SA Power Networks

Revised Tariff Structure Statement 2017 - 2020 Part A

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Introduction

SA Power Networks is submitting this revised Tariff Structure Statement (**TSS**) for 2017/18 to 2019/20 to the Australian Energy Regulator (**AER**). The revised TSS has been prepared in accordance with the requirements of the National Electricity Rules (**Rules**) and the AER's 2015-20 Final Determination made in October 2015.

This document (Part A and Part B) covers all of SA Power Networks' standard control services (ie relevant to Distribution Use of System, or **DUoS**, charges) and alternative control services (ie relevant to metering services). In its final determination, the AER confirmed a change in the regulatory control mechanism for SA Power Networks for 2015-20, with a revenue cap replacing the previous weighted average price cap (**WAPC**) for standard control services and a price cap replacing the alternative control services WAPC.

The structure of our revised TSS document is different to our initial TSS. Our revised TSS consists of two parts. Part A (this document), addresses the requirements of NER 6.18.1A(a) by specifying our tariff classes, tariff structures and charging parameters, along with the policies and procedures for applying our tariffs. Part A also includes an indicative pricing schedule as required by NER 6.8.2(d1). Part B is more comprehensive, incorporating sections that achieve compliance with the NER pricing principles and provides a detailed explanation of our overall approach for this revised TSS.

Our objective in this initial transition period (ie 2017-20), has been to achieve an appropriate balance between implementing cost-reflective tariffs and minimising customer pricing impacts. When developing tariffs and tariff structures our aim is to better reflect the costs incurred by SA Power Networks that result from customer decisions to use electricity at specific times and locations. Our forward looking costs are primarily driven by network augmentation works required to rectify a future network constraint to ensure we provide a safe and reliable network during periods of peak demand.

The purpose of 'cost-reflective' tariffs is to provide a pricing signal to retailers and their customers during periods of peak demand, so that customers can be appropriately rewarded if they respond by moving some of their electricity usage out of the peak demand period. Reducing peak demand will reduce the need for future augmentation investment and future network prices will be lower as a consequence. Cost-reflective tariffs also provide better signalling of future costs for those customers wishing to use more electricity.

Our tariff classes are summarised in Table 1 below.

Our tariff structures for each of our tariff classes is summarised in Table 2.

Table 1: SA Power Networks' tariff classes and associated tariffs

Tariff class	Customer type	Tariffs
Residential	Low voltage residential customers, single phase and three phase	RSR, MRD
Small business	Low voltage businesses consuming less than 160MWh per annum, single phase and multi-phase	B2R, SBDT, SBD, LVUU, LVUU24, BSR, SLV
Large LV business	Low voltage businesses consuming more than 160MWh per annum	BD, LV, LBSR, LB2R, LVSG, LVB, BDT
High Voltage business	High voltage businesses generally supplied at 11kV	HV, HV400, HBD, HVB, B2R124H
Major business	High voltage businesses connected to the sub-transmission network or a zone substation	STN, STNXXX, STNB, ZSN, ZSNXXX, ZSNB

Note:

1. OPCL (controlled load) is often paired with RSR, MRD, BSR and B2R tariffs.
2. A review of LV Business Customer annual consumption will be undertaken after summer each year to determine usage above/below 160 MWh. Tariff Class reassignment will apply for the next tariff year. Similar tariffs will be used if tariff class reassignment occurs, eg BDT/SBDT, BD/SBD, LV/SLV depending on the large LV business or small business status.

Table 2: SA Power Networks' Tariff Structures

Tariff Class	Major Business	High Voltage Business	Large LV Business	Small Business	Residential
Agreed Demand Tariffs					
Structure	Fixed charge + Variable charge + Demand charge (Agreed demand plus additional demand)				
Measurement	Fixed Charge $ per day				
	Variable charge $/kWh single rate				
	Demand Charge $/kVA/day Peak and Additional. Half hour Interval				
TOU Demand Charge	Peak Demand (November to March) higher than Additional Demand				
Agreed Demand Charge Window	November to March 1201-2100 workdays for Peak, Additional = Anytime Demand less Peak Demand				
Tariff Assignment	**Default**	**Default** is HV	Opt-In	Closed July 2016	
Common Tariff Types	Sub-trans Locational (STN999) Zone Sub Locational (ZSN999) Sub-transmission (STN) Zone Substation (ZSN)	HV Agreed (HV) HV <400 kVA (HV400)	Large LV Agreed (LV)	Small LV Agreed (SLV)	
Unique Tariff Types	Sub-trans Back-Up (STNB) Zone Sub Back-Up (ZSNB)	HV Back-Up (HVB)	LV Back-Up (LVB) Sportsground (LVSG)		
Actual Demand Tariffs					
Structure		Fixed charge + Variable Charge + Demand Charge (Peak and Shoulder)			
Measurement		Fixed Charge $ per Day			
		Variable charge $/kWh (Business Transition BDT, SBDT has Peak/Off-Peak)			
		Demand Charge $/kVA/Day Peak and Shoulder. Half hour interval			$/kW/Day Peak and Shoulder
TOU Demand Charge		Peak Demand November-March, Shoulder July-June			Peak November-March, Shoulder April-Oct
Actual Demand Charge Window		Peak Demand 1601-2100 workdays, Shoulder 1201-1600 workdays			Peak and Shoulder 1601-2100 all days
Tariff Assignment		Opt-In	**Default** is BD	Transition is **Default** for **3 phase adds/alts**. Opt-In for other Small Business	Opt-In
Common Tariff Types		HV Actual (HBD)	Large LV Actual (BD) Transition Large Actual (BDT)	Small Business Actual (SBD) Transition Small Business Actual (SBDT)	Residential Actual (MRD)
Notes			Peak Usage 0701-2100 workdays, Off-Peak any other time. Applies to Transition tariffs only		
Consumption Tariffs					
Structure		Fixed Charge + Variable Charge (B2R variants have peak/off-peak)			
Measurement		Fixed Charge $ per Day			
		Variable Charge $/kWh			
		Controlled Load $/kWh (option, tariff OPCL)			
TOU Consumption Window - B2R variants		Peak 0701-2100 workdays. Off-Peak all other times. Type 6 meters as recorded by the meter			
Inclining Blocks					Block 1 0-4,000 kWh, Block 2 >4,000 kWh
Tariff Assignment		Obsolete	Closed - Type 6 meter only	B2R **Default 1 phase additions**. BSR Closed	**Default**
Common Tariff Types		HV Bus 2-rate (B2R124H)	Large Bus 2-rate (LB2R) Large Bus single rate (LBSR)	Small Bus 2-rate (B2R) Small Bus single rate (BSR)	Residential Single rate (RSR)
Unique Tariff Types				Streetlights (LVUU) $/kwh only Unmetered (LVUU24) $/kWh only	
Notes			OPCL is a closed tariff option with the BSR/B2R variants		OPCL is an open tariff option

Shortened forms

Abbreviation	Definition or description
AER	Australian Energy Regulator.
Augmentation	Investment in new network assets to meet increased demand.
Capacity	The amount of electrical power that a part of the network is able to carry.
Capital Contributed Works	Works for which the customer(s) contribute towards the cost of supplying assets, typically because they are the sole users.
COAG	Council of Australian Governments.
Contestability	Customer choice of electricity or related service supplier.
Controlled Load	The DNSP controls the hours in which the supply is made available.
Cost of Supply Model	Theoretical and algorithmic model used to calculate prices, which conform to the pricing goals.
Cross subsidy	Where the price to a tariff class falls outside the range between the avoidable incremental cost of supply and the cost of stand-alone supply, an economic cross subsidy from or to other customers is said to exist.
Decision	The Australian Energy Regulator's Final Decision on South Australia - distribution determination 2015–16 to 2019–20, October 2015
Demand	Electricity consumption at a point in time.
Demand Management	Attempt to modify customer behaviour so as to constrain customer demand at critical times.
Distribution Network	The assets and service which links energy customers to the transmission network.
Distributor, DNSP	Distribution Network Service Provider.
DUoS	Distribution Use of System. The utilisation of the distribution network in the provision of electricity to consumers (a component of NUoS).
DAPR	Distribution Annual Planning Report.
ESCoSA	Essential Services Commission of South Australia, a South Australian Regulator of energy and other infrastructure.
FiT	Feed-in Tariff, paid to customers that have solar PV generators.

Abbreviation	Definition or description
High Voltage	Equipment or supplies at voltages of 7.6kV or 11kV.
IBT, Inclining Block Tariff	A network tariff energy rate in which the rate increases above specific consumption thresholds.
JSA	Jurisdictional Scheme Amount, a component of the Network Use of System charge to fund Feed-in Tariff payments to customers that have solar PV generators.
kVA, MVA	Kilo-volt amps and Mega-volt amps, units of apparent total electrical power demand. Usually the peak demand is referenced. See also PF for the relationship between power demand quantities.
kVAr, MVAr	Kilo-volt amps (reactive) and Mega-volt amps (reactive) units of instantaneous reactive electrical power demand. Usually the peak demand is referenced. See also PF for the relationship between power demand quantities.
kW, MW	Kilo-watts and Mega-watts, units of instantaneous real electrical power demand. Usually the peak demand is referenced. See also PF for the relationship between power demand quantities.
kWh, MWh	Kilo-watt hours and Mega-watt hours, units of electrical energy consumption.
Low Voltage	Equipment or supply at a voltage of 230V single phase or 400V, three phase.
Marginal Cost	The cost of providing a small increment of service. The Long Run Marginal Cost (LRMC) includes future investment, Short Run Marginal Cost (SRMC) considers only the costs involved without extra investment.
Market Participant	Businesses involved in the electricity industry are referred to as Market or Code Participants.
Supply Rate	The fixed daily cost component of a Network price.
NEL	National Electricity Law.
NEM	National Electricity Market.
NER	National Electricity Rules.
NUoS	Network Use of System. The utilisation of the total electricity network in the provision of electricity to consumers (NUoS = DUoS + TUoS).
PV	Photo-Voltaic

Abbreviation	Definition or description
PF	Power Factor, a measure of the ratio of real power to total power of a load. The relationship between real, reactive and apparent power is as follows: Power Factor = Real Power (kW) / Apparent Power (kVA) Apparent Power (kVA) = √ [Real Power (kW)^2 + Reactive Power (kVAr)^2]
Price Signal	Prices set to convey a desired behaviour because of the costs associated with supplying the service.
Price Structure	The components that make up a Price available to customers.
Retailer	A Full Retail Contestability market participant (business) supplying electricity to customers.
Rules	National Electricity Rules.
Sub-transmission	Equipment or supplies at voltage levels of 33kV or 66 kV.
Tariff	Network price components and conditions of supply for a tariff class.
Tariff class	A class of customers for one or more direct control services who are subject to a particular tariff or particular tariffs with similar electricity demand and usage requirements.
ToU	Time of Use, a system of pricing where energy or demand charges are higher in periods of peak utilisation of the network.
Transmission Network	The assets and service that enable generators to transmit their electrical energy to population centres. Operating voltage of equipment is 275kV and 132kV with some at 66kV.
TUoS	Transmission Use of System charges for the utilisation of the transmission network.
Unmetered supply	A connection to the distribution system which is not equipped with a meter and has estimated consumption. Connections to public lights, phone boxes, traffic lights and the like are not normally metered.

Contents

1. Residential tariff class and tariffs

This Section sets out our residential tariff class and tariffs. This information is also included in Part B, Section 5.

1.1 Residential tariff class

The residential tariff class is for customers residing in a domestic property. These customers typically have low voltage, single phase or multi-phase connection and are taking supply at less than 1kV.

1.2 Residential tariffs

The residential tariff class structure and charging parameters are set out in Table 3 and include:

- An inclining block energy tariff. This tariff consists of a fixed daily charge and an inclining two block energy component. A separate energy rate applies to the energy consumption within each block level;
- A fully cost-reflective opt-in actual kW demand tariff. The winter demand price will be half of the summer demand price;
- There is a controlled load (hot water) partner tariff available with these residential tariffs. The controlled load tariff is used to control permanently installed hot water services and other appliances below 25A between 23:00 – 07:00 hours CST, with an option for use between 10:00 – 15:00 hours CST;
- The demand tariff components will reflect the distribution long run marginal costs (**LRMCs**) and the transmission demand based costs (exit price and locational capacity price);
- The Network Use of System (**NUoS**) supply charge for the inclining block energy tariff will recover 20% of the total NUoS charges on this tariff (excluding controlled load charges). The same supply charge applies to the actual kW demand tariff;
- All other residual costs will be recovered as non-Time Of Use (**TOU**) prices ($/kWh); and
- The Photo Voltaic Feed-in Tariff (**PV-FiT**) recovery costs are recovered from the residential tariff class as 20% from the supply charge and 80% from usage charges, applied equally to all tariffs and tariff blocks, including controlled load usage.

Table 3: SA Power Networks' residential tariff structures and indicative 2017/18 NUoS charges

RESIDENTIAL 2017/18				Tariff Components							
Tariff	Description	Assignment	Note	Fixed Charge	Demand		Energy				Customer Numbers
				$/day	$/KW/day		$/kWh				
					Peak	Shoulder	Anytime	Block 1	Block 2	Controlled load	
RSR	Single rate	Default	1,3	0.388	-	-	-	0.124	0.149	0.066	770,000
MRD	Monthly actual kW demand	Opt-in	2,3	0.388	0.390	0.193	0.061	-	-	0.066	1,000

Residential tariff notes:

1. The low voltage residential single rate tariff is currently available to eligible residential customers taking supply at less than 1 kV. These customers ordinarily use a Type 1-6 National Electricity Market (**NEM**) compliant meter. The metered energy consumption is charged in two blocks. Block 1 is 0-4MWh pa, Block 2 is >4MWh pa.

2. The low voltage residential monthly actual demand tariff is available to eligible residential customers taking supply at less than 1 kV. These customers will require a Type 1-5 NEM compliant meter read at least monthly. The metered energy consumption is charged at a single rate. The maximum kW demand charge is based on the actual maximum demand measured over a half hour interval, on any day in the month between 16:00 and 21:00 hours local time. A higher price applies during the summer period (November to March) than the winter period (April to October). Currently, there is no charge for demand that is higher outside of the peak 16:00 and 21:00 local time, time period. The demand charge is applied on a 'per day' basis according to the days in the month.

3. Controlled load is an optional partner tariff component used to control permanently installed hot water services and other appliances (including electric vehicles) below 25A, during off peak times between 23:00-07:00 hours Central Standard Time (**CST**). Operation anywhere within this window is permitted based on the customer's requirements but with a randomised start time. A solar sponge version is also available between and 10:00-15:00 hours CST.

2. Small business tariff class and tariffs

This Section sets out our small business tariff class and tariffs. This information is also included in Part B, Section 5.

2.1 Small business tariff class

The small business tariff class is for low voltage businesses consuming less than 160MWh per annum, with a single phase or multi-phase supply.

2.2 Small business tariffs

The small business customer tariff class structures and charging parameters are set out in Table 4 and include:

- A two rate energy tariff (peak and off-peak) with a fixed daily charge. Off-peak DUoS and Transmission Use of System (**TUoS**) is set at half of peak. This tariff applies to existing customers and new single phase customers;
- An actual kVA demand tariff with a fixed daily charge. The demand charges reflect LRMC costs, with shoulder demand priced at half of peak demand. This tariff is suitable for larger (eg three phase) small customers, particularly those with either a seasonal load that varies across the year or a flexible load;
- A transitional version of the kVA demand tariff is default (mandatory) for new multi- phase customers or existing multi-phase customers who alter their supply and require a new meter, including single phase customers converting to a multi-phase. The transitional version of the kVA demand tariff is optional for all customers;
- An unmetered 12 hour energy tariff. This tariff is typically used for overnight public lighting;
- An unmetered 24 hour energy tariff. This tariff is typically used for public phones, traffic lights and telecommunications installations;
- A single rate energy tariff (anytime) with a fixed daily charge. This tariff has been closed to new customers from July 2010 as it is more suited to large business customers;
- An annual kVA agreed demand tariff with a fixed daily charge. This tariff has been closed to new customers from July 2016; and
- There was a controlled load (hot water) partner tariff available with the business two rate and business single rate tariffs. This partner tariff is now closed to new applicants. The controlled load tariff is used to control permanently installed hot water services and other appliances below 25A between 23:00 – 07:00 hours CST, with an option for use between 10:00 – 15:00 hours CST when high solar PV output typically occurs.

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Table 4: SA Power Networks' small business tariff structures and indicative 2017/18 NUoS charges

SMALL BUSINESS 2017/18				Tariff Components							
Tariff	Description	Assignment	Note	Fixed Charge	Demand		Energy				Customer Numbers
				$/day	$/KVA/day		$/kWh				
					Peak	Shoulder	Anytime	Peak	Off-peak	Controlled load	
B2R	Two rate	Default (1ph)	1,7	0.388	-	-	-	0.0153	0.080	0.066	29,000
SBDT	Monthly actual kVA demand transition	Default (3ph) Opt-in (1ph)	2	0.388	0.189	0.094	-	0.100	0.066	-	1,170
SBD	Monthly actual kVA demand	Opt-in	3	0.388	0.348	0.173	0.054	-	-	-	4,400
LVUU	Unmetered 12 hr (streetlights)	Special	4	-	-	-	0.061	-	-	-	-
LVUU24	Unmetered 24 hr	Special	4	-	-	-	0.061	-	-	-	-
BSR	Single rate	Closed	5,7	0.388	-	-	0.137	-	-	0.066	58,400
SLV	Annual agreed kVA demand	Closed	6	10.040	0.277	Add 0.107	0.040	-	-	-	10

Small business tariff notes:

1. The low voltage business two rate tariff has a TOU structure with peak and off-peak consumption charges. This tariff is the default tariff for new single phase customers. Peak charges (at a higher rate) apply work days 07:00-21:00 hours CST with all other times including non-work-days defined as off-peak (charged at a lower rate). Peak and off-peak is charged in single blocks. A Type 1-6 NEM compliant meter is required.

2. The small business monthly actual kVA demand transition tariff is mandatory for new multi-phase small business customers or existing small business customers who upgrade to a multi-phase supply and require a new meter. The usage portion has peak charges (at a higher rate) that apply work days 07:00-21:00 hours local time, with all other times including non-work-days defined as off-peak (charged at a lower rate). The demand charge is based on the actual maximum kVA demand measured over a half hour interval, on any day in the month between 12:00 and 16:00 hours local time, work days, for the shoulder period (12 months). An additional peak demand price applies during the peak period (November to March) between 16:00 and 21:00 hours local time, on workdays. Currently, there is no charge for demand that is higher outside of the peak 16:00 and 21:00 time period. The tariff is a combination of 50% business 2-rate and 50% small business actual demand. These customers require a Type 1-5 interval meter read at least monthly.

3. The small business actual kVA demand tariff is optional to small business customers taking supply at less than 1 kV. Metered energy consumption is charged at a single rate. Shoulder demand (12 months) applies to the monthly workday maximum kVA demand (measured over a half hour interval) between 12:00 and 16:00 hours local time, for each month of the year. Peak demand prices also apply during the peak period (November to March) between 16:00 and 21:00 hours local time, on workdays. These customers will require a Type 1-5 interval meter read at least monthly.

4. Unmetered supply tariffs are applicable to supply points that are not metered. Unmetered tariffs comprise of an energy rate that is applied to the calculated electricity consumption using an agreed algorithm from the applicable Metrology Procedure. Unmetered supply tariffs are generally invoiced monthly.

5. The business single rate tariff is a closed tariff that was available for use before July 2010. The consumption is charged on a flat scale (previously inclining block until July 2016).

6. The low voltage agreed kVA demand tariff is a closed tariff that was available for use before July 2016. The peak demand is agreed, and measured on work days between 12:00 and 21:00 hours local time, during the summer months of November to March and is charged on an inclining scale in two demand blocks. Block 1: 0-1000kVA, block 2: >1000kVA. An additional demand applies where higher levels of demand are required during the year than are required during the peak demand period. Customers (through their retailer) can apply for agreed demand to be amended. Reduction requests require supporting evidence. This tariff requires a Type 1-5 interval meter capable of measuring both active and reactive power.

7. Controlled load is an optional partner tariff component used to control permanently installed hot water services and other appliances below 25A, during off peak times between 23:00-07:00 hours CST. Operation anywhere within this window is permitted based on the customer's requirements but with a randomised start time. A solar sponge version is also available between and 10:00-15:00 hours CST.

3. Large LV business tariff class and tariffs

This Section sets out our small business tariff class and tariffs. This information is also included in Part B, Section 5.

3.1 Large LV business tariff class

The large LV business tariff class is for low voltage businesses consuming more than 160MWh per annum typically with a multi-phase supply.

3.2 Large LV business tariffs

Large Business customer tariff class structures and charging parameters are set out in Table 5 and include:

- An actual kVA demand tariff with a fixed daily charge. The demand charges reflect LRMC costs, with shoulder demand priced at half of peak demand. This tariff is the default tariff for large LV business customers and is suitable for larger customers, particularly those with either a seasonal load that varies across the year or a flexible load;
- A transitional version of the actual kVA demand tariff was created for customers on fully cost-reflective tariffs and were facing cost increases. As of July 2016 the transitional version of this tariff was closed to existing large LV business customers;
- An agreed kVA demand tariff with a fixed daily charge. This tariff is available on an opt-in basis for large LV business customers. The demand charge is stepped according to the customer's size, to reflect the LRMC of providing network capacity at the particular voltage level. There are variants of this tariff available for:
    - Back-up supply; and
    - Sportsgrounds with significant floodlighting. This variant uses a peak demand period of 12:00 to 19:00 local time, December to February on work days. This is because floodlights are not typically used during extreme heat;
- A single rate transitional tariff with a fixed daily charge. This tariff is for large business customers with a Type 6 meter only; and
- Two rate transitional tariff with a fixed daily charge. This tariff is for large business customers with a Type 6 meter only.

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Table 5: SA Power Networks' large LV business tariff structures and indicative 2017/18 NUoS charges

LARGE LV BUSINESS 2017/18				Tariff Components							
Tariff	Description	Assignment	Note	Fixed Charge	Demand		Energy				Customer Numbers
				$/day	$/KVA/day		$/kWh				
					Peak	Shoulder	Anytime	Peak	Off-peak	Controlled load	
BD	Monthly actual kVA demand	Default	1	0.349	0.348	0.173	0.052	-	-	-	1,280
LV	Annual agreed demand	Opt-in	2	10.000	Blk 1 0.277 Blk 2 0.226	Add 0.107	0.040	-	-	-	3,530
LVSG	Sports ground annual agreed demand	Special	3	10.000	Blk 1 0.277 Blk 2 0.266	Add 0.107	0.040	-	-	-	5
LVB	Annual agreed demand	Back-up	4	10.000	0.107	Add 0.107	0.040	-	-	-	5
LBSR	Single rate transition	Type 6 meter	5,7	0.349	-	-	0.160	-	-	0.066	15
LB2R	Two rate transition	Type 6 meter	6	0.349	-	-	-	0.180	0.092	0.066	70
BDT	Monthly actual kVA demand transition	Closed	6	0.349	0.232	0.115	-	0.085	0.060	-	100

Large LV business tariff notes:

1. The large LV business actual kVA demand tariff is the default tariff for large LV business customers. It has a fixed daily charge and a metered energy consumption charged at a single rate. Shoulder demand (12 months) applies to the monthly workday maximum kVA demand (measured over a half hour interval) between 12:00 and 16:00 hours local time, for each month of the year. An additional peak demand price applies during the peak period (November to March) between 16:00 and 21:00 hours local time, on workdays. These customers will require a Type 1-5 interval meter read at least monthly.

2. The large LV business agreed kVA demand tariff is an opt-in tariff for large LV business customers. It has a fixed daily charge and a metered energy consumption charged at a single rate. The peak demand is measured on work days between 12:00 and 21:00 hours local time, during the summer months of November to March and is charged on a declining scale in two consumption blocks. Block 1: 0-1000kVA, block 2: >1000kVA. An additional demand applies where higher levels of demand are required during the year than are required during the peak demand period. Customers (through their retailer) can apply for agreed demand to be amended. Reduction requests require supporting evidence. This tariff requires a Type 1-5 interval meter capable of measuring both active and reactive power.

3. The sportsground agreed kVA demand tariff is a special purpose tariff for sportsgrounds with significant floodlighting. It has a fixed daily charge and a metered energy consumption charged at a single rate. The peak demand is measured on work days between 12:00 and 21:00 hours local time, during the summer months of December to February and is charged on a declining scale in two consumption blocks. Block 1: 0-1000kVA, block 2: >1000kVA. An additional demand applies where higher levels of demand are required during the year than are required during the peak demand period. Customers (through their retailer) can apply for agreed demand to be amended. Reduction requests require supporting evidence. This tariff requires a Type 1-5 interval meter capable of measuring both active and reactive power.

4. The back-up agreed kVA demand tariff is special purpose tariff. It has a fixed daily charge and metered energy consumption charged at a single rate. The peak demand is measured on work days between 12:00 and 21:00 hours local time, during the summer months of November to March and is charged on a flat scale. Customers (through their retailer) can apply for agreed demand to be amended. Reduction requests require supporting evidence. This tariff requires a Type 1-5 interval meter capable of measuring both active and reactive power.

5. The single rate transitional tariff has a fixed daily charge. The metered energy consumption is charged on a flat scale. This tariff is only available to businesses with a Type 6 meter.

6. The two rate transitional tariff has a fixed daily charge and a TOU structure with peak and off-peak consumption charges. Peak charges (at a higher rate) apply on work days from 07:00-21:00 hours local time, with all other times including non-work-days defined as off-peak (and charged at a lower rate). Peak usage and off-peak is charged in single blocks. This tariff is only available to businesses with a Type 6 meter.

7. A controlled load partner tariff is an optional tariff component used to control permanently installed hot water services and other appliances below 25A, during off peak times between 23:00-07:00 hours CST. Operation anywhere within this window is permitted based on the customer's requirements but with a randomised start time. A solar sponge version is also available between and 10:00-15:00 hours CST.

4. High voltage business tariff class and tariffs

This Section sets out our high voltage business tariff class and tariffs. This information is also included in Part B, Section 5.

4.1 High voltage business tariff class

The high voltage business tariff class is for very large businesses who are generally supplied at 11kV.

4.2 High voltage business tariffs

High Voltage customer tariff class structures and charging parameters are set out in Table 6 and include:

- A high voltage annual agreed kVA demand tariff which is suitable for larger high voltage customers above 400 kVA. This is the default tariff for the HV tariff class. There are variants of this tariff as follows:
    - 400kVA variant which is more suited to demands below 400kVA. This variant is the equivalent of the large LV business agreed demand tariff; and
    - A back-up tariff for customers who have a second supply source for a higher security of supply;
- An actual kVA demand tariff suitable for large customers, for seasonal large customers whose load varies across the year and also those large customers with very flexible load; and
- A high voltage business two rate tariff which is closed to new customers.

The boundaries between these three tariffs are approximate, with the customer able to elect any of the three tariffs through a request via their retailer.

Table 6: SA Power Networks' high voltage business tariff structures and indicative 2017/18 NUoS charges

HIGH VOLTAGE BUSINESS 2017/18				Tariff Components						
Tariff	Description	Assignment	Note	Fixed Charge	Demand		Energy			Customer Numbers
				$/day	$/KVA/day		$/kWh			
					Peak	Additional	Anytime	Peak	Off-peak	
HV	Annual agreed kVA demand	Default	1	68.493	0.222	0.128	0.028	-	-	140
HV400	Annual agreed kVA demand <400kVA	Opt-in	2	10.000	0.277	0.107	0.038	-	-	5
HBD	Monthly actual kVA demand	Opt-in	3	0.349	Pk 0.348	Sh 0.173	0.050	-	-	45
HVB	Demand kVA	Back-up	4	-	0.128	0.128	0.028	-	-	35
B2R124H	Two rate	Closed	5	0.349	-	-	-	0.180	0.090	0

High voltage business tariff notes:

1. The high voltage annual agreed kVA demand tariff is the default tariff for this tariff class. It consists of a single block of peak demand, a single usage price for energy and a significant fixed daily charge. An additional demand applies where higher levels of demand are required during the year than are required during the peak demand period. Customers (through their retailer) can apply for agreed demand to be amended. Reduction requests require supporting evidence. This tariff requires a Type 1-5 interval meter capable of measuring both active and reactive power.
2. The high voltage annual agreed kVA demand <400kVA tariff is available on an opt-in basis however the customer's maximum demand must not exceed 400 kVA. It consists of a single block of peak demand, a single usage price for energy and a fixed daily charge.
   An additional demand charge applies where higher levels of demand are required during the year than are required during the peak demand period. Customers (through their retailer) can apply for agreed demand to be amended. Reduction requests require supporting evidence. This tariff requires a Type 1-5 interval meter capable of measuring both active and reactive power.

3. The business monthly actual kVA demand tariff is an opt-in tariff. It has a metered energy consumption charged at a single rate. Shoulder demand applies to the monthly workday maximum kVA demand (measured over a half hour interval) between 12:00 and 16:00 hours central local time every month of the year. An additional peak demand price applies during the peak period (November to March) between 16:00 and 21:00 hours local time, on workdays. These customers will require a Type 1-5 interval meter read at least monthly.

4. The back-up annual agreed kVA demand tariff is a special purpose tariff. It consists of a single block of peak demand and a single usage price for energy. An additional demand applies where higher levels of demand are required during the year than are required during the peak demand period. Customers (through their retailer) can apply for agreed demand to be amended. Reduction requests require supporting evidence. This tariff requires a Type 1-5 interval meter capable of measuring both active and reactive power.

5. The two rate tariff is closed to new customers. It has a fixed daily charge and a TOU structure with peak and off-peak consumption charges. Peak charges (at a higher rate) apply during work days from 07:00-21:00 hours local time, with all other times including non-work-days defined as off-peak (charged at a lower rate). Peak and off-peak usage is charged in single blocks. This tariff is only available to businesses with a Type 6 meter.

5. Major business tariff class and tariffs

This Section sets out our major business tariff class and tariffs. This information is also included in Part B, Section 5.

5.1 Major business tariff class

The major business tariff class is for very large businesses who are connected to the sub-transmission network or a zone substation.

5.2 Major business tariffs

The major business customers are the largest 20 customers connected to SA Power Networks' network. They comprise a range of industrial, manufacturing and commercial enterprises. Customers connected at 33kV or 66kV utilise the sub-transmission agreed kVA demand tariff while customers connected to a zone substation (generally at 11kV) use the zone substation agreed kVA demand tariff. Most of these customers have demand exceeding 10 MVA or usage exceeding 40 GWh pa and so their transmission tariff component is priced locationally. Once a customer has received locational transmission pricing, we continue to apply such prices unless we receive a customer request via their retailer to have postage stamp transmission pricing which would require their demand to have reduced below 10 MVA and their annual usage reduced to below 40 GWh pa.

Table 7: SA Power Networks' major business tariff structures and indicative 2017/18 NUoS charges

HIGH VOLTAGE BUSINESS 2017/18				Tariff Components						
Tariff	Description	Assignment	Note	Fixed Charge	Demand		Energy			Customer Numbers
				$/day	$/KVA/day		$/kWh			
					Peak	Additional	Anytime	Peak	Off-peak	
STN	Sub-transmission annual agreed kVA demand (non-locational)	Default	1	-	0.094	0.022	0.013	-	-	1
STNXXX	Sub-transmission annual agreed kVA demand (locational)	Locational	2,4	x	x	x	x	-	-	9
STNB	Sub-transmission kVA back-up	Back-up	3	-	0.022	0.022	0.013	-	-	2
ZSN	Zone substation annual agreed kVA demand (non-locational)	Default	1	-	0.171	0.099	0.016	-	-	2
ZSNXXX	Zone substation annual agreed kVA demand (locational)	Locational	2,4	x	x	x	x	-	-	7
ZSNB	Zone substation kVA back-up	Back-up	3	-	0.099	0.099	0.016	-	-	1

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Major business tariff notes:

1. The sub-transmission and zone substation kVA demand tariff is for business customers that take supply directly from the sub-transmission network or a zone substation but do not utilise locational transmission pricing (ie their demand is < 10 MW and their annual usage is below 40 GWh pa). It consists of a single block of peak demand and a single usage price for energy. The peak demand price applies during the peak period (November to March) between 12:00 and 21:00 hours local time, on workdays. An additional demand charge applies where higher levels of demand are required during the year than are required during the peak demand period. The minimum level of agreed demand (peak plus additional) for this tariff is 5,000 kVA. A Type 1-4 interval meter is required with the ability to measure both active and reactive power.

2. The locational sub-transmission and zone substation kVA demand tariff is for business customers that take supply directly from the sub-transition network or a zone substation and are subject to locational transmission pricing (ie their demand is > 10 MW and their annual usage is above 40 GWh pa). It consists of a fixed daily rate based on locational pricing, a single block of peak demand and a single usage price for energy. The peak demand price applies during the peak period (November to March) between 12:00 and 21:00 hours local time, on workdays. An additional demand charge applies where higher levels of demand are required during the year than are required during the peak demand period. The minimum level of agreed demand (peak plus additional) for this tariff is 5,000 kVA. A Type 1-4 interval meter is required with the ability to measure both active and reactive power.

3. The sub-transmission and zone substation kVA demand back-up tariff is a special purpose tariff for business customers that require additional security of supply. It consists of a single block of peak demand and a single usage price for energy. A Type 1-4 interval meter is required with the ability to measure both active and reactive power is required.

4. Sub-transmission and zone substation customers on locational tariffs have individually calculated charges.

General notes applicable to demand tariffs:

1. Agreed Demand charges for business customers are determined on the basis of the maximum half-hour trading interval for:

    a. Agreed Maximum Demand (Annual Peak Demand) on workdays between 1200 and 2100 local time, during November to March only;
    b. Agreed additional maximum demand (Additional Demand), as the difference between the customer's anytime maximum demand and the agreed (peak) maximum demand; and
    c. For business customers on the Sports Ground demand kVA tariff, the Agreed Peak Demand shall be determined on work days between 1200 and 1900 local time, during December to February only. Additional Demand shall be determined using all other times of the year.

2. Actual Demand charges for business customers are determined on the basis of the maximum half-hour trading interval since the last meter read (Type 1-4 meters are assumed to be read each calendar month) for:

    a. Summer Peak Demand on work days between 1600 and 2100 local time, during November to March only;
    b. Year-round Shoulder Demand on work days between 1200 and 1600 local time; and
    c. Off-peak Demand at all other times (the price is zero for actual off-peak demand).

3. Actual Demand charges for residential customers are determined on the basis of the maximum half-hour trading interval since the last meter read (Type 1-4 meters are assumed to be read each calendar month) for:

    a. Summer Peak Demand on all days between 1600 and 2100 local time during November to March only;
    b. Winter Shoulder Demand on all days between 1600 and 2100 local time; and
    c. Off-peak Demand at all other times (the price is zero for actual off-peak demand).

4. Peak energy is energy consumed on business days between the hours of 0700 and 2100 CST. Type 6 meters typically measure this component during week days whereas Type 1-5 meters will measure this in on work days. For customers with Type 6 metering that does not recognise specific days, peak energy is energy consumed on each day between the hours of 0700 and 2100 CST.

5. Off-peak energy is energy consumed other than peak energy.

6. Pricing of Standard Control Services

This Section sets out SA Power Networks' pricing outcomes for standard control services. For further details, refer to Part B, Section 7 and Part B, Appendix C.

6.1 LRMC calculation

The LRMC outcomes shown in Table 8 have been updated for individual tariff classes for 2017/18. The Average Incremental Cost (**AIC**) results at the sub-transmission, high voltage and distribution transformer levels are directly applicable to the major business, high voltage business and large LV business tariff classes. At low voltage, the LRMC outcomes apply to both Small Business and Residential tariff classes.

Table 8: Calculated LRMC for SA Power Networks' network ($2017/18)

Tariff class	LRMC, $/kVA per annum
Major business	$22 (STR) - $57 (ZSN)
HV business	$80
Large LV business	$100
Small business	$111
LV residential	$111

A demand based tariff parameter should indicate to customers the LRMC of their utilisation of the network. For simplicity, we have determined the demand charges to recover the same amount of money as indicated by the LRMC multiplied by that tariff's co-incident demand.

Clause 6.18.5(g) - Tariffs reflect total efficient costs

The way in which the LRMC and the balance of efficient costs has been taken into account by SA Power Networks in establishing the 2017/18 tariffs has involved the following considerations:

- ***Ensuring that demand price signalling components reasonably signal the LRMC:*** Demand prices are set to fully recover the LRMC for each demand tariff;
- ***Use of price signalling components where practicable:*** In Type 6 metering situations where demand cannot be effectively signalled, energy rates have been structured to ensure that efficient costs are recovered. However, the metering does not indicate usage during high consumption periods so we have retained relatively simple tariff structures which recover the efficient costs for that tariff's assigned customers. We have a single block tariff for Business single, and a single block tariff for business two-rate (off-peak is set at 50% of the peak-rate price). For residential, the inclining two-block tariff has been set with the second block being 2.5 c/kWh above the first block in line with the 2016/17 tariff. We aim to combine these two blocks by 2019/20; and
- ***Revenue recovery through non-distortionary charging parameters:*** For cost-reflective tariffs, demand charging parameters recover a proportion of the total revenue reflecting

high network utilisation period future costs. The balance of revenue recovery takes place in the least distortionary manner possible, through fixed supply charges for the efficient costs

- of local assets and customer service with the balance recovered through energy usage rates. Lower rates apply to usage that is outside of high network utilisation periods for off peak periods (two-rate tariffs) and controlled load.

6.2 Revenue cost allocation

Table 9 outlines how SA Power Networks allocates the revenue across tariff classes. SA Power Networks has ensured the tariffs reflect the efficient costs incurred in supplying customers using those tariffs.

Note, Table 9 shows how the direct control services costs are allocated and also shows the methods for recovery of Designated Pricing Proposal Charges under clause 6.18.7 of the Rules (Transmission charges) and of Jurisdictional Scheme Amounts under clause 6.18.7A (the Solar PV FiT).

Table 9: 2017/18 revenue cost allocation across network elements and to tariff classes

Allocation Basis to Tariff Class	Tariff Class				
	Major business	**High voltage business**	**Large LV business**	**Small business**	**Residential**
Number of Customers (NMI's)	20	192	4,910	92,970	771,000
Diversified Demand (MVA)	149	203	793	644	1,605
Usage GWh (at Pool Exit)	973	931	3,454	1,785	4,253
Distribution (SA Power Networks) $775M					
Sub-transmission lines	9% allocated half demand half usage				
Zone substations	17% allocated half demand half usage				
High Voltage Lines		32% allocated half demand half usage			
Distribution Transformers			20% allocated half demand half usage		
Low Voltage Lines				16% to NMI/demand/usage	
Services				6% NMIs only	
PV FiT Recovery (SA Government Scheme) $88M					
Sub-transmission lines	37% allocated on DUoS proportion				63%
Transmission (ElectraNet) $263M					
Transmission Exit	6% locational price pass-through	10% peak demand allocation			
Transmission Locational		35% peak demand allocation			
Transmission Non-locational		19% allocated on demand		30% allocated on usage	
Transmission Common Service					

Distribution costs of $775M are allocated across the tariff classes (and the tariffs) according to the usage by customers of the voltage steps involved. The efficient costs are apportioned across these asset categories, with customer use of these assets determined by the customers' diversified demand and usage. Some assets are apportioned according to customer numbers eg the connection services and a portion of the asset LV Lines reflecting house frontage needs. Customers are only charged for an asset category if they use it.

We allocate 50% of asset charges to demand as we have found that these amounts broadly reflect the LRMC of these assets. Note that we price the actual tariffs using the actual LRMC calculation, not the 50% cost allocation. The balance of asset charges are allocated in a non-distortionary manner using energy, apart from those costs which are driven principally by numbers of customers. As we have

State-wide pricing requirements under South Australian Government legislation, we do not consider the issue of distance (eg long or short feeders) or location (eg urban or rural) in these calculations. If we need to consider pricing for a potentially constrained network, we will look at other variations to this for those specific locations, and consider an 'opt-in' tariff/rebate. The variation might have a stronger demand signal reflecting the local LRMC. Customers would retain the right to access State-wide prices despite the constraint.

6.3 Residual distribution cost recovery

After pricing the LRMC signal in the DUoS demand tariff element, the balance of residual costs is recovered from usage and fixed (supply charge) tariff elements.

The residential supply charge has been set to recover the service wire cost and about half of the LV lines costs allocated to residential. Overall, the fixed charges (including PV-FiT recovery and transmission components) amount to 20% of the residential usage tariff NUoS charges. This is in line with our Electricity Advisory Panel's support for up to 20% of residential charges being fixed (this concept was first adopted for the PV- FiT recovery. We have used the same concept for providing a fair and equitable limit to NUoS fixed charges).

We have used the same supply charge for the other LV lines-connected tariffs, ie to all residential and small business tariff class customers (excluding unmetered customers).

The agreed demand tariffs for large LV business and HV business include some supply charges reflecting fixed costs associated with the connecting equipment eg the transformer for LV agreed demand. Over time, we will review the level of this fixed charge to reflect specific equipment used. For example, in 2017/18, the fixed charge for HV agreed demand of $20,000 pa is 80% of the amount charged in 2016/17. Refer to Table 10, which shows the proportion of an average customers distribution charge, recovering either LRMC reflective costs (demand charges) or residual costs (fixed and usage charges). Note that the residential and small business usage tariffs do not have any LRMC demand tariff element.

Table 10: Residual distribution cost recovery

Tariff element	Major Business	HV Business	Large LV Business	Small Business Demand	Small Business Usage	Residential Demand	Residential Usage
LRMC Demand	69%	50%	46%	48%	-	49%	-
Fixed Charges	-	11%	7%	3%	10%	19%	24%
Usage Charges	31%	39%	46%	50%	90%	32%	76%

6.4 PV-FiT recovery

SA Power Networks must recover $88 million in PV-FiT payments. The recovery has been apportioned between residential customers (63%) and business customers (37%). For residential customers, 20%

of the recovery is on a 'per customer' basis (ie fixed charge) with the balance recovered from usage. For business customers the recovery is based on the proportion of DUoS payable by that tariff class. This is consistent with the allocation made in 2016/17.

We have simplified the pricing of the PV-FiT recovery to a flat rate (c/kWh) with a single price set for each tariff class. The residential tariff class has 20% of the recovery priced on a $/customer basis and small business has a portion of their costs charged out at the same $/customer. This enables a similar spread across the tariff classes similar to the 2016/17 outcomes.

Table 11 below shows the indicative prices for 2017/18 to recover $88M in PV-FiT recovery. The flat rates apply equally to all usage tariff elements, eg for residential tariffs the 1.15 c/kWh applies to the demand tariff usage, to the usage tariff block 1 and 2, and to the controlled load tariff usage.

Table 11: PV-FiT cost recovery

Tariff element	Major Business	HV Business	Large LV Business	Small Business	Small Business Unmetered	Residential	Controlled Load
Fixed Charges $pa	-	-	-	$14.45	-	$14.45	-
Usage Charges c/kWh	0.08	0.33	0.49	0.73	0.73	1.15	1.15

6.5 Transmission cost recovery

We apply the ElectraNet pricing structure where possible as our basis for allocating and pricing the recovery of Designated Pricing Proposal transmission charges under NER clause 6.18.7. For our Major Business tariff class, each customer is priced individually according to their location and their demand/energy characteristics. They receive the same transmission price as if they were directly connected to the transmission network. For all other tariff classes, we apply a State-wide average price but pass through the intent of ElectraNet's prices, for example:

- The locational charges for transmission exits and locational TUoS are summed and allocated evenly across all customers according to their diversified demand. Where we have demand components in our tariffs, these costs are reflected in that tariff parameter. Where we do not have demand components, these costs are included in the usage charges.

- The non-locational and common service charges are allocated to tariff classes according to the load factor of that tariff class. ElectraNet has a choice of price for these charges, with a maximum $/kW charge suitable for tariff classes with above-average load factor and a maximum $/MWh charge suitable for tariff classes with below average load factor. We allocate the demand tariffs classes on the $/kW basis (as these customers have above average load factor) with the charges recovered from a usage (c/kWh) basis that does not distort the TUoS demand signal. The balances of these costs are allocated to the usage based small customer tariff classes (as these have below average load factor) with the amounts split amongst the tariff classes according to energy usage. This results in a more optimal allocation of costs and resultant prices than if a combination of the ElectraNet $/MWh and

$/kW options were used. It also more closely reflects the intent of ElectraNet's pricing structure.

The revenue cost allocation model enables us to reasonably apportion our charges across customers in a manner which ensures good cost-reflectivity for State-wide prices. It also provides guidance for the subsequent conversion of allocated costs to prices.

7. Alternative Control Services - Metering

This section of our revised TSS provides visibility of our metering charges for the 2015-20 regulatory control period. This pricing will continue to apply post December 2017 when retailers take over the responsibility for new and replacement meters for their customers. For more details, refer to Part B, Section 7.

In its Final Decision (revenue determination), the AER has determined that a price cap applies for Alternative Control Services (regulated metering services). Attachment 16[1] sets out all of the pricing arrangements and the final prices that will apply. Part A of Attachment 16 sets out the annual metering charges (AER Table 16.11) and the upfront capital charges (AER Table 16.14, with annual X-factors set out in AER Table 16.15).

7.1 Our tariff class and tariffs for metering services

The annual metering charges contain a Capital charge and a non-Capital charge, with different prices applying to the three categories of alternative control services metering, ie Whole Current (**WC**), Current Transformer (**CT**) Type 5 and 6 meters and Exceptional meters.

There are four different combinations of metering fees possible:

- Existing customers at June 2015 using SA Power Networks' meters. These customers continue to pay the Capital and non-Capital charges;
- Where an existing customer that was using an SA Power Network's meter at June 2015 has the meter replaced by an alternate meter provider (eg a Type 4 meter), the customer will continue to pay SA Power Networks' Capital charge, but will cease paying the non-Capital charge;
- (From 1 July 2015), where a new customer connects to the network and elects to use an SA Power Networks meter, the customer incurs an upfront Capital charge, and also incurs the annual non-Capital charge. The customer is not liable for any ongoing Capital charges; and
- Where an existing customer at June 2015 was not using an SA Power Networks meter and is using a meter from an alternate meter provider, (eg a Type 4 meter), the customer is not liable for any annual metering charges to SA Power Networks.

We have implemented the AER's preferred system of meter service pricing. We have implemented a new meter charging system which can be separated from the standard control services tariffs. We will use separate, more manual systems to manage the exceptional and CT metering pricing, as occurs at present. We also use a separate manual process to manage the pricing where an existing customer's meter churns to another meter provider.

[1] Attachment 16 to the AER's Final Decision for SA Power Networks determination 2015-16 to 2019-20.

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Table 12 sets out the tariff classes and tariffs that correspond to the price terms contained in the alternative control services metering services in the 2015-20 regulatory control period.

Table 12: Alternative Control Services indicative annual metering charges (excludes GST) $ p.a.

Meter type	2016/17	2017/18	2018/19	2019/20
Type 1-4 'Exceptional' remotely read interval meter				
Non-capital[4]	$187	$182	$177	$172
Capital	$217	$256	$250	$243
Non-capital + capital[6]	$404	$438	$427	$415
Type 5-6 CT[1] connected manually read meter				
Non-capital[4]	$102	$99	$96	$94
Capital	$118	$140	$136	$132
Non-capital + capital[6]	$220	$239	$232	$226
Type 5-6 WC[2] manually read meter				
Non-capital[4]	$12.40	$12.10	$11.80	$11.50
Capital	$14.50	$17.00	$16.60	$16.20
Non-capital + capital[6]	$26.90	$29.00	$28.40	$27.70

Note:

1. Current transformer metering applies for supplies over 100 amps.
2. Whole current metering applies for supplies up to 100 amps.
3. Prices assume an annual CPI movement of 2.5% per annum.
4. The non-Capital charge is paid by the customer/retailer who has paid an upfront capital fee (see below).
5. The Capital charge is paid by a customer/retailer using a regulated meter as of July 2015 but only when the meter has since churned.
6. The combined non-Capital/Capital fee is paid by a customer/retailer that continues to use a regulated meter as of July 2015.
7. Customers not using a regulated meter in the 2015-20 regulatory control period are not charged a regulated metering fee.

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Table 13 shows the upfront capital charges that apply in the 2015-20 regulatory control period. The AER set prices have been escalated by the actual CPI for 2016/17. For 2017/18 to 2019/20, an assumed CPI of 2.5% has been applied along with the AER's nominated X-factor.

Table 13: Alternative Control Services indicative upfront capital charges (excludes GST) $ p.a.

Meter type	2016/17[2]	2017/18[2]	2018/19[1]	2019/20[1]
Type 5 meters				
Single element	$197	$203	$210	$217
Two element	$283	$292	$302	$312
Three phase	$486	$501	$518	$535
Type 6 meters				
Single element	$113	$116	$120	$124
Two element	$283	$292	$302	$312
Three phase	$334	$345	$356	$368

Note:

1. Under the AEMC Rule change this pricing will not apply from 1 December 2017 as SA Power Networks will not be responsible for installing new meters.
2. These charges apply where a customer/retailer requests SA Power Networks to install a meter from July 2015 to November 2017.

8 Our policies and procedures for assigning customers to tariffs

The requirements concerning the assignment and re-assignment of customers to tariff classes are set out in clause 6.18.4 of the Rules and Attachment 14 Appendix D of the AER's Final Decision (revenue determination).

8.1 Regulatory Requirements

Rules requirements

In making a distribution determination, the AER is required to formulate provisions for the assignment and re-assignment of customers to tariff classes, in accordance with the principles set out in clause 6.18.4 of the Rules. This Rule covers the following matters:

- Factors governing the assignment of customers to tariff classes;
- Equitable treatment of customers with micro-generation;
- The review of the DNSP decision on tariff class assignment; and
- The review of DNSPs' tariff structures containing energy or demand related charges.

8.2 Requirements of the AER's Final Decision

In accordance with the principles in clause 6.18.4 of the Rules, Attachment 14, Appendix D of the AER's Final Decision (revenue determination) sets out the procedures to apply to assigning or re-assigning customers to tariff classes[2]. These provisions are in several parts, covering the following aspects:

- Assignment of existing retail customers to tariff classes at the commencement of the forthcoming regulatory control period;
- Assignment of new retail customers to a tariff class during the next regulatory control period;
- Re-assignment of existing retail customers to another existing or a new tariff class during the next regulatory control period; and
- Objections to proposed assignments and re-assignments.

[2] AER, Final Decision, October 2015, Attachment 14 pp. 21-23.

Assignment of existing retail customers to a tariff classes at the commencement of the forthcoming regulatory control period

1. SA Power Networks' retail customers will be taken to be "assigned" to the tariff class to which SA Power Networks was charging that retail customer immediately prior to 1 July 2015 if:

    - they were an SA Power Networks retail customer prior to 1 July 2015; and
    - they continue to be a retail customer of SA Power Networks as at 1 July 2015.

Assignment of new retail customers to a tariff class during the forthcoming regulatory control period

2. If, after 1 July 2015, SA Power Networks becomes aware that a person will become a customer, then SA Power Networks must determine the tariff class to which the new customer will be assigned.

3. In determining the tariff class to which a retail customer or potential retail customer will be assigned, or re-assigned, in accordance with paragraph 2 or 5 of this section, SA Power Networks must take into account one or more of the following factors:

    (a) the nature and extent of the retail customer's usage;

    (b) the nature of the retail customer's connection to the network[3]; and

    (c) whether remotely–read interval metering or other similar metering technology has been installed at the retail customer's premises as a result of a regulatory obligation or requirement.

4. In addition to the requirements under paragraph 3 above, SA Power Networks, when assigning or re-assigning a retail customer to a tariff class, must ensure:

    (a) retail customers with similar connection and usage profiles are treated equally; and

    (b) retail customers who have micro–generation facilities are not treated less favourably than retail customers with similar load profiles without such facilities.

Re-assignment of existing retail customers to another existing or a new tariff class during the next regulatory control period

5. SA Power Networks may re-assign a retail customer to another tariff class if the existing retail customer's load characteristics or connection characteristics (or both) have changed such that it is no longer appropriate for that retail customer to be assigned to

[3] The AER interprets 'nature' to include the installation of any technology capable of supporting time based tariffs.

the tariff class to which the retail customer is currently assigned or a retail customer no longer has the same or materially similar load or connection characteristics as other retail customers on the retail customer's existing tariff class, then it may re-assign that retail customer to another tariff class. In determining the tariff class to which a retail customer will be re-assigned, SA Power Networks must take into account paragraphs 3 and 4 above.

Objections to proposed assignments and re-assignments

6. SA Power Networks must notify a customer's retailer in writing of the tariff class to which the retail customer has been assigned or re-assigned, prior to the assignment or re-assignment occurring.

7. A notice under paragraph 6 above must include advice informing the customer's retailer that they may request further information from SA Power Networks and that the retail customer may object to the proposed re-assignment. This notice must specifically include:

   a. a written document describing SA Power Networks' internal procedures for reviewing objections;

   b. that if the objection is not resolved to the satisfaction of the customer's retailer under SA Power Networks' internal review system within a reasonable timeframe, then, to the extent that resolution of such disputes are within the jurisdiction of the EWOSA, or like officer, the customer's retailer is entitled to escalate the matter to such a body; and

   c. that if the objection is not resolved to the satisfaction of the customer's retailer under SA Power Networks' internal review system and the body noted in clause7.b above, then the customer or its retailer is entitled to seek a decision of the AER via the dispute resolution process available under Part 10 of the NEL.

8. If, in response to a notice issued in accordance with paragraph 7 above, SA Power Networks receives a request for further information from a customer's retailer, then it must provide such information within a reasonable timeframe. If SA Power Networks reasonably claims confidentiality over any of the information requested by the customer's retailer, then it is not required to provide that information to the customer's retailer. If the customer's retailer disagrees with such confidentiality claims, he or she may have resort to the dispute resolution procedures referred to in paragraph 7 (as modified for a confidentiality dispute).

9. If, in response to a notice issued in accordance with paragraph 7 above, a customer's retailer makes an objection to SA Power Networks about the proposed assignment or re-assignment, SA Power Networks must reconsider the proposed assignment or re-assignment. In doing so SA Power Networks must take into consideration the factors in paragraphs 3 and 4 above, and notify the customer's retailer in writing of its decision and the reasons for that decision.

10. If a customer's retailer's objection to a tariff assignment or re-assignment is upheld by the relevant body noted in paragraph 7.b and 7.c above, then any adjustment which needs to be made to tariffs will be done by SA Power Networks as part of the next annual review of prices.

11. If a customer's retailer objects to SA Power Networks' tariff class assignment SA Power Networks must provide the information set out in paragraph 7 above and adopt and comply with the arrangements set out in paragraph 8, 9 and 10 above in respect of requests for further information by the customer's retailer and resolution of the objection.

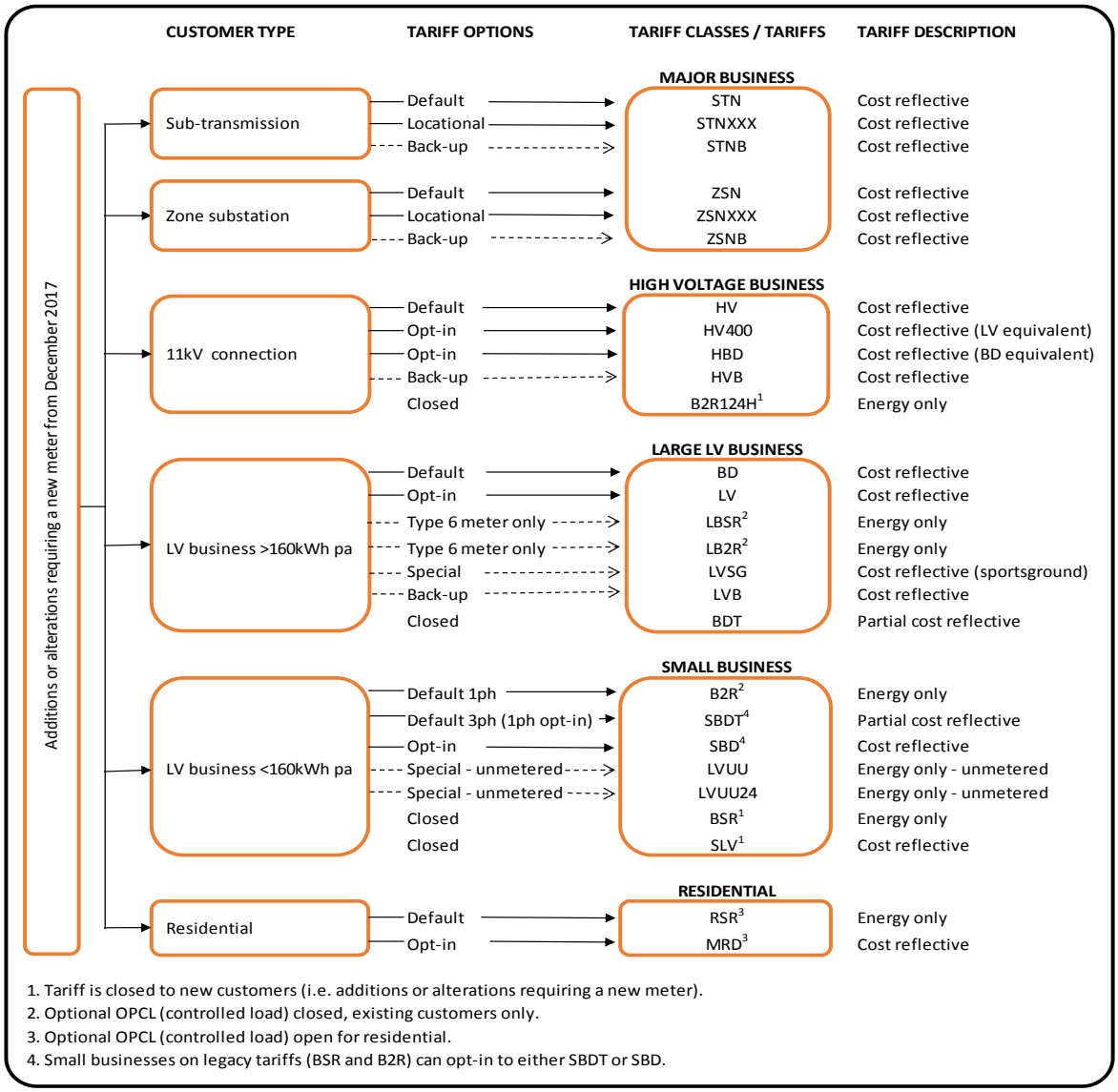
8.3 Our response to the assignment/re-assignment requirements

In this Section of the revised TSS, SA Power Networks describes the process it applies to the initial assignment of customers to tariffs and to their re-assignment. Notwithstanding that the individual tariffs have been grouped within tariff classes in this revised TSS, the existing approach to managing tariff assignment and re-assignment is demonstrated to align with the requirements established by the AER.

8.3.1 Assignment of new customers to a tariff class and tariff

The process whereby new customers are assigned to tariff classes and tariffs, following the receipt of a connection application by the customer or their retailer, follows in Figure 24. In the application of this process, a customer that lodges an application to modify or upgrade an existing network connection is treated in the same manner as a new customer.

Figure 1: Assignment of new and upgraded customer connections to tariff classes



The two major decisions that determine the tariff class assessment are as follows:

- The nature of a customer's usage: (ie residential or business); and
- For business customers only, the nature and extent of the associated connection to the network (the connection voltage, whether located within in the network or directly connected to a zone substation), and if the business customer is connected at LV then the annual consumption (above or below 160MWh pa) applies as a further test.

  Note that large LV businesses with a Type 6 meters cannot utilise the default BD tariff which requires interval metering. These customers (with a Type 6 meter) will be assigned to either LBSR or LB2R.

8.3.1.1 Assignment to demand tariffs – Thresholds and triggers

The specific thresholds and triggers that will result in a business customer being assigned to a cost-reflective tariff comprise:

- All large businesses (> 160 MWh pa), from July 2015;
- All businesses with a maximum demand exceeding 250 kVA, from July 1999;
- All new/alterations to supply businesses requiring more than 100 Amps capacity (CT metering, about 70 kVA), from July 2010; and
- All new/alterations to supply small businesses requiring 3-phase supply, from July 2015.

Alterations to supply include those alterations that would require a new meter to be installed, for example:

- Physical supply changes to an existing supply that increase the capacity of supply to a customer, eg converting to three phase power from single phase, or having the available capacity to a property increased; and
- Installing an inverter to enable import and expert of energy to the network.

Alterations to supply/new customers do not include:

- A change in the name of the existing account holder;
- The installation of an interval meter, by either customer choice or by replacement;
- Installing an appliance greater than 25 amps without increasing the supply capacity would not in itself require a meter upgrade, so will not be considered an alteration; and
- The installation of battery storage (unless the customer will export energy to the network which would require a new meter). Whilst battery storage does require an inverter, we do not consider batteries to be an alteration to supply that will increase the cost of supply. It is likely that the customer will benefit from the use of cost-reflective tariffs with batteries, however we do not propose to mandate such tariff assignments. (Note that whilst battery storage installation might not trigger an 'alteration to supply' and consequent cost-reflective tariff triggers, it will render a customer previously eligible for the 2028 PV FiT 44 cent/kWh schemes to be ineligible if the battery can export to the grid).

8.3.1.2 Customers with micro-generation

As SA Power Networks' tariff class assignment process is applied to the ***net*** customer demand on the network, it does not distinguish between customers that have micro-generation and those without.

The only aspects of the connection process that distinguish customers with micro-generation are technical requirements, principally to ensure public and employee safety in the event of disconnection of supply to a site with generation.

8.3.2 Re-assignment of existing customers to another existing or a new tariff during the next regulatory control period

Within each tariff class, there has been and will continue to be movement between individual tariffs. This is particularly the case with the customers in the small business and large LV business tariff classes.

The five tariff classes that SA Power Networks has established are sufficiently broad to ensure that all the existing customers are within the appropriate tariff class and that it is unlikely that customers will seek to migrate or be reclassified to a different tariff class during the course of the determination. Transfer between tariff classes would be limited to circumstances where the nature of usage or level of consumption changed significantly, for example where a residence was redeveloped to become a small business such as a medical surgery or office.

Transfer can also occur between the small business and large LV business tariff classes if a customers' consumption moves across the 160MWh threshold. SA Power Networks proposes to review customers' consumption in April each year, using data from 31 March. We will advise retailers of any resultant tariff class/tariff changes in May. The changes will apply from 1 July in that year.

Notwithstanding that the re-assignment of customers' tariff classes is unlikely during the 2015-20 regulatory control period, SA Power Networks will do so in accordance with the provisions of the AER's Decision (revenue determination).

SA Power Networks follows the same processes for customers being re-assigned to another tariff within a tariff class as would apply to customers being re-assigned to another tariff class. Customers are able to object to such re-assignments in the same manner that they are permitted to object to a tariff class re-assignment.

8.3.3 Objections to proposed assignments and re-assignments

The AER has established requirements that SA Power Networks must follow in assigning or reassigning customers to tariff classes and in responding to objections to SA Power Networks' tariff class assignments.

The requirements that SA Power Networks must follow have been documented in an internal procedure entitled "Manual 18, Network Tariff Manual".

This document is published on SA Power Networks' web site.

9 Indicative prices for the 2017-20 period

Within the framework of SA Power Networks' longer term tariff strategy, this Section sets out an indicative pricing schedule for tariff charging components of standard control services for 2017-20.

It should be noted that the information in this Section relate to SA Power Networks' standard control services and pass-throughs. These Network Use of System (NUoS) charges to customers are bundled charges that contain:

- SA Power Networks' standard control services (DUoS);
- Transmission cost recovery components (TUoS); and
- PV JSA cost recovery components (PV JSA).

The charges bundled to customers can also include alternative control service charges for metering. These charges are explicitly set out in our tariff list, but are part of the total network charges to customers. Metering is discussed in Section 7.

Table 14: SA Power Networks' indicative residential tariff rates for NUoS charges

Residential					
Tariff	**Component**	**2016/17**	**2017/18**	**2018/19**	**2019/20**
Residential Usage					
Supply Rate	$/day	$ 0.301	$ 0.388	$ 0.398	$ 0.407
Usage Block 1	$/kWh	$ 0.118	$ 0.124	$ 0.128	$ 0.135
Usage Block 2	$/kWh	$ 0.147	$ 0.149	$ 0.138	$ 0.135
Controlled Load	$/kWh	$ 0.054	$ 0.066	$ 0.066	$ 0.067
Residential Monthly Actual kW Demand					
Supply Rate	$/day	$ -	$ 0.388	$ 0.398	$ 0.407
Usage	$/kWh	$ 0.065	$ 0.061	$ 0.061	$ 0.062
Controlled Load	$/kWh	$ 0.054	$ 0.066	$ 0.066	$ 0.067
Peak Actual kW	$/kW/day	$ 0.428	$ 0.390	$ 0.389	$ 0.402
Shoulder Actual kW	$/kW/day	$ 0.211	$ 0.193	$ 0.192	$ 0.198
Off-Peak Actual kW	$/kW/day	$-	$-	$-	$-

Table 15: SA Power Networks' indicative small business tariff rates for NUoS charges

Small Business					
Tariff	**Component**	**2016/17**	**2017/18**	**2018/19**	**2019/20**
Small Business 2-rate Usage					
Supply Rate	$/day	$ 0.301	$ 0.388	$ 0.398	$ 0.407
Peak Usage	$/kWh	$ 0.158	$ 0.153	$ 0.152	$ 0.157
Off-Peak Usage	$/kWh	$ 0.071	$ 0.080	$ 0.080	$ 0.082
Controlled Load	$/kWh	$ 0.054	$ 0.066	$ 0.066	$ 0.067
Small Business Monthly Actual kVA Demand					
Supply Rate	$/day	$ -	$ 0.388	$ 0.398	$ 0.407
Usage	$/kWh	$ 0.051	$ 0.054	$ 0.054	$ 0.055
Peak Actual kVA	$/kVA/day	$ 0.491	$ 0.348	$ 0.347	$ 0.358
Shoulder Actual kVA	$/kVA/day	$ 0.244	$ 0.173	$ 0.172	$ 0.178
Off-Peak Actual kVA	$/kVA/day	$-	$-	$-	$-
Small Business Monthly Actual kVA Demand Transition					
Supply Rate	$/day	$ 0.151	$ 0.388	$ 0.398	$ 0.407
Peak Usage	$/kWh	$ 0.105	$ 0.100	$ 0.096	$ 0.094
Off-Peak Usage	$/kWh	$ 0.061	$ 0.066	$ 0.065	$ 0.066
Peak Actual kVA	$/kVA/day	$ 0.246	$ 0.189	$ 0.200	$ 0.221
Shoulder Actual kVA	$/kVA/day	$ 0.122	$ 0.094	$ 0.099	$ 0.110
Off-Peak Actual kVA	$/kVA/day	$ -	$ -	$ -	$ -
Unmetered 24 hour and 12 hour (streetlights)					
Usage	$/kWh	$ 0.069	$ 0.061	$ 0.061	$ 0.063
Small Business Single-Rate (obsolete July 2010)					
Supply Rate	$/day	$ 0.301	$ 0.388	$ 0.398	$ 0.407
Usage	$/kWh	$ 0.134	$ 0.137	$ 0.136	$ 0.140
Controlled Load	$/kWh	$ 0.054	$ 0.066	$ 0.066	$ 0.067
Small Business Annual Agreed kVA Demand (obsolete July 2016)					

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Small Business					
Supply Rate	$/day	$ 11.134	$ 10.000	$ 10.276	$ 10.569
Usage	$/kWh	$ 0.031	$ 0.042	$ 0.042	$ 0.043
Agreed kVA Block 1	$/kVA/day	$ 0.319	$ 0.277	$ 0.276	$ 0.286
Agreed kVA Block 2	$/kVA/day	$ 0.263	$ 0.226	$ 0.223	$ 0.231
Additional kVA	$/kVA/day	$ 0.128	$ 0.107	$ 0.110	$ 0.113

Table 16: SA Power Networks' indicative large LV business tariff rates for NUoS charges

Large Business					
Tariff	**Component**	**2016/17**	**2017/18**	**2018/19**	**2019/20**
Large Business Annual Agreed kVA Demand					
Supply Rate	$/day	$ 11.134	$ 10.000	$ 10.276	$ 10.569
Usage	$/kWh	$ 0.031	$ 0.040	$ 0.040	$ 0.041
Agreed kVA Block 1	$/kVA/day	$ 0.319	$ 0.277	$ 0.276	$ 0.286
Agreed kVA Block 2	$/kVA/day	$ 0.263	$ 0.226	$ 0.223	$ 0.231
Additional kVA	$/kVA/day	$ 0.128	$ 0.107	$ 0.110	$ 0.113
Large Business Monthly Actual kVA Demand					
Supply Rate	$/day	$-	$0.349	$0.358	$0.368
Usage	$/kWh	$0.051	$0.052	$0.051	$0.053
Peak Actual kVA	$/kVA/day	$0.491	$0.348	$0.347	$0.358
Shoulder Actual kVA	$/kVA/day	$0.244	$0.173	$0.172	$0.178
Off-Peak Actual kVA	$/kVA/day	$-	$-	$-	$-
Large Business Monthly Actual kVA Demand Trans. (obs. July 2016)					
Supply Rate	$/day	$0.151	$0.349	$0.358	$0.368
Peak Usage	$/kWh	$0.105	$0.085	$0.069	$0.053
Off-Peak Usage	$/kWh	$0.061	$0.060	$0.056	$0.053
Peak Actual kVA	$/kVA/day	$0.246	$0.232	$0.289	$0.358
Shoulder Actual kVA	$/kVA/day	$0.122	$0.115	$0.143	$0.178
Off-Peak Actual kVA	$/kVA/day	$-	$-	$-	$-
Large Business Single-Rate Transition (type 6 meter)					
Supply Rate	$/day	$0.301	$0.349	$0.358	$0.368
Usage	$/kWh	$0.161	$0.160	$0.159	$0.165
Controlled Load	$/kWh	$0.054	$0.066	$0.066	$0.067
Large Business Two-Rate Transition (type 6 meter)					
Supply Rate	$/day	$0.301	$0.349	$0.358	$0.368

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Large Business					
Peak Usage	$/kWh	$0.190	$0.180	$0.179	$0.185
Off-Peak Usage	$/kWh	$0.085	$0.092	$0.092	$0.095
Controlled Load	$/kWh	$0.054	$0.066	$0.066	$0.067

Table 17: SA Power Networks' indicative HV business tariff rates for NUoS charges

High Voltage Business					
Tariff	**Component**	**2016/17**	**2017/18**	**2018/19**	**2019/20**
HV Business Annual Agreed kVA Demand					
Supply Rate	$/day	$80.411	$68.493	$70.387	$72.388
Usage	$/kWh	$0.024	$0.028	$0.027	$0.028
Agreed Peak kVA	$/kVA/day	$0.232	$0.222	$0.220	$0.227
Additional kVA	$/kVA/day	$0.119	$0.128	$0.132	$0.135
HV Business Monthly Actual kVA Demand					
Supply Rate	$/day	$-	$0.349	$0.358	$0.368
Usage	$/kWh	$0.051	$0.050	$0.050	$0.051
Peak Actual kVA	$/kVA/day	$0.491	$0.348	$0.347	$0.358
Shoulder Actual kVA	$/kVA/day	$0.244	$0.173	$0.172	$0.178
Off-Peak Actual kVA	$/kVA/day	$-	$-	$-	$-
HV Business Annual Agreed kVA Demand < 400 kVA					
Supply Rate	$/day	$11.134	$10.000	$10.276	$10.569
Usage	$/kWh	$0.031	$0.038	$0.038	$0.039
Agreed Peak kVA	$/kVA/day	$0.319	$0.277	$0.276	$0.286
Additional kVA	$/kVA/day	$0.128	$0.107	$0.110	$0.113

Table 18: SA Power Networks' indicative major business tariff rates for NUoS charges

Major Business					
Tariff	**Component**	**2016/17**	**2017/18**	**2018/19**	**2019/20**
Zone Substation Annual Agreed kVA Demand (non-locational)					
Supply Rate	$/day	$-	$-	$-	$-
Usage	$/kWh	$0.015	$0.016	$0.015	$0.016
Agreed Peak kVA	$/kVA/day	$0.191	$0.171	$0.167	$0.173
Additional kVA	$/kVA/day	$0.098	$0.099	$0.102	$0.104
Sub Transmission Annual Agreed kVA Demand (non-locational)					
Supply Rate	$/day	$-	$-	$-	$-
Usage	$/kWh	$0.010	$0.013	$0.012	$0.012
Agreed Peak kVA	$/kVA/day	$0.113	$0.094	$0.088	$0.092
Additional kVA	$/kVA/day	$0.021	$0.022	$0.023	$0.024