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2019-24 Revised Tariff Structure Statement

January 2019

Contents

1	About this Revised Tariff Structure Statement	2
2	Customer Classes	5
3	Assigning Customers to Customer Classes	8
4	Our Distribution Network Charge Structures	11
5	Our Pricing Proposal Methodology	17
6	Proposed User Pays Charges	32
7	Compliance Checklist	34
8	Glossary	36
Aŗ	pendix A - Network Charge Assignment and Reassignment	37

List of attachments

Attachment 1 - Tariff Structure Explanatory Statement
Attachment 2 - Revised Indicative NUOS pricing schedule
Attachment 3 - Revised Indicative Ancillary Network Services pricing schedule
Attachment 4 - Revised Indicative Metering Services pricing schedule
Attachment 5 - Revised Indicative Public Lighting pricing schedule
Attachment 6 - Revised LRMC model

About this Revised Tariff Structure Statement



About this Revised Tariff Structure Statement

Essential Energy is submitting this revised Tariff Structure Statement (TSS) to the Australian Energy Regulator (AER) in accordance with the requirements of the National Electricity Rules (NER).

We have also submitted an accompanying Tariff Structure Explanatory Statement (Attachment 1) that provides background information and our reasons for proposing the distribution network charge structures in this document. It describes how stakeholders have shaped the TSS outcomes and how our proposed structures comply with the NER.

Essential Energy's role in the electricity process

Essential Energy is an electricity distributor, so our TSS and Tariff Structure Explanatory Statement (Attachment 1) only addresses distribution costs, which are just one part of the total retail bill that customers pay.

Our distribution network charges represent our costs to operate and maintain the distribution network and are the subject of the Regulatory Proposal of which this TSS is a part. On a customer's bill, our charges are bundled with:

- > Transmission costs, which are also regulated by the AER. These costs are passed through to Essential Energy by TransGrid and Powerlink, the operators of the transmission networks that our distribution network connects to.
- Sovernment imposed levies to pay for the Climate Change Fund levy and contributions to the Queensland Solar Bonus Scheme.



¹ Based on the 2017–18 forecast, Australian Energy Market Commission, 2017 Residential Electricity Price Trends, 18 December 2017 p. 100

TSS structure

Section	Title	Purpose				
2	Customer Classes	How customers are divided into groups for pricing				
3	Assigning Customers to Customer Classes	How customers are assigned and reassigned to customer groups for pricing				
4	Our Distribution Network Charge Structures	The structure and charging parameters along with our policies and procedures for assigning customers				
5	Our Pricing Proposal Methodology	Describes our approach to setting prices, which includes calculating avoided and stand-alone costs, estimating Long Run Marginal Cost (LRMC) and associated issues				
6	Proposed User Pays Charges	Outlines the Alternative Control Services (ACS) that are regulated by the AER				
7	Compliance Checklist	Identifies where each TSS Rule Requirement is met				
	Glossary	Definitions of key terms				
Attachment 1	Tariff Structure Explanatory Statement	Explanations and reasons as to how this Revised TSS has been developed, including how stakeholders have shaped its outcomes.				
Attachment 2	Indicative Network Use of System (NUOS) pricing schedule					
Attachment 3	Indicative Ancillary Network Services pricing schedule	Indicative prices for the regulatory control period				
Attachment 4	Indicative Metering Services pricing schedule					
Attachment 5	Indicative Public Lighting pricing schedule	-				
Attachment 6	LRMC model	Our LRMC calculations				

Customer Classes



Customer Classes

Customers for Essential Energy's services are divided into service groups and classes for the purposes of assigning distribution network charges.

Standard Control Services

We established our customer classes for Standard Control Services by considering:

- > historical pricing structures;
- existing metering capability and the costeffectiveness of metering options;
- > the connected voltage level of customers; and
- the cost-benefit of providing further disaggregation into additional customer classes.

There are five customer classes.

- 1. Subtransmission (including inter-distributor transfers)
- 2. High Voltage Demand

3. Low Voltage Large Business (previously Low Voltage Demand)

4. Low Voltage Residential and Small Business (previously Low Voltage Energy)

5. Unmetered supply.

The threshold for the Large Business customer class is 160MWh a year.

Apart from our largest customers, who have sitespecific charges, all customer prices are averaged for their class.

The indicative network charges for these customer classes are included in Attachment 2.



Standard Control Services customer classes

User pays services

We charge for our Alternative Control Services (ACS) on a user pays basis, so they are organised into three groups based on the type of service provided rather than customer characteristics.

Alternative Control Services customer classes



Basic meters service refers to services for Type 5 & 6 meters installed before 30 March 2018

There may be some level of competition for these services, but the market is not yet fully competitive. Therefore, costs are attributable to specific customers who pay for the service.

The indicative prices for these services are included in Attachments 3, 4 and 5.

Assigning Customers to Customer Classes



Assigning Customers to Customer Classes

This is the second step in designing distribution network charges. All new customers have a default pricing assignment for their customer type. Most new and existing customers can also choose other pricing options if they meet the eligibility criteria. We reassign customers if their characteristics change.

Default charging assignment

Default distribution network charge assignment happens when a customer starts consuming electricity from a new connection point (greenfield site) or they receive a meter upgrade.

We assign each customer to their appropriate default customer class based on technical properties such as their estimated load (demand and/or usage), the voltage level at which they are connected to the network and their meter type. To assign (or reassign) customers to an appropriate customer class, we combine our own information with information from the retailer's service in order to:

- assign the customer to the appropriate customer class, based on the class criteria; and
- > assign the customer to an appropriate distribution network charge within the class, based on their connection, load and metering characteristics, and customer type e.g. residential or business.

If there is a change of occupancy, we will assign the new customer to the most appropriate default distribution network charge, depending on the type of meter and customer.

Large Business customers who consume over 160MWh a year do not have the option to opt out of a demandbased charge.

The diagram shows our proposed distribution network charge structure for the 2019–24 regulatory period.





Distribution network charge reassignment

Customers will remain on their current distribution network charge unless:

- their meter is upgraded (although they may opt to move to a different distribution network charge);
- the customer or their retailer requests reassignment; or
- > we request reassignment.

Reassignment to a different distribution network charge can be requested by a customer or retailer as a result of:

- a customer request, for example they want to move to an opt-in demand-based charge; or
- a change in the customer's load, connection and/or metering characteristics.

Reassignment can also occur through Essential Energy's review process if we identify that a customer's load, connection and/or metering characteristics have changed and it is no longer appropriate for them to be assigned to their current distribution network charge.

A customer or retailer may only seek reassignment once a year unless they can prove mitigating circumstances.

Full details of our network charging assignment and reassignment processes are in Appendix A.

Opt-in charging assignment options

Our opt-in network charging options during 2019–24 are shown in the graph, with total bill amounts averaged over the period.

Most new and existing customers have the option to choose another distribution network charge. However, our opt-in demand charges are the most efficient of our cost-reflective distribution network charges, so we have made them an attractive option.





Our Distribution Network Charge Structures



Our Distribution Network Charge Structures

Charging windows

Our Time-of-Use (ToU) charging windows for consumption and demand charges are set to different time windows, according to the type of meter a customer has.

Basic accumulation meters with ToU capability (Type 5 meters) cannot be cost-effectively reprogrammed, so they still record a morning peak between 7am and 9am on weekdays. This additional peak window also applies to our obsolete charges (historical charges that are not cost-reflective and not available to new customers).

Charging windows for Type 5 meter



Interval/smart meters can be remotely reprogrammed. There is just one peak period for these types of meters. **Charging windows for interval/smart meters**



Distribution network charge structures by customer class

Residential and Small Business customers are assigned to different distribution network charges based on their meter type. There are three categories of meters that define our distribution network charges: Basic accumulation meter (Type 6 meter), Type 5 meters and smart/interval meters.



The distribution network charge structures for each of these distribution network charge types are shown in the following table.



	Low voltage—Large Business									
	(low voltage connection where consumption exceeds 160MWh a year)									
DISTRIBUTION NETWORK CHARGE	NETWORK ACCESS CONSUMPTION Fixed dollar per day charge Cents per kWh rate based on time of day Peak Shoulder Off-peak weekdays weekdays Fam - 5pm and All other times	Demand Dollars per kVA per month								
	Eligibility	Demand charging								
Low voltage – ToU three rate Demand	 Low voltage connection Business premises where consumption exceeds 160MWh a year 	Charge based on the highest measured half-hour kVA demand registered in each of the peak, shoulder and off- peak periods during the month								
Low voltage – ToU Demand alternative	 Low voltage connection Business premises where consumption exceeds 160MWh a year 	One charge based on the highest measured half-hour kVA demand registered in either the peak or shoulder periods during the month								
Transitional – Demand	 Eligible customers will be automatically assigned—pricing not available on request Eligible customers on Anytime or ToU pricing but who no longer meet the associated eligibility requirements and are worse off under equivalent Low Voltage – ToU Demand pricing Low voltage connection Business premises where consumption exceeds 160MWh per year 									
Low voltage – ToU average daily Demand	 Not available to new customers Low voltage connection Business premises where consumption exceeds 160MWh per year Monthly load factor greater than 60% for at least four of the most recent 12 months coinciding with a minimum on-season Anytime monthly demand of 1500 kVA Intended for customers with a seasonal demand 	One charge for maximum demand during either peak or shoulder periods								

		High vo							
DISTRIBUTION NETWORK CHARGE	(high voltage) (high voltage) NETWORK ACCESS Fixed dollar per day charge	oint) me of day Off-peak	Dollars per kVA per month						
		Peak weekdays 5–8pm	Shoulder weekdays 7am – 5pm and 8–10pm	All other times	Demand charging				
High voltage – ToU monthly Demand	 Business premises connect 	network	Charge based on the highest measured half-hour kVA demand registered in each of the peak, shoulder and off- peak periods during the month						
High voltage – ToU average daily Demand	 Not available to new cust. Monthly load factors greater recent 12 months coincidit monthly demand of 1500k requirements will be waive part of the load on the load Intended for customers with the second second	Demand charge calculated on the average daily ToU demand for peak, shoulder and off-peak periods for the month							

	Subtransmission										
(connected at	a subtransmission voltage ne	twork, includ	ing site-specific a	nd inter-dist	ributor transfer customers)						
			ց-								
DISTRIBUTION NETWORK CHARGE	NETWORK ACCESS Fixed dollar per day charge	1	со <mark>изимртіо</mark> м Wh rate based on ti	Demand Dollars per kVA per month							
		Peak weekdays 5–8pm	Shoulder weekdays 7am – 5pm and 8–10pm	Off peak All other times							
		Eligibility		Demand charging							
Subtransmission – ToU monthly Demand	 Subtransmission connection Not applicable for connection distribution circuits 		Charge based on the highest measured half-hour kVA demand registered in each of the peak, shoulder and off- peak periods during the month								
Site-specific	 Large Business customers Essential Energy 	cation to	Various combinations of fully cost-reflective structures								



Unmetered (Type 7 metering installation. Applies to loads detailed in the AEMO National Electricity Market Load Tables¹) DISTRIBUTION NETWORK CHARGE Cents per kWh rate based on time of day Eligibility LV unmetered All new unmetered supply Fixed dollar per day Flat rate not based on time of day supply connections will have this pricing charge **LV Public** All new public street lighting Shoulder Off-peak Does not apply Peak **Lighting ToU** connections will have this pricing weekdays weekdays 7–9am and 9am – 5pm All other 5–8pm and 8–10pm times

¹ https://www.aemo.com.au/-/media/Files/Electricity/NEM/Retail_and_Metering/Metering-Procedures/NEM-Load-Tables-For-Unmetered-Connection-Points.pdf

Our Pricing Proposal Methodology

Our Pricing Proposal Methodology

The approach we have used in this Revised TSS, and which we will use for our annual Pricing Proposals in 2019–24, accords with clause 6.18.5 of the NER.

Rule requirements

The pricing structures and indicative charges for this Revised TSS have been developed following the pricing principles set out in the NER, particularly the principles relating to customer impact and ease of understanding. For more detail, see Attachment 1.

The NER principles

Clause	Principle						
Clause 6.18.5(e) 6.18.5(f)	The revenue expected to be recovered for each tariff class must lie on or between:						
	 an upper bound representing the stand-alone cost of serving the retail customers who belong to that class; and 						
	> a lower bound representing the avoidable cost of not serving those retail customers						
6.18.5(f)	Each tariff is based on the Long Run Marginal Cost (LRMC) of providing the service						
6.18.5(g)	Tariffs reflect the efficient costs of serving customers and minimise distortions in price signals for efficient usage						
6.18.5(h)	The need to consider the impact on customers of tariff changes						
6.18.5(i) Tariff structures must be reasonably capable of being understood by customers							
efficient usage6.18.5(h)The need to consider the impact on customers of tariff changes							

Stand-alone and avoidable cost

In relation to clause 6.18.5(e), our estimates of the stand-alone and avoidable cost for each customer class are included in our LRMC model. The method is the same as for our previous TSS and we can provide further details on request.

Our calculations show that, for each customer class, the proposed revenue lies between the lower bound (avoidable cost) and upper bound (stand-alone cost).

How our proposed 2018–19 revenue (\$m) by customer class complies with the NER

C ustomer class	Avoidable	Stand-alone	Proposed	Proposed revenue lies between stand-alone and avoidable cost?
Low voltage Residential & Small Business customers	323	2,186	711	Yes
Low voltage Demand	91	725	202	Yes
High voltage Demand	29	250	49	Yes
Subtransmission	8	73	15	Yes
Unmetered	6	52	9	Yes

Explaining the link between LRMC, residual costs and our distribution network charges

Our proposed distribution network charges are designed to reflect our LRMC while also recovering our residual costs, as illustrated in the graphic. The graphic is explained in more detail, see Attachment 1.



PART 1. Determine LRMC by voltage level and network charge



Long Run Marginal Cost

In relation to clause 6.18.5(f), our approach to estimating the LRMC across our network is summarised in Attachment 1.

This approach is the same as that approved by the AER for our previous TSS, updated to reflect the AER's feedback. We have extended the time horizon to 15 years and included the component of replacement expenditure that relates to a change in incremental demand only.

How different expenditures contribute to our LRMC at each voltage level

Customer class	LRMC at voltage level	Growth capital expenditure	Replacement capital expenditure	Growth operating expenditure	Voltage level component of LRMC	Total LRMC at voltage level
Subtransmission	(\$/kVA)	10	2	3	14	14
High voltage	(\$/kVA)	46	23	11	80	95
Low voltage	(\$/kVA)	8	7	2	18	113

Numbers may not add up due to rounding

Essential Energy calculates LRMC at a voltage level for customers, with an LRMC estimate for low voltage, high voltage and subtransmission customers. The LRMC estimate is not specific to location or feeder, but an average for all customers connected at the same voltage level within the same customer class.

Because these costs are all variable over time, the variable component of our distribution network charges are set to at least reflect our LRMC estimates. If they are not at this level, then they are transitioned to them over time.

Distribution network charges are cost-reflective and minimise price signal distortions

If we based our distribution network charges solely on our LRMC, we would not recover all our required revenue. The NER require us to consider how best to recover the remaining costs (residual costs) in a way that is efficient and minimises distortions to price signals.

Efficient pricing

In the initial stages of pricing reform, it would be efficient to allocate more residual costs to less efficient distribution network charges and charging parameters, and fewer residual costs to the more efficient distribution network charges and charging parameters. In this way, customers on more efficient prices would pay a smaller quantum of residual costs. This would encourage more customers to take up more efficient price options.

Price distortion

Pricing parameters set closer to the LRMC have a smaller distortion on efficient usage decisions than those set further from the LRMC. All distribution network charges are at least at the new LRMC recovery levels.

For this Revised TSS, we have considered both efficient pricing and price distortion in conjunction with the customer impact of the distribution network charge changes requirement in NER clause 6.18.5(h).

Customer impact of price changes

To encourage increased progress towards cost-reflectivity, we have further transitioned our approach to managing the impact of charges on existing customers and new customers in this Revised TSS.

Many of our legacy pricing structures do not reflect NER requirements to provide efficient pricing signals. Also, most customers remain on accumulation meters that impede our ability to offer them cost-reflective prices. If the meter type allows it, these distribution network charges are no longer the default and some are now closed to new customers.

Moving all our existing customers to cost-reflective and efficient distribution network charges, as required under the NER, would cause significant price shock for many of them. We are therefore managing the associated bill impacts through residual costs management, allocating more costs to our most inefficient prices in this Revised TSS.

New customers will be assigned to our default cost-reflective charges, as set out in Chapter 4 of this Revised TSS. We have also priced our most cost-reflective distribution network charges to encourage customers to opt in to them.

Making our distribution network charge structures easier to understand

During our consultation process, customers, stakeholders and retailers told us our distribution network charges need to be simple and clear. We have tried to make sure our proposed pricing structures can be easily understood.

- > Our distribution network charge structures remain largely unchanged from the previous TSS.
- > We have not implemented seasonal charging windows.
- > We have retained our simplified charging windows, which removed the morning peak for customers who have had an interval (or higher-capability) meter since July 2017.
- > Residential and Small Business customers who want to select demand-based charges can opt-in, ensuring that only customers who understand demand charging will be assigned to this pricing.
- Distribution network charges require customer education. Information explaining our ToU, Energy Saver and demand distribution network charges and outlining different types of meters and their capabilities can be downloaded from: <u>https://www.essentialenergy.com.au/our-network/network-pricing-and-regulatoryreporting/tariff-change</u>

Approach to Price-setting

Essential Energy is improving price signals to encourage more efficient use of our network while managing bill impacts for customers as we transition to more cost-reflective charges.

We propose a greater difference between peak and shoulder rates and default assignment of new customers to costreflective distribution network charges.

In addition, when calculating our proposed distribution network charges for each year of this Revised TSS, we have:

- ensured the expected revenue for each customer class lies between our estimates of the stand-alone cost of serving customers in that class and the avoidable costs of not serving them;
- > assessed the relevant variable component of each customer class and, where this is not above LRMC, are transitioning them to LRMC; in some cases, this will take years e.g. the demand components of transitional pricing and opt-in residential demand pricing;
- > sought to align peak demand charges in demand pricing with our estimate of LRMC for that customer class;
- > allocated residual costs in a way that minimises distortion to customers' usage decisions by recovering more residual costs from Anytime usage distribution network charges that are less efficient or less responsive to price changes; and
- > considered customer bill impacts.

Residual cost allocation

We have sought to allocate residual costs (the difference between LRMC-driven costs and our AER-allowed revenues) in a way that:

- > allows us to create distribution network charges that more accurately reflect the cost of providing network services at different times of the day; and
- > encourages customers to take up our new cost-reflective demand-based distribution network charges.

Distribution network charge types

This approach means our most efficient charging types (demand) most closely reflect their LRMC estimates, while our least efficient charging types (Anytime) attract a greater share of residual costs. This is because their charging parameters are not closely linked to ToU, which is a key driver of higher residual costs for us.

This method of allocating our residual costs across different pricing types is the best way to encourage customers to choose cost-reflective distribution network charges.



Allocation of residual costs between distribution network charges and customer types

Charging parameters

We have continued this principled approach when allocating residual costs within distribution network charges, based on the various charging parameters for each plan.

We have allocated a higher share of residual costs to charging parameters that are not closely linked to our LRMC cost drivers (e.g. fixed and usage charges), and our demand charging does not attract significant residual costs. This approach is more cost-reflective and more likely to change customers' consumption behaviour.

To put the split of residual costs for ToU and demand pricing in perspective, it is important to consider the allocation of residual costs in conjunction with the actual residual dollars allocated to each pricing component.

Increase to fixed charges

We propose to increase the fixed charge for Residential and Small Business customers by \$5 a year. This amount will be offset by changes to other distribution network charge components and is prior to the application of average distribution network charge changes.



Customer bill impacts

Our proposed network charging approach is different for the 2019–24 regulatory period than in our current TSS and will lead to changes in customers' distribution network charges.

Average price changes may vary for each customer, depending on their consumption level. Additional customer bill impacts can be found in our Tariff Structure Explanatory Statement (Attachment 1).

Residential 'Anytime' flat rate network charge - estimated annual NUOS charge based on customer usage (real 2018–19)



Annual customer usage	2019–20	2020–21	2021–22	2022–23	2023–24	Total \$ change over the period	% Change over the period
1MWh	\$392	\$394	\$398	\$398	\$399	\$7	1.8%
2MWh	\$494	\$496	\$499	\$497	\$498	\$4	0.9%
3MWh	\$595	\$598	\$601	\$597	\$597	\$2	0.3%
4MWh	\$697	\$700	\$703	\$697	\$696	-\$1	-0.2%
5MWh	\$798	\$801	\$804	\$796	\$794	-\$4	-0.5%
6MWh	\$900	\$903	\$906	\$896	\$893	-\$7	-0.7%
7MWh	\$1,002	\$1,004	\$1,007	\$995	\$992	-\$9	-0.9%
8MWh	\$1,103	\$1,106	\$1,109	\$1,095	\$1,091	-\$12	-1.1%
9MWh	\$1,205	\$1,208	\$1,211	\$1,195	\$1,190	-\$15	-1.2%
10MWh	\$1,306	\$1,309	\$1,312	\$1,294	\$1,289	-\$18	-1.4%
11MWh	\$1,408	\$1,411	\$1,414	\$1,394	\$1,387	-\$20	-1.5%
12MWh	\$1,510	\$1,512	\$1,515	\$1,493	\$1,486	-\$23	-1.5%



Residential ToU interval network charge - estimated annual NUOS charge based on customer usage (real 2018–19)

Annual customer usage	2019–20	2020–21	2021–22	2022–23	2023–24	Total \$ change over the period	% Change over the period
1MWh	\$369	\$371	\$373	\$374	\$375	\$7	1.8%
2MWh	\$447	\$449	\$450	\$450	\$451	\$4	0.8%
3MWh	\$525	\$526	\$527	\$526	\$526	\$1	0.1%
4MWh	\$603	\$604	\$604	\$602	\$601	-\$2	-0.4%
5MWh	\$682	\$682	\$681	\$678	\$676	-\$5	-0.8%
6MWh	\$760	\$759	\$758	\$754	\$751	-\$8	-1.1%
7MWh	\$838	\$837	\$835	\$831	\$827	-\$11	-1.4%
8MWh	\$916	\$915	\$912	\$907	\$902	-\$15	-1.6%
9MWh	\$994	\$992	\$989	\$983	\$977	-\$18	-1.8%
10MWh	\$1,073	\$1,070	\$1,066	\$1,059	\$1,052	-\$21	-1.9%
11MWh	\$1,151	\$1,148	\$1,143	\$1,135	\$1,127	-\$24	-2.1%
12MWh	\$1,229	\$1,225	\$1,220	\$1,211	\$1,202	-\$27	-2.2%



Residential ToU network charge - estimated annual NUOS charge based on customer usage (real 2018–19)

Annual customer usage	2019–20	2020–21	2021–22	2022–23	2023–24	Total \$ change over the period	% Change over the period
1MWh	\$371	\$374	\$376	\$377	\$379	\$8	2.1%
2MWh	\$451	\$454	\$456	\$456	\$457	\$6	1.3%
3MWh	\$532	\$534	\$536	\$536	\$536	\$4	0.8%
4MWh	\$612	\$614	\$616	\$615	\$614	\$2	0.3%
5MWh	\$693	\$694	\$696	\$694	\$693	\$O	0.0%
6MWh	\$773	\$775	\$776	\$773	\$772	-\$2	-0.2%
7MWh	\$854	\$855	\$856	\$852	\$850	-\$4	-0.4%
8MWh	\$934	\$935	\$936	\$932	\$929	-\$6	-0.6%
9MWh	\$1,015	\$1,015	\$1,015	\$1,011	\$1,007	-\$8	-0.7%
10MWh	\$1,095	\$1,096	\$1,095	\$1,090	\$1,086	-\$9	-0.9%
11MWh	\$1,176	\$1,176	\$1,175	\$1,169	\$1,164	-\$11	-1.0%
12MWh	\$1,256	\$1,256	\$1,255	\$1,248	\$1,243	-\$13	-1.1%



Residential demand network charge - estimated annual NUOS charge based on customer usage (real 2018–19)

Annual customer usage	2019–20	2020–21	2021–22	2022–23	2023–24	Total \$ change over the period	% Change over the period
1MWh	\$337	\$340	\$343	\$344	\$346	\$9	2.7%
2MWh	\$383	\$386	\$389	\$390	\$392	\$9	2.2%
3MWh	\$430	\$433	\$435	\$436	\$438	\$8	1.9%
4MWh	\$476	\$479	\$482	\$483	\$484	\$7	1.5%
5MWh	\$523	\$526	\$528	\$529	\$529	\$7	1.3%
6MWh	\$569	\$572	\$575	\$575	\$575	\$6	1.1%
7MWh	\$616	\$619	\$621	\$621	\$621	\$5	0.9%
8MWh	\$662	\$665	\$668	\$667	\$667	\$5	0.7%
9MWh	\$709	\$712	\$714	\$713	\$713	\$4	0.6%
10MWh	\$755	\$758	\$760	\$759	\$759	\$4	0.5%
11MWh	\$802	\$805	\$807	\$805	\$805	\$3	0.4%
12MWh	\$848	\$851	\$853	\$852	\$850	\$2	0.3%



Small Business 'Anytime' flat rate network charge - estimated annual NUOS charge based on customer usage (real 2018-19)

Annual customer usage	2019–20	2020–21	2021–22	2022–23	2023–24	Total \$ change over the period	% Change over the period
10 MWh	\$1,695	\$1,692	\$1,687	\$1,677	\$1,667	-\$28	-1.6%
20 MWh	\$3,100	\$3,088	\$3,076	\$3,053	\$3,032	-\$67	-2.2%
30 MWh	\$4,504	\$4,484	\$4,465	\$4,429	\$4,398	-\$106	-2.4%
40 MWh	\$5,909	\$5,880	\$5,854	\$5,806	\$5,763	-\$146	-2.5%
50 MWh	\$7,313	\$7,276	\$7,243	\$7,182	\$7,128	-\$185	-2.5%
60 MWh	\$8,718	\$8,672	\$8,632	\$8,559	\$8,493	-\$225	-2.6%
70 MWh	\$10,122	\$10,069	\$10,021	\$9,935	\$9,858	-\$264	-2.6%
80 MWh	\$11,527	\$11,465	\$11,410	\$11,312	\$11,223	-\$304	-2.6%
90 MWh	\$12,932	\$12,861	\$12,799	\$12,688	\$12,589	-\$343	-2.7%
100 MWh	\$14,336	\$14,257	\$14,187	\$14,065	\$13,954	-\$382	-2.7%
110 MWh	\$15,741	\$15,653	\$15,576	\$15,441	\$15,319	-\$422	-2.7%



Small Business ToU interval network charge - estimated annual NUOS charge based on customer usage (real 2018-19)

Annual customer usage	2019–20	2020–21	2021–22	2022–23	2023–24	Total \$ change over the period	% Change over the period
10 MWh	\$1,445	\$1,439	\$1,432	\$1,420	\$1,409	-\$36	-2.5%
20 MWh	\$2,383	\$2,369	\$2,355	\$2,330	\$2,308	-\$75	-3.1%
30 MWh	\$3,321	\$3,300	\$3,277	\$3,241	\$3,207	-\$113	-3.4%
40 MWh	\$4,258	\$4,230	\$4,200	\$4,151	\$4,107	-\$152	-3.6%
50 MWh	\$5,196	\$5,161	\$5,122	\$5,062	\$5,006	-\$190	-3.7%
60 MWh	\$6,134	\$6,091	\$6,045	\$5,972	\$5,906	-\$229	-3.7%
70 MWh	\$7,072	\$7,022	\$6,967	\$6,882	\$6,805	-\$267	-3.8%
80 MWh	\$8,010	\$7,952	\$7,889	\$7,793	\$7,704	-\$306	-3.8%
90 MWh	\$8,948	\$8,883	\$8,812	\$8,703	\$8,604	-\$344	-3.8%
100 MWh	\$9,886	\$9,813	\$9,734	\$9,614	\$9,503	-\$383	-3.9%
110 MWh	\$10,824	\$10,744	\$10,657	\$10,524	\$10,402	-\$421	-3.9%



Small Business ToU network charge - estimated annual NUOS charge based on customer usage (real 2018-19)

Annual customer usage	2019–20	2020–21	2021–22	2022–23	2023–24	Total \$ change over the period	% Change over the period
10 MWh	\$3,040	\$2,829	\$2,638	\$2,461	\$2,301	-\$739	-24.3%
20 MWh	\$4,012	\$3,797	\$3,601	\$3,414	\$3,246	-\$766	-19.1%
30 MWh	\$4,985	\$4,765	\$4,564	\$4,368	\$4,191	-\$794	-15.9%
40 MWh	\$5,957	\$5,734	\$5,528	\$5,321	\$5,136	-\$822	-13.8%
50 MWh	\$6,930	\$6,702	\$6,491	\$6,275	\$6,080	-\$849	-12.3%
60 MWh	\$7,902	\$7,670	\$7,454	\$7,229	\$7,025	-\$877	-11.1%
70 MWh	\$8,875	\$8,638	\$8,418	\$8,182	\$7,970	-\$905	-10.2%
80 MWh	\$9,848	\$9,607	\$9,381	\$9,136	\$8,915	-\$933	-9.5%
90 MWh	\$10,820	\$10,575	\$10,344	\$10,090	\$9,860	-\$960	-8.9%
100 MWh	\$11,793	\$11,543	\$11,308	\$11,043	\$10,805	-\$988	-8.4%
110 MWh	\$12,765	\$12,512	\$12,271	\$11,997	\$11,749	-\$1,016	-8.0%



Small Business demand network charge- estimated annual NUOS charge based on customer usage (real 2018-19)

Annual customer usage	2019–20	2020–21	2021–22	2022–23	2023–24	Total \$ change over the period	% Change over the period
10 MWh	\$1,047	\$1,067	\$1,090	\$1,113	\$1,143	\$96	9.2%
20 MWh	\$1,587	\$1,626	\$1,670	\$1,717	\$1,776	\$189	11.9%
30 MWh	\$2,127	\$2,184	\$2,250	\$2,321	\$2,409	\$282	13.3%
40 MWh	\$2,667	\$2,743	\$2,830	\$2,925	\$3,043	\$376	14.1%
50 MWh	\$3,207	\$3,302	\$3,411	\$3,529	\$3,676	\$469	14.6%
60 MWh	\$3,747	\$3,861	\$3,991	\$4,133	\$4,309	\$562	15.0%
70 MWh	\$4,287	\$4,419	\$4,571	\$4,737	\$4,942	\$656	15.3%
80 MWh	\$4,827	\$4,978	\$5,151	\$5,341	\$5,576	\$749	15.5%
90 MWh	\$5,367	\$5,537	\$5,731	\$5,945	\$6,209	\$842	15.7%
100 MWh	\$5,907	\$6,096	\$6,311	\$6,549	\$6,842	\$936	15.8%
110 MWh	\$6,447	\$6,654	\$6,892	\$7,153	\$7,476	\$1,029	16.0%

Large business annual network charges by voltage level by year



HV ToU Monthly Demand



Subtransmission 3 Rate Demand



Proposed User Pays Charges

Proposed User Pays Charges

We provide some fee-based services to individual customers on an as-needs basis. These Alternative Control Services (ACS) fall into three categories:

- Ancillary Network Services;
- Metering Services; and
- > Public Lighting.



For these services, we charge an approved fee; a fee based on an approved unit rate; or a quoted fee. For more details, see Attachments 3, 4 and 5.

During the TSS period, we will adjust these charges each year for CPI and any approved cost increases.

Ancillary Network Services

The AER defines Ancillary Network Services as nonroutine services provided to individual customers on an 'as-needed basis'.

Our indicative prices for these services are in Attachment 3.

Metering Services

When developing our Metering Services charges for this Revised TSS, we have considered the intent of the Power of Choice framework and developed costreflective charges. They include:

- An operational component to recover meter reading and maintenance costs; and
- A capital component to recover the costs of meters installed before 1 July 2015.

Customers pay our Metering Services charges on a cents-per-day basis and each metering charge aligns to an equivalent distribution network charge.

Our indicative charges for these services are available in Attachment 4.

Public Lighting Services

The Public Lighting Services Essential Energy provides include maintaining and replacing public lighting infrastructure – the Street Lighting Use of System (SLUOS) component of our services.

In response to stakeholder feedback for this Revised TSS, we propose to implement component pricing during the 2019–24 regulatory period based on:

- Capital Recovery charges (only apply to public lighting installations currently on distribution network charges 3 and 5):
 - o luminaire;
 - o bracket; and
 - o pole.
- Maintenance (operating expenditure) charges (apply to all public lighting installations):
 - o lamp; and
 - o pole.

Our proposed Public Lighting Services and indicative prices are in Attachment 5.



Compliance Checklist

Compliance Checklist

Section 6.18 of the NER sets out the requirements for preparing and submitting a TSS to the AER. The table shows these requirements and where we have complied with them.

A more detailed Compliance Checklist can be found at the back of Attachment 1 to this TSS.

How to find where Essential Energy has addressed the NER's TSS requirements

Relevant requirement	Rule reference	Location in the Revised TSS
The TSS must include customer classes	6.18.1A(a)(1)	Section 2 – Customer Classes
The TSS must include the policies and procedures for assigning and reassigning customers to network charges	6.18.1A(a)(2)	Section 3 – Assigning Customers to Customer Classes
The TSS must include the structures for each network charge	6.18.1A(a)(3)	Section 4 – Our Distribution Network Charge Structures
The TSS must include the charging parameters for each network charge	6.18.1A(a)(4)	Section 4 – Our Distribution Network Charge Structures
The TSS must include a description of the approach we will take in setting each network charge in each Pricing Proposal during the regulatory period	6.18.1A(a)(5)	Section 5 – Our Pricing Proposal Methodology
The TSS must comply with the pricing principles for Direct Control Services	6.18.1A(b)	<mark>Section 5</mark> – Our Pricing Proposal Methodology
A DNSP must comply with the TSS approved by the AER and any other applicable requirements in the AER, when the provider is setting the prices that may be charged for Direct Control services	6.18.1A(c)	Not applicable to this Revised TSS
Subject to clause 6.18.1B, a TSS may not be amended during a regulatory period	6.18.1A(b)	Not applicable to this Revised TSS
The TSS must be accompanied by an indicative pricing schedule	6.18.1A(b)	Attachment 2 – Indicative NUOS Pricing Schedule

Glossary

Term	Meaning
AER	Australian Energy Regulator: national regulator for the electricity industry
AEMO	Australian Energy Market Operator
Alternative Control Services	Specific user-requested services: Public Lighting; Type 5 and Type 6 Metering Services (generally Residential and Small Business customer meters); and Ancillary Network Services
Ancillary Network Services	Individual fee-based services as requested by individual customers, that are not Metering Services or Public Lighting services. Prices are regulated by the AER.
Charging parameters	The specific charge characteristics for a component within the pricing structure
CPI	Consumer Price Index – a measure of inflation
Customer class	A group of customers who share a common set of characteristics that allow them to be grouped together to ensure similar customers pay similar charges
Demand charge	Charge based on the maximum amount of electricity a customer uses at any one time, measured in kW or kVA
Direct Control Services	Services regulated by the AER under the National Electricity Rules, comprising Standard Control Services and Alternative Control Services
Distribution network charge	A cost charged to distribution network customers to recover the efficient costs of providing distribution network services. Commonly referred to as a 'tariff'
DNSP	Distribution Network Service Provider
HV	High voltage
IDT	Inter-distributor transfer – a type of customer
kVA	Kilovolt ampere
kW	Kilowatt
kWh	Kilowatt hour
LRMC	Long Run Marginal Cost: economic term for the cost of adding one more unit of demand to the network
LV	Low voltage
NEL	National Electricity Law
NER	The National Electricity Rules: these govern the operation of the national electricity market
Network charge	Same as NUOS
NUOS	Network Use of System charge. This is the sum of our distribution network charge , plus transmission charges and relevant Government imposed levies that appear as one item on a customer's bill. The transmission costs and Government levies are direct pass throughs to customers, with no additional mark-up.
Peak demand/peak load	The maximum electricity demand customers place on the electricity network
Prices/Pricing	A cost charged to customers to recover the efficient costs of providing either Standard Control Services or Alternative Control Services.
	Standard Control Services distribution prices are commonly referred to as a 'tariff'.
Pricing components	Different cost factors that work together to reflect the efficient costs of providing network services to customers, comprising network access, consumption and demand charges
Pricing schedule	The list of prices and pricing structures for each of our Standard Control Services and Alternative Control Services , published annually.
	The Standard Control Services pricing schedule is also referred to as Network Price List and Explanatory Notes
Pricing structure	How pricing components are combined to give the pricing structure/distribution network charge
Real	Dollars before the impact of inflation
Residual costs	Those costs recovered annually that are above our Long Run Marginal Cost
Standard Control Services	Essential Energy's core activities: providing access to, and supply of, electricity to customers
ToU	Time of Use: a meter or charging parameter that varies according to whether electricity is consumed in the peak, shoulder or off-peak period
TSS	Tariff Structure Statement

Network Charge Assignment and Reassignment

This appendix sets out our policies and procedures governing assignment or reassignment of Essential Energy's retail customers for direct control services.

Procedures for assigning and reassigning retail customers to customer classes

1 The procedure outlined in this section applies to direct control services.

Assignment of existing customers to customer classes at the commencement of the regulatory control period

- 2 Essential Energy's customers will be taken to be assigned to the customer class which was charging that retail customer immediately prior to 1 July 2019, if:
 - They were a customer prior to 1 July 2019, and
 - Continue to be a customer as at 1 July 2019.

Assignment of new customers to a network charge class during the regulatory control period

- 3 New connection or a change of occupancy will trigger assignment.
- 4 For new connections, Essential Energy will use the estimated information collected from the retailer's B2B service order, in conjunction with the system of assessment as described above, to assign the new customer to the appropriate network charge.
- 5 New residential and small business customers connecting to the network, will be assigned to the default costreflective network charge relevant to their metering technology.
- 6 Change of occupancy will lead to assignment to the default cost-reflective network charge where the appropriate metering technology is available at the premises. If the premises do not have a smart or interval meter, the customer will be assigned the network charge that previously existed at the premises. Where a network price change is required in connection with a change of occupancy, the retailer must request a network charge reassignment in accordance with the section on Network charge reassignment procedure below.
- 7 These customers will have the choice to opt out to an alternative network charge if they satisfy the necessary eligibility requirements.

Reassignment of existing customers to another existing or a new customer class during the regulatory control period

- 8 Reassignment can be triggered when an existing customer's load, connection and/or metering characteristics have changed such that it is no longer appropriate for that customer to be assigned to the network charge to which the customer is currently assigned. Existing residential and small business customers who:
 - upgrade their connection, through installing three-phase power or embedded generation, will be assigned to the default cost-reflective network charge relevant to their metering technology.
 - change their meter characteristics with the installation of a smart metering, with no other change to their connection, will be assigned to the default cost-reflective network charge relevant to their metering technology
- 9 Reassignment can be triggered by Essential Energy or a customer's retailer.
- 10 Customers may notify their retailer or Essential Energy if they identify that their current assignment is no longer appropriate.
- 11 If notified by a customer directly, Essential Energy is obliged to investigate, and where it finds the assignment is no longer appropriate, to initiate reassignment. In these instances Essential Energy is obliged to provide all notifications otherwise only sent to the customer's retailer, to both the customer's retailer and the customer directly.
- 12 In general, customers and customer's retailers may make one application for reassignment in any 12-month period per connection point. Essential Energy will consider exceptions on a case-by-case basis.
- 13 Whether the customer's retailer or Essential Energy initiates a network charge reassignment, Essential Energy will use the system of assessment described above to reassign the customer to the appropriate network charge.
- 14 The network charge change being applied from the last actual meter read date. For Smart Meters where daily reads occur, the last meter read date will be taken as the last invoiced meter read date (therefore end of month).

Reassignment triggered by the customer or customer's retailer

15 Customers and the customer's retailer should monitor the suitability of the network charge applied. Where a customer or customer's retailer identifies the existing network charge is not suitable, they must advise Essential Energy of the need for reassignment. Additionally, where it identifies a need for reassignment, Essential Energy can initiate reassignment.

- 16 Where the customer's retailer requests a network charge reassignment (on its own initiative or at the customer's request):
 - the customer's retailer applies in writing by submitting the Supply Service Works Service Order (SSW-SO) for Network Charge Change via the Energy Market B2B processes; or
 - if the request requires a metering configuration or update the customer's retailer would need to raise the appropriate B2B service order (Metering Service Works Service Order MSW-SO).

Reassignment triggered by Essential Energy

- > Where Essential Energy initiates the network charge reassignment, it will provide a notice to the customer's retailer prior to the actual network charge reassignment. Essential Energy will also advise the customer prior to the assignment if they are a business customer.
- > The obligation to notify a customer's retailer does not apply if the customer has agreed with its retailer and Essential Energy that its network charges are to be billed by Essential Energy directly to the retail customer, in which case Essential Energy must notify the customer directly.

Obsolete network charge

- 17 An obsolete network charge is a network charge that may apply to existing Essential Energy customers but is not available to new customers. Customers who choose to transfer off an obsolete network charge will lose all rights to all obsolete network charges on that premise, therefore the entire site will be required to move onto a currently available network charge. Exceptions apply when customers connect to additional services. Refer to Essential Energy's Network Price List and Explanatory Notes which is available on <u>www.essentialenergy.com.au</u> for further details in relation to obsolete network charge.
- 18 Customers may not go back onto an obsolete network charge once they have transferred off it.

Energy Saver (Controlled load)

- 19 Where a customer wishes to change from Energy Saver 1 to Energy Saver 2 (or vice-versa) the customer must notify its retailer.
- 20 To change Energy Saver network charge, the customer's retailer is required to submit the relevant Metering Service Works (Meter reconfiguration) B2B service order to trigger the necessary meter / relay re-configuration. Once the meter / relay reconfiguration has taken place, Essential Energy will perform the appropriate network charge reassignment without requiring the retailer to submit a SSW-SO.
- 21 The network charge will be changed as at the date of the Meter reconfiguration (therefore Frequency Injection Relay channel change).

Notifications

- 22 Essential Energy will notify the customer's retailer in writing of the network charge to which the customer will be assigned or reassigned prior to the network charge assignment or reassignment occurring:
 - in the event Essential Energy initiates the network charge reassignment, Essential Energy will notify the customer's retailer in writing prior to the actual network charge reassignment occurring; and
 - in the event the customer's retailer initiates the network charge reassignment, Essential Energy will notify the
 retailer in writing of the success or otherwise of the application. Where the application is not successful or where
 Essential Energy has decided to assign a network charge other than that proposed by the retailer, Essential
 Energy will advise the retailer of the reasons for the decision.
 - The obligation to notify a customer's retailer does not apply if the customer has agreed with its retailer and Essential Energy that its network charges are to be billed by Essential Energy directly to the retail customer, in which case Essential Energy must notify the customer directly.
- 23 As part of its notification procedures, Essential Energy will advise the retailer that they can request further information from Essential Energy and that they may object to the network charge reassignment decision made by Essential Energy. Essential Energy will encourage retailers to request further information or clarification of its network charge reassignment decision before an objection is lodged.
- 24 If, in response to a notice issued in accordance with paragraph 23 above, Essential Energy receives a request for further information from a customer's retailer or customer, then it must provide such information. If any of the information requested is confidential then it is not required to provide that information to the retail customer.
- 25 The customer's retailer is wholly responsible for conveying the correct information to Essential Energy and communicating any further requests and decisions made by Essential Energy to the customer.

Objections

- 26 Essential Energy must allow retailers to object to a network charge reassignment decision made by Essential Energy. The objection procedure allows retailer's to formally request a review of the network charge reassignment decision.
- 27 The following steps will be applied as part of the objection procedure:
 - (a) Retailers must submit an objection in writing using Essential Energy's Network Charge Reassignment Objection form. Supporting evidence or documentation related to the decision being reviewed must be provided by the retailer. Retailers should make reference to their customer's load, connection and metering characteristics as part of the network charge reassignment objection. The completed form and supporting information and documentation will be emailed to networktariffchange@essentialenergy.com.au.
 - (b) Essential Energy's Network Pricing Manager must review the objection, including any documentation provided. In reviewing the objection, the Network Pricing Manager must assess if the original decision complies with this Network Charge Assignment and Reassignment policy, Essential Energy's regulatory obligations and must take into consideration any supporting evidence and documentation provided.
 - (c) Within 20 days of receiving the completed Network Charge Reassignment Objection form, Essential Energy must notify the customer's retailer, and where appropriate the customer, in writing of the outcome of the Network Pricing Manager's review and reasons for accepting or rejecting the objection. If Essential Energy believes the objection review process will take longer than 20 business days, Essential Energy must advise the retailer, and where appropriate the customer, accordingly.
- 28 If an objection to an assignment or reassignment is upheld:
 - (a) If the completed objection form is received within 20 business days from the date the retailer was advised of the original network charge reassignment decision, Essential Energy must apply the changes from the last actual meter read date prior to the original network charge reassignment application.
 - (b) If the completed objection form is received after 20 business days from the date the retailer was advised of the original network charge reassignment decision, Essential Energy must apply the changes from the last actual read date prior to the date the completed objection form is received.
 - (c) if Essential Energy requests further information from the retailer pertaining to the objection application, and such information is not provided within 20 business days from the date requested, Essential Energy must apply the changes following a subsequently successful objection from the last actual read date prior to the date the additional requested information is received.
- 29 Any adjustment to network charges billed to retailers, or directly to customers, because of upholding an objection to an assignment or reassignment, Essential Energy must do as part of the normal billing process, including of any compensation relating to the time value of money.
- 30 If an objection to a network charge class assignment or reassignment is upheld, then any adjustment which needs to be made to network charge levels will be done by Essential Energy as part of the next annual review of prices.

If any objection is not satisfactorily resolved under Essential Energy's internal review procedure within a reasonable timeframe, then to the extent that the matter relates to a small retail customer and resolution of such disputes are within the jurisdiction of the Energy and Water Ombudsman NSW (EWON) the retail customer is entitled to escalate the matter to the EWON.

31 If the objection is not resolved to the satisfaction of the retail customer under Essential Energy's internal review procedure or EWON processes, then the retail customer is entitled to seek a decision of the AER via the dispute resolution process available under Part 10 of the NEL.

