-based charging has been applied to both consumption and exports. This will:

- > allow the bi-directional storage technology to manage the pace at which it buys and sells energy to minimise network costs (charged in kW for exports and KVA for consumption demand) while still being able to profit from the scale of its energy trading, and
- > ensure that if the technology has spikes in its rate of consumption or exports due to its provision of other market services, it will face the network costs of accommodating these spikes.

Given the basic export level is about helping existing exporting customers to transition to export charges, given they have been paying for 'intrinsic' export capacity to date, and our tariff will apply only to new customers who were not previously connected or paying for load services, it does not offer a basic export level at all times of the day. Instead, our trial tariff offers *consumption free of charge* in the 10am to 3pm Sun Soaker window and applies a *zero threshold for export charges in that same window* – a concept we

¹ These changes amend the framework to recover non-energy costs based on a participant's gross consumed and sent out energy over relevant intervals, irrespective of the participant category in which it is registered. It would not include the energy produced and consumed behind the connection point.

believe has merit and is worthy of trialling. A basic export service is provided by allowing free exports between 3pm and 10am and rebated exports between 5pm and 8pm.

Initial feedback on the tariff structure, from both stakeholders and proponents, has been supportive. A summary of the trial, including the proposed tariff structure and an accompanying graphic can be found in Attachment 2.

Overview of the short or seasonal, peaky load large customer tariff project

Some large customers, generally those with short or seasonally peaky loads have approached Essential Energy with a request to explore new tariff options. Essential Energy is keen to trial innovative large customer tariffs, particularly those related to different loads.

A working group of Essential Energy staff, large customers with short or seasonal peaky loads and their industry representatives was formed in early 2021-22. The group meets every two months and three workshops have been held to date. The working group comprises Cotton Australia, cotton farmers, cotton ginners, farmers, irrigators, orchard farmers, fruit dehydrators and the Electric Vehicle Council as a representative for electric vehicle fast chargers. Staff from the AER and other relevant observers are also invited to attend.

The objective of the group is to consider alternative tariffs that could be applied to short or seasonally peaky load large customers, consider whether there are technologies that could assist with making tariffs easier for customers to work with, trial possible solutions that are derived and propose any changes to the National Electricity Rules if required.

The network problems this trial aims to solve


In the initial workshop Essential Energy shared its network problems and customers then shared their experience working with our network tariffs. Essential Energy has identified five network problems that tariffs can assist with – these were outlined in our 2021 [intention to introduce sub-threshold tariffs letter](#) to the AER. However, the short or seasonally peaky load large customer trial aims to design alternative tariff structures to solve the problems that certain customers experience operating under our existing tariff structures, rather than solving network problems. Having said that, it is imperative that the trial tariffs are suitably cost-reflective and do not inadvertently create new network problems.

Proposed tariff structure

Through our workshops, we have identified three alternative ways that these customers could be charged:

- > A capacity charge – to provide more bill certainty for customers
- > Using 12-month or 52-week rolling average demand – to help smooth customer's bills.
- > Weekly demand charges – to allow customers to operate their business outside the constraints of a monthly demand charge.

More details and the potential structures for these options can be found in Attachment 3.

Essential Energy is committed to keeping the AER, retailers and customers informed of the progress of tariff trials and is looking forward to working with the AER on these additional projects. Should you have any questions about the trials or the business' intended application of clause 6.18.1C, then please do not hesitate to contact Natalie Lindsay, Head of Regulatory Affairs on 

Yours sincerely








Chantelle Bramley

Executive General Manager Corporate Affairs

Attachment 1 – Tariff principles



Principle	This means:
 <p>AVOID BILL SHOCK</p>	<ul style="list-style-type: none"> > Tariffs minimise the risk of bill shock for customers (especially vulnerable customers)
 <p>EASY TO UNDERSTAND</p>	<ul style="list-style-type: none"> > Tariffs are relatively simple to interpret
 <p>FAIR</p>	<ul style="list-style-type: none"> > Customers pay their fair share of network costs (cost-reflective)
 <p>INTEGRATE RENEWABLES</p>	<ul style="list-style-type: none"> > Tariffs accommodate changing technology, energy flows and greener customer choices
 <p>EFFECTIVE</p>	<ul style="list-style-type: none"> > Tariffs do the job - they solve network issues and don't create new ones

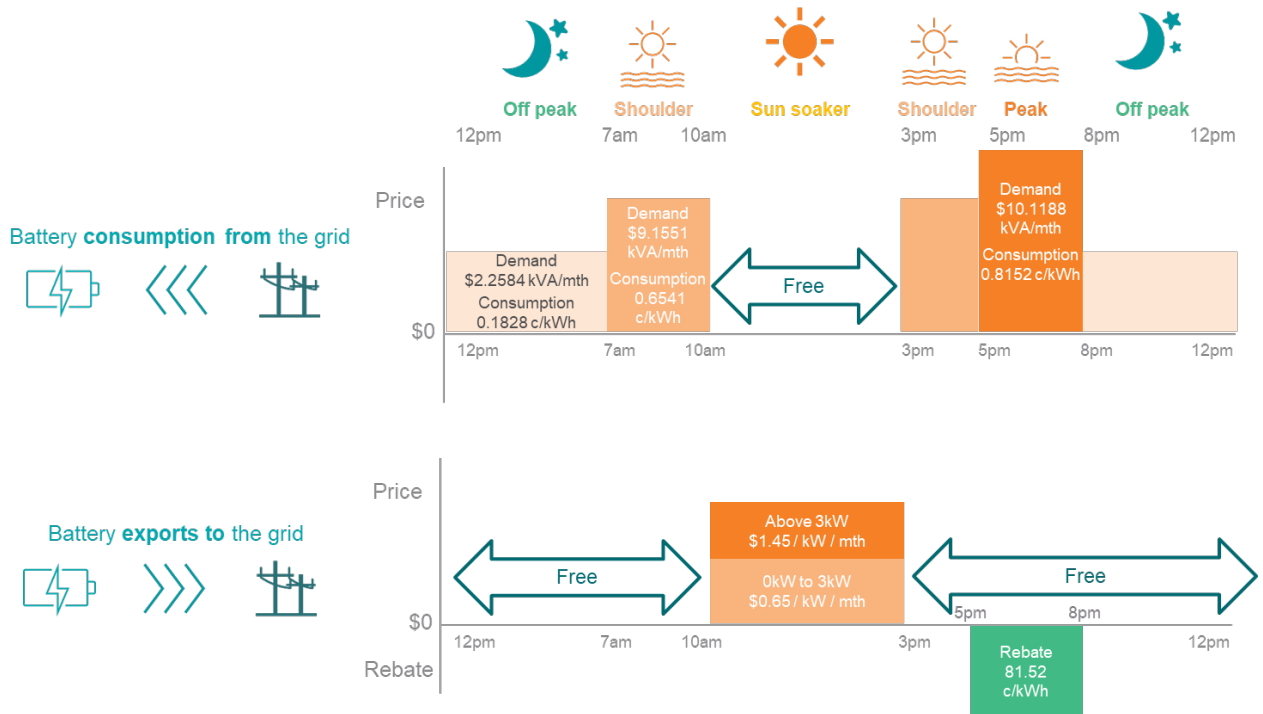
Attachment 2

Distributor:	Essential Energy
Required Information	
Name of trial	Bi-directional distribution support tariff
Objectives of trial	To test whether the tariff encourages the efficient use of storage technologies to assist with managing network issues i.e. storage operation inversely responds to network cost drivers being imposed by other customers — that is, consuming at times of distribution system daily minimum demand and exporting at times of distribution system daily maximum demand and propose any changes to the National Electricity Rules if required.
Retailer engagement	<p>Formal retailer engagement on the proposed tariff is yet to be undertaken, however we expect retailers will support the tariff given its overlay with Essential Energy’s existing Low Voltage Large Business – ToU three rate Demand tariff and the trial export charge tariff for small customers that was developed in conjunction with retailers.</p> <p>Retailer and aggregator engagement will be undertaken as part of the development of Essential Energy’s 2024-29 Tariff Structure Statement (TSS). The Australian Energy Council, who is the peak body and advocacy association on behalf of the retail energy sector is a member of Essential Energy’s Stakeholder Collaboration Collective (SCC) – our primary reference group for the 2024-29 Regulatory Proposal.</p> <p>In addition, a dedicated pricing group, the Pricing Collaboration Collective (PCC), has been established to guide the development of our TSS, of which retailers are a part. Retailers and aggregators will also be specifically engaged with in one-on-one discussions as part of the Regulatory Proposal engagement program – a copy of which was provided to the AER as part of our expression of interest for the early signal pathway.</p> <p>We expect consumers and stakeholders to agree that the trial tariff be proposed as part of our TSS with the trial results then informing any tweaks or changes to be made as part of the Revised TSS.</p>
Consumer engagement	<p>No formal consumer engagement has been undertaken for this tariff yet. As mentioned above, consumer engagement will be undertaken as part of the development of the 2024-29 Tariff Structure Statement. Broad tariff questions will be managed through customer forums and more specific tariff discussions will be undertaken through deep dives with a smaller subset of interested customers.</p> <p>The Essential Energy PCC will guide this engagement, including this trial tariff. The first PCC meeting was held on the 22 February and monthly meetings will follow. Participants include consumer advocates, retailers, energy user and advisory groups.</p>

Proposed tariff (structure and pricing)	<p>The proposed structure combines Essential Energy’s large customer low voltage demand tariff with aspects of the export charge tariff and sun soaker tariff developed as part of the small customer tariff trials.</p> <p>A graphic of the proposed tariff structure and indicative prices is attached. For the purposes of this notification these figures are based on the current 2021-22 prices. Essential Energy will inform the AER of the updated 2022-23 prices when they become available (after April 1) and subsequent years.</p>	
	Energy consumed from the network	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Network access charge <input checked="" type="checkbox"/> Consumption charge: Cents per kWh rate based on time of day <ul style="list-style-type: none"> ▪ Peak 5–8pm ▪ Shoulder 7am – 5pm and 8–10pm ▪ Off peak – 8pm – 7am ▪ Free between 10am and 3pm <input checked="" type="checkbox"/> Demand charge: Dollars per kVA based on the highest measured half-hour kVA demand registered in each of the peak, shoulder and off-peak periods during the month
	Energy exports into the network	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Demand charge (exports): Stepped \$/kW capacity payment is based on the relevant band that the highest level of energy exported (kW) into the network between 10am and 3pm in the month falls into <ul style="list-style-type: none"> ▪ Band 1 rate applies to the first 3kW exported ▪ Band 2 rate applies to kW exported above 3kW <input checked="" type="checkbox"/> Rebate (exports) option 1: <ul style="list-style-type: none"> ▪ c/kWh payment from Essential Energy for exports into the network between 5pm and 8pm <input checked="" type="checkbox"/> Exports at all other times are free
Forecast revenue (\$ and % AAR)	<p>Forecast revenue will sit within the one percent of annual revenue requirement threshold and the cumulative revenue of all trials will sit within the 5 percent of annual revenue requirement threshold. This will be demonstrated in our 2022-23 pricing proposal which we will submit on 1 April 2022 using the AER’s new pricing model.</p>	
Trial start date	Any time from 1 July 2022 – depending on the proponent	
Duration of trial	Two years	
Potential changes and triggers	<p>We will review the tariff each year and make any tweaks and adjustments in collaboration with proponents and stakeholders. We will advise the AER of any structural changes ahead of 28 February in each year as required.</p>	
Notification date	28 February 2022	

Optional information	
Forecast volumes	The forecast volumes will be visible when we submit our 2022-23 pricing proposal using the AER's new pricing model on 1 April 2022.
Potential additions	
Location of trial	All trials will be within Essential Energy's network footprint. More precise locations will be determined as proponents are engaged.
Other	The trial tariff will be applied to new customers whose sole purpose is to operate a bi-directional technology with no co-located load behind their meter.

Graphic of the proposed battery tariff and indicative prices



Attachment 3

Distributor: Essential Energy		
Required Information		
Name of trial	Short or seasonal, peaky load large customer tariff	
Objectives of trial	To test alternative tariff structures for customers with seasonal high load operations and those with short but large peaky loads and propose any changes to the National Electricity Rules if required. Our current tariffs for large customers are all based on average monthly demand and this trial will test a more frequent demand window and/or a capacity-based charge to assist business operations for these customers.	
Retailer engagement	<p>Formal retailer engagement on the proposed tariffs is yet to be undertaken. Retailer and aggregator engagement will be undertaken as part of the development of Essential Energy’s 2024-29 Tariff Structure Statement (TSS). The Australian Energy Council, who is the peak body and advocacy association on behalf of the retail energy sector is a member of Essential Energy’s Stakeholder Collaboration Collective (SCC) – our primary reference group for the 2024-29 Regulatory Proposal.</p> <p>In addition, a dedicated pricing group, the Pricing Collaboration Collective (PCC), has been established to guide the development of our TSS, of which retailers are a part. Retailers and aggregators will also be specifically engaged with in one-on-one discussions as part of the Regulatory Proposal engagement program – a copy of which was provided to the AER as part of our expression of interest for the early signal pathway.</p> <p>We expect consumers and stakeholders to agree that the trial tariff(s) be proposed as part of our TSS with the trial results then informing any tweaks or changes to be made as part of the Revised TSS.</p>	
Consumer engagement	<p>These tariffs have been developed in conjunction with a working group of large customers who have short or seasonal, peaky loads and their industry representatives. The working group includes Cotton Australia, cotton farmers, cotton ginners, farmers, irrigators, orchard farmers, fruit dehydrators and the Electric Vehicle Council as a representative for electric vehicle fast chargers.</p> <p>Essential Energy’s PCC will guide the business as to whether further consumer engagement is required around this trial. The first PCC meeting was held on the 22 February and monthly meetings will follow. Participants include consumer advocates, retailers, energy user and advisory groups.</p>	
Proposed tariff (structure and pricing)	<p>Given Essential Energy is still in the process of co-designing the tariffs to trial with customers and stakeholders, the final tariffs that will be trialled and their associated structures is not yet 100 percent certain. However, engagement to date has helped refine the tariff options that could be trialled.</p> <p>Each tariff will comprise a network access charge and a consumption charge, however the final demand or capacity components are yet to be determined.</p> <p>Once the final tariffs are determined the preferred structures and prices will be shared with the AER and other stakeholders.</p>	
	<table border="0"> <tr> <td style="vertical-align: top;">Settled tariff components</td> <td> <input checked="" type="checkbox"/> Network access charge <input checked="" type="checkbox"/> Consumption charge: Cents per kWh rate based on time of day <ul style="list-style-type: none"> ▪ Peak 5–8pm weekdays ▪ Shoulder 7am – 5pm and 8–10pm weekdays ▪ Off peak – all other times </td> </tr> </table>	Settled tariff components
Settled tariff components	<input checked="" type="checkbox"/> Network access charge <input checked="" type="checkbox"/> Consumption charge: Cents per kWh rate based on time of day <ul style="list-style-type: none"> ▪ Peak 5–8pm weekdays ▪ Shoulder 7am – 5pm and 8–10pm weekdays ▪ Off peak – all other times 	

Proposed tariff (structure and pricing) continued	Component yet to be determined (only one will apply to each tariff, in addition to the network access charge and consumption charge above)	<input checked="" type="checkbox"/> Demand charge: Dollars per kVA based on the highest measured half-hour kVA demand registered in either the peak or shoulder periods <u>during the week</u> OR <input checked="" type="checkbox"/> Demand charge: Dollars per kVA based on a <u>12-month rolling average</u> of the highest measured half-hour kVA demand registered in each of the peak, shoulder and off-peak periods during the month OR <input checked="" type="checkbox"/> Demand charge: Dollars per kVA based on a <u>52-week rolling average</u> of the highest measured half-hour kVA demand registered in each of the peak, shoulder and off-peak periods during the week OR <input checked="" type="checkbox"/> Capacity charge: basis yet to be determined – will be designed in collaboration with customers and stakeholders
Forecast revenue (\$ and % AAR)	Forecast revenue will sit within the one percent of annual revenue requirement threshold and the cumulative revenue of all trials will sit within the 5 percent of annual revenue requirement threshold. This will be demonstrated in our 2022-23 pricing proposal which we will submit on 1 April 2022 using the AER's new pricing model.	
Trial start date	Any time from 1 July 2022 – depending on the proponent	
Duration of trial	Two years (ending 30 June 2024)	
Potential changes and triggers	We will review the tariff each year and make any tweaks and adjustments in collaboration with proponents and stakeholders. We will advise the AER of any structural changes ahead of 28 February in each year as required.	
Notification date	28 February 2022	
Optional information		
Forecast volumes	The forecast volumes will be visible when we submit our 2022-23 pricing proposal using the AER's new pricing model on 1 April 2022.	
Potential additions		
Location of trial	All trials will be within Essential Energy's network footprint. More precise locations will be determined as proponents are engaged.	
Other	The trial tariff will be applied to low voltage connections at business premises where consumption exceeds 160MWh a year. The capacity demand charge tariffs will require the customer to have a minimum of 12 months historical meter data. Essential Energy is still considering whether other eligibility requirements may need to apply for this tariff.	