SA Power Networks
Annual Pricing Proposal 2015/16

Revised Version 2.0

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SA Power Networks
www.sapowernetworks.com.au

Executive Summary

On 21 May 2015 SA Power Networks lodged its Annual Pricing Proposal 2015/2016 which included two new tariffs within the LV residential tariff class being a residential Solar tariff and a residential Social tariff. On 19 June 2015 SA Power Networks received a letter from the Chair of the AER advising that the AER had made a pricing determination that the two tariffs do not meet the requirements of the tariff pricing principles in Part I of the National Electricity Rules. The AER has required SA Power Networks to resubmit our 2015/2016 Pricing Proposal, removing the residential Social tariff and the residential Solar tariff from the Pricing Proposal. While this resubmission of the Pricing Proposal removes these two tariffs, it is done on a 'without prejudice' basis and its submission is not agreement to nor acceptance of the validity of the AER's pricing determination. This Revised Pricing Proposal provides details of our pricing strategy, proposed network prices for 2015/16 (as directed by the AER) and comprehensive information on the price changes for each type and size of customer.

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Each electricity customer's retail bill comprises the following components, the first four of which are included in this Network Pricing Proposal:

1. SA Power Networks' distribution network charges;
2. Transmission network charges, by ElectraNet and MurrayLink;
3. Jurisdictional Scheme Amount charges, required to fund the South Australian Government's Feed-in Tariff (FiT) credits to the owners of qualifying solar photo-voltaic (PV) electricity generators;
4. Metering charges (by SA Power Networks or another metering provider); and
5. Retail charges, including the cost of energy generation.

GST is applicable to these items.

Qualifying customers may also receive FiT Credits under the PV Scheme, at the SA Government legislated prices.

For the purpose of comparison and information to the reader, the price changes for small customers in this Revised Pricing Proposal are compared to the AGL transitional small customer retail price applicable in 2014/15. They represent a publicly available discounted retail price which is used by a significant proportion of SA residential customers.

Over the last 15 years, SA Power Networks has used a residential customer consuming 5,000 kWh per annum as a typical, average customer. For consistency with previous years, SA Power Networks continues to use 5,000 kWh as a typical average customer, although the median customer today would be closer to 4,000 kWh because of energy efficiency and use of their own PV energy in-house.

The cost of electricity distribution services from SA Power Networks will reduce the average residential bill by -8.9% (-$163). The distribution charges reflect the AER's Preliminary Decision for 2015-20 announced in April 2015. The Final Determination for 2015-20 will be announced in October 2015, with any adjustments reflected in future pricing proposals eg 2016/17.

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In addition to SA Power Networks' distribution charges, SA Power Networks pays ElectraNet the transmission charge and recovers this charge from customers. We have used the recently released ElectraNet final prices for 2015/16 and have applied their pricing explicitly to individual customer segments this year. Whilst total payments to ElectraNet are largely unchanged this year, the amount recovered from residential customers account for a separate +1.2% increase in the retail bill (+$22).

Also, SA Power Networks is obliged to pay qualifying solar PV generators a legislated credit price for the energy they export, and recover this via charges from all customers. Both of these items (ie transmission charges and solar PV FiT credits) are 'passed through' by SA Power Networks - the amounts required to be paid are fully recovered from SA Power Networks' customers. Prices for 2015/16 are closer to that required for ongoing payments under the scheme than they were in 2014/15, so the amount recovered from typical residential customers will account for a separate -1.9% decrease in the retail bill (-$34).

The AER has also announced new arrangements for metering charges. The arrangements are more complex than applied in 2014/15, and are detailed later in this Pricing Proposal. For the vast majority of residential customers, their new metering price will reduce the retail bill by -0.7% (-$13).

The following Table provides a comparison of the annual cost for the average residential customer (5,000 kWh). The retail prices for 2015/16 have not been announced, so those values are blank. These changes should lower the typical residential customer's retail bill by -10.3% (-$188) relative to 2014/15 retail prices.

Component of price (a) **Average Residential Customer** **Using 5,000 kWh pa**	**2014/15** $ per annum	**2015/16** $ per annum	**(Decrease) / Increase** $ per annum	**Impact on retail bill**
1. SA Power Networks DUoS charge	$ 703	$ 540	-$ 163	-8.9%
2. Transmission charge(c)	$ 150	$ 172	+$ 22	+1.2%
3. Jurisdictional Scheme Amount (PV)	$ 128	$ 94	-$ 34	-1.9%
Total Networks charges	***$ 981***	***$ 806***	***-$ 175***	***-9.6%***
4. Metering (Alternative control)	$ 36	$ 23	-$ 13	-0.7%
Total Regulated charges	***$ 1,017***	***$ 829***	***-$ 188***	***-10.3%***
5. Retail (b)	$ 813			
Total Retail Bill includes GST	***$ 1,830***			

Notes:
(a) All amounts are nominal and contain GST.
(b) Using AGL transitional contract retail price for August 2014.
(c) Using ElectraNet May 2015 advice of 2015/16 prices.

The AER has used a 10 MWh small Business single-rate customer to illustrate typical small customer outcomes. The outcomes are shown below, and result in a 9.3% reduction to the retail bill.

Component of price (a) **Average Business Customer** **Using 10,000 kWh pa**	**2014/15** $ per annum	**2015/16** $ per annum	**(Decrease) / Increase** $ per annum	**Impact on retail bill**
1. SA Power Networks DUoS charge	$ 1,361	$ 1,099	-$ 262	-7.1%
2. Transmission charge (c)	$ 340	$ 337	-$ 3	-0.1%
3. Jurisdictional Scheme Amount (PV)	$ 248	$ 185	-$ 63	-1.7%
Total Networks charges	***$ 1,949***	***$ 1,621***	***-$ 328***	***-8.9%***
4. Metering (Alternative control)	$ 36	$ 23	-$ 13	-0.4%
Total Regulated charges	***$ 1,985***	***$ 1,644***	***-$ 341***	***-9.3%***
5. Retail (b)	$ 1,678			
Total Retail Bill includes GST	***$ 3,663***			

Notes:
(a) All amounts are nominal and contain GST.
(b) Using AGL transitional contract retail price for August 2014.
(c) Using ElectraNet May 2015 advice of 2015/16 prices.

For large business, we are concluding a period of tariff reform that has operated over the last 15 years. We currently have nearly 4,500 large business customers (>160 MWh pa) on cost-reflective demand tariffs. We propose to reassign the last 1,000 of such customers to cost-reflective tariffs from July 2015. To enable this to happen as smoothly as possible, we have:

- Reviewed the individual circumstances of the 5,500 customers and determined their most appropriate tariff;
- Reviewed the demand history of those customers who would continue to utilise agreed demand tariffs to see if the agreed demand should be reduced;
- Created a new actual demand tariff for business which will be suitable for those businesses with seasonal load and/or load which is flexible during the afternoon/evening. The demand would typically be measured and billed monthly; and
- Created transition arrangements whereby customers who might otherwise face a price increase from these tariffs have a 5 year transition period where the tariff changes progressively from 2014/15 arrangements to fully cost-reflective arrangements by July 2020. In 2015/16 the tariff is 30% cost-reflective and will apply to about 100 customers. All other customers can migrate to the cost-reflective tariffs in July 2015 without price increases.

Shortened forms

Abbreviation	Definition or description
AER	Australian Energy Regulator.
Augmentation	Investment in new network assets to meet increased demand.
Capacity, capability	The amount of energy 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 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 Preliminary Decision on South Australia - distribution determination 2015–16 to 2019–20, April 2015
Demand	Energy consumption at a point in time.
Demand Management	Attempt to modify demand behaviour so as to constrain 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). .
EDPD	Electricity Distribution Price Determination (South Australian).
ESCoSA	Essential Services Commission of South Australia, the South Australian Regulator of energy and other infrastructure.
FiT	Feed-in Tariff, paid to customers that have solar PV generators.
FRC	Full Retail Competition (sometimes called Full Retail Contestability).
High Voltage	Equipment or supplies at voltages of 22 or 11 kV.
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 instantaneous 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.

Abbreviation	Definition or description
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 230 V single phase or 415 V, 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.
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
PF	Power Factor, a measure of the ratio of real power to total power of a load. The relationship between real, reactive and total power is as follows: $PF = \frac{Real\ \ Power\ \ (in\ \ kW\ \ or\ \ MW)}{Reactive\ \ Power\ \ (in\ \ kVA\ \ or\ \ MVA)}$ $Total\ \ Power\ \ kVA = \sqrt{Real\ \ Power\ \ kW^2 + Reactive\ \ Power\ \ kVAr^2}$
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.
Proposal	SA Power Networks' Initial Pricing Proposal, submitted in accordance with the Rules (this document).
Retailer	An FRC market participant (business) supplying electricity to customers.
Rules	National Electricity Rules.
Subtransmission	Equipment or supplies at voltage levels of 66 or 33 kV.
Tariff	A grouping of customers who are subject to the same network price components and conditions of supply.
Tariff class	A class of customers for one or more direct control services who are subject to a particular tariff or particular tariffs.
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 275 and 132 kV with some at 66 kV.
TUoS	Transmission Use of System charges for the utilisation of the transmission network.

Abbreviation	Definition or description
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.
WAPC	Weighted Average Price Cap, a form of regulatory price control, where the allowable price change is based on the weighted historic consumption of each price.

Contents

1 Introduction

SA Power Networks is submitting this annual Pricing Proposal (Pricing Proposal) for 2015/16 to the Australian Energy Regulator (AER). The proposal has been prepared in accordance with the requirements of the National Electricity Rules (Rules) and the AER's 2015-20 Preliminary Decision made in April 2015.

The Pricing Proposal covers all of SA Power Networks' standard control services (DUoS) and alternative control services (metering). In its April 2015 Preliminary Decision, the AER confirmed a change in 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.

1.1 National Electricity Rules

Clause 6.1.1 of the Rules confers responsibility on the AER for the economic regulation of distribution services provided by means of, or in connection with, distribution systems that form part of the national grid.

1.1.1 Classification of distribution services

In accordance with clause 6.2.1 and 6.2.2 of the Rules, the AER has classified SA Power Networks' distribution services into the following three classes:

1. Direct control services;
2. Negotiated distribution services; and
3. Unregulated distribution services.

Direct control services have been further divided into the following two subclasses:

1. Standard control services; and
2. Alternative control services.

This Pricing Proposal applies to all of the direct control services provided by SA Power Networks.

1.2 Scope of SA Power Networks' Pricing Proposal

SA Power Networks' Pricing Proposal sets out the proposed prices required to comply with the revenue cap (direct control) and price cap (alternative control) approved by the AER.

This Pricing Proposal is submitted in accordance with, and complies with, the requirements of:

1. The National Electricity Law;
2. The National Electricity Rules, including the Transitional Rules for South Australia;
3. The AER's 2015-20 SA Power Networks Preliminary Determination, including the AER's Preliminary Decisions on the control mechanisms and revenue/pricing *X* factors for standard control services and alternative control services;

1.3 Structure of SA Power Networks' Pricing Proposal

In Part I of the Rules, clause 6.18 sets out the requirements concerning Distribution Pricing. These requirements include:

- The Pricing Principles which must be followed;
- The requirement for this Pricing Proposal; and
- The matters that the Pricing Proposal must address.

The AER's Preliminary Decision has been made pursuant to clause 6.11.1 of the Rules. Several aspects of that determination impose requirements concerning distribution pricing, including:

- Classification of services;
- The pricing control mechanism(s), *X* factors and side constraints;
- Assigning and reassigning customers to tariff classes;
- Recovery of transmission charges; and
- The passthrough of costs, in specified circumstances. This includes the PV Jurisdictional Scheme Amount.

This Pricing Proposal has been structured so as to allow compliance with the specific requirements of the Rules and the AER's Preliminary Decision to be readily ascertained. The substantive Sections of this Pricing Proposal are set out in Table 1.

Table 1 - Structure of SA Power Networks' Pricing Proposal

Section		Purpose
2	Regulatory Requirements	Summarises the regulatory requirements as they relate to SA Power Networks' Pricing Proposal including the relevant requirements of the Rules and the AER's 2015 Preliminary Decision. It also describes the requirements concerning the recovery of the Jurisdictional Scheme Amount, to fund Feed-in Tariff payments made to customers with solar PV generators.
3	Business Overview	Summarises the characteristics of SA Power Networks' network that provide the context for SA Power Networks' network tariff strategy.
4	Tariff Classes	Defines the tariffs and tariff classes into which SA Power Networks' customers for direct control services are divided and their charging parameters.
5	Network Tariff Strategy	Outlines SA Power Networks' Network Tariff Strategy and indicates how tariff charging parameters are expected to vary.
6	Standard Control Services Tariffs	Describes the nature and extent of the change in SA Power Networks' DUoS tariffs between 2014/15 and 2015/16.
7	Customer Impacts	Outlines the expected customer impacts of Network Use of System (NUoS) prices in 2015/16 and the system of reviewing those impacts throughout the regulatory control period.
8	Pricing of Standard Control Services	Demonstrates that SA Power Networks' 2015/16 prices comply with the revenue X factors, side constraints and the NER Pricing Principles.
9	Transmission Cost Recovery Tariffs	Sets out SA Power Networks' Transmission cost recovery tariff setting methodology and demonstrates adjustments made to the tariffs resulting from the actual, estimated and forecast recovery of these charges in 2013/14, 2014/15 and 2015/16.
10	Recovery of the PV Jurisdictional Scheme Amount	Sets out SA Power Networks' approach to the recovery of the Jurisdictional Scheme Amount for the recovery of SA Government Feed-in Tariff payments made by SA Power Networks to customers with qualifying solar PV generators.
11	Customer Assignment and Reassignment	Sets out SA Power Networks' tariff assignment and reassignment strategy, in line with the AER's requirements from the Preliminary Decision (Attachment 14).
12	Alternative Control Services	Sets out SA Power Networks' tariffs for alternative control metering services.
Appendices		Separately provided.

1.4 Confidential information

Clause 6.19.2 of the Rules classifies as confidential all network pricing information about a Distribution Network User used by a DNSP for the purposes of network pricing. SA Power Networks has nominated Attachments B and G which constitute part of this Pricing Proposal, as confidential.

SA Power Networks requests that the AER does not disclose the information contained in these confidential attachments to any person outside of the AER.

2 Regulatory requirements

This Section summarises the regulatory requirements pertaining to SA Power Networks' Pricing Proposal, including the relevant requirements of the Rules and those of the AER's 2015-20 Preliminary Decision.

2.1 Rules requirements

2.1.1 Required elements of a Pricing Proposal

To comply with clause 6.18.2 of the Rules, SA Power Networks' 2015/16 Pricing Proposal must include the elements below[1]:

6.18.2 Pricing proposals

(a) A *Distribution Network Service Provider* must:

(1) submit to the *AER*, as soon as practicable, and in any case within 15 *business days*, after *publication* of the distribution determination, a *pricing proposal* (the initial *pricing proposal*) for the first *regulatory year* of the *regulatory control period*; and

(2) submit to the *AER*, at least 2 months before the commencement of the second and each subsequent *regulatory year* of the *regulatory control period*, a further *pricing proposal* (an annual *pricing proposal*) for the relevant *regulatory year*.

(b) A *pricing proposal* must:

(1) set out the *tariff classes* that are to apply for the relevant *regulatory year*; and

(2) set out the proposed tariffs for each *tariff class*; and

(3) set out, for each proposed tariff, the *charging parameters* and the elements of service to which each *charging parameter* relates; and

(4) set out, for each *tariff class* related to *standard control services*, the expected weighted average revenue for the relevant *regulatory year* and also for the current *regulatory year*; and

(5) set out the nature of any variation or adjustment to the tariff that could occur during the course of the *regulatory year* and the basis on which it could occur; and

(6) set out how charges incurred by the *Distribution Network Service Provider* for *transmission use of system services* are to be passed on to customers and any adjustments to tariffs resulting from over or under recovery of those charges in the previous *regulatory year*; and

(7) demonstrate compliance with the *Rules* and any applicable distribution determination; and

(8) describe the nature and extent of change from the previous *regulatory year* and demonstrate that the changes comply with the *Rules* and any applicable distribution determination.

In accordance with clause 6.18.2(a) of the Rules, SA Power Networks is submitting this Pricing Proposal for the first year of the 2015-20 regulatory control period to the AER within the required period after publication of the Preliminary Decision.

[1] Australian Energy Market Commission, National Electricity Rules, version 35, 25 March 2010.

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This Pricing Proposal has been prepared by SA Power Networks in such a way as to demonstrate in a logical sequence that it complies with all of the requirements of clause 6.18.2(b) of the Rules above.

The other relevant Sections of the Rules that have been addressed in formulating this Pricing Proposal are as follows:

6.18.3 Tariff classes

6.18.5 Pricing principles

6.18.6 Side constraints on tariffs for standard control services

6.18.7 Recovery of charges for transmission use of system services

6.18.8 Approval of pricing proposal

6.18.9 Publication of information about tariffs and tariff classes

Reference to these clauses has been made in the appropriate Sections of this Pricing Proposal, to demonstrate how SA Power Networks has complied with each applicable Rules provision.

2.2 Requirements of the AER's 2015 Preliminary Decision

The AER's April 2015 Preliminary Decision for South Australia has been made pursuant to the provisions clause 6.11.1 of the Rules and imposes a number of requirements that are relevant to a Pricing Proposal. The relevant requirements are as follows:

Attachment 1 Annual revenue requirement

Attachment 11 Service target performance incentive scheme

Attachment 12 DMIS arrangements

Attachment 13 Classification of services

Attachment 14 Control mechanism

- Application of the revenue cap, and under/over recovery mechanism for DUoS
- Under/over recovery for transmission (TUoS)
- Under/over-recovery of jurisdictional schemes (PV FiT)
- Revenue control and Pricing side constraint formulae
- Assigning retail customers to tariff classes

Attachment 15 Pass through events

Attachment 16 Alternative control services

Where it is necessary to demonstrate that SA Power Networks has complied with a requirement of the AER's Decision, reference to the relevant component of the Decision has been made in the appropriate Section of this Pricing Proposal.

2.3 Principal elements of the AER's 2015 Preliminary Decision

The principal elements of the AER's Decision pertaining to direct control services (comprising standard and alternative control services) are outlined in this Section.

2.3.1 Revenue Cap for standard control services

SA Power Networks' Pricing Proposals must submit to the AER proposed tariffs and charging parameters. SA Power Networks' revenues must be consistent with the total annual revenue formula set out below plus any unders and overs adjustment needed to move the balance of its DUoS unders and overs account to zero[2].

Revenue cap formula

1. $TAR_t \geq \sum_{i=1}^{n} \sum_{j=1}^{m} p_t^{ij} \, q_t^{ij}$ i=1,...,n and j=1,...,m and t=1,...,5
2. $TAR_t = AR_t \pm I_t \pm C_t$
3. $AR_t = AR_{t-1}(1 + \Delta CPI_t)(1 - X_t)(1 + S_t)$

Where:

TAR_t is total annual revenue in year t.

p_t^{ij} is the price of component i of tariff j in year t.

q_t^{ij} is the forecast quantity of component i of tariff j in year t.

AR_t is the annual smoothed expected revenue for year t. For the first year of the 2015–20 regulatory control period, this amount will be equal to the smoothed revenue requirement for 2015–16 set out in the PTRM.

I_t is the final carryover amount from the application of the DMIS from the 2010–15 distribution determination. This amount will be deducted from/added to allowed revenue in the 2016-17 pricing proposal.

C_t is the approved pass through amounts (positive or negative) with respect to regulatory year t, as determined by the AER.

ΔCPI_t is the annual percentage change in the Australian Bureau of Statistics (ABS) Consumer Price Index All Groups, Weighted Average of Eight Capital Cities from December in year t–2 to December in year t–1. For example, for the 2015–16 year, t–2 is December 2013 and t–1 is December 2014 and in the 2016–17 year, t–2 is December 2014 and t–1 is December 2015 and so on.

X_t the smoothing factor determined in accordance with the PTRM as approved in the AER's final decision, and annually revised for the return on debt update in accordance with the formula specified in the return on debt appendix I calculated for the relevant year.

S_t is the STPIS factor sum of the raw s-factors for all reliability of supply and customer service parameters (as applicable) to be applied in year t.[3]

[2] AER, Preliminary Decision, April 2015, Attachment 14 pp.12.

[3] In the formulas in the STPIS attachment, the AR_{t+1} is equivalent to AR_t in this formula. Calculations of the S factor adjustment are to be made accordingly.

2.3.2 Side constraint for standard control services

SA Power Networks must demonstrate in its pricing proposal that proposed DUoS prices for the next year (t) will meet the side constraints formula for each tariff class[4].

Side constraints

$$\frac{(\sum_{j=1}^{m} d_t^j q_t^j)}{(\sum_{j=1}^{m} d_{t-1}^j q_t^j)} \leq (1+\Delta CPI_t)(1-X_t)(1+2\%)(1+S_t) \pm I_t \pm C_t \pm DUoS_t$$

where each tariff class has up to 'm' components, and where:

d_t^j is the proposed price for component 'j' of the tariff class for year t

d_{t-1}^j is the price charged by SA Power Networks for component 'j' of the tariff class in year t–1

q_t^j is the forecast quantity of component 'j' of the tariff class in year t

ΔCPI_t is the annual percentage change in the Australian Bureau of Statistics (ABS) CPI All Groups, Weighted Average of Eight Capital Cities from December in year t-2 to December in year t-1.

X_t is the smoothing factor determined in accordance with the PTRM as approved in the AER's final decision, and annually revised for the return on debt update in accordance with the formula specified in the return on debt appendix I calculated for the relevant year. If X>0, then X will be set equal to zero for the purposes of the side constraint formula

S_t is the STPIS factor sum of the raw s-factors for all reliability of supply and customer service parameters (as applicable) to be applied in year t.[5]

I_t is the final carryover amount from the application of the DMIS from the 2010–15 distribution determination. This amount will be deducted from/added to allowed revenue in the 2016-17 pricing proposal.

C_t is the sum of adjustments relating to pass through events.

$DUoS_t$ is an annual adjustment factor related to the balance of the DUoS unders and overs account with respect to regulatory year t

With the exception of the CPI and X factors, the percentage for each of the other factors above can be calculated by dividing the incremental revenues (as used in the total annual revenue formula) for each factor by the expected revenues for regulatory year t–1 (based on the prices in year t–1 multiplied by the forecast quantities for year t).

2.3.3 Revenue requirement and pricing X factors for standard control services

Attachment 1 of the Decision contains SA Power Networks' standard control service 2015/16 smoothed revenue requirements of $682 M and revenue X factors for subsequent years. Attachment 16 contains alternative control metering services prices for 2015/16 and price *X* factors for subsequent years. The AER's October 2015 Final Decision will amend those X factors for subsequent years.

[4] AER, Preliminary Decision, April 2015, Attachment 14 pp.13.

[5] In the formulas in the STPIS attachment, the AR_{t+1} is equivalent to AR_t in this formula. Calculations of the S factor adjustment are to be made accordingly.

2.3.4 Price Cap for alternative control services

The AER's Preliminary Decision has set the annual metering charges for 2015/16.

- Most small customers will incur the non-capital and capital charges, typically for a type 5-6 WC manually read meter with quarterly readings. There are other charges for CT meters and Exceptional meters supplied by SA Power Networks.
- Customers who do not use SA Power Networks' meters at June 2015 continue to not get a charge.
- Customers who switch to another meter provider from July 2015 will still incur the capital-related charge.
- New customers from July 2015 electing to use an SA Power Networks' meter will incur the upfront capital charge, as well as the ongoing non-capital charge.

Metering charges are discussed further later in this pricing proposal.

AER Table 2.1Annual metering charge – Preliminary Decision ($ nominal)[6]

Tariff class	Costs	2015/16	2016/17	2017/18	2018/19	2019/20
Type 1–4 'Exceptional' remotely read interval meter	Non–capital	135.07	138.51	142.05	145.67	149.38
	Capital	176.18	180.67	185.28	190.00	194.84
Type 5–6 CT connected manually read meter	Non–capital	73.52	75.40	77.32	79.29	81.32
	Capital	95.90	98.35	100.85	103.42	106.06
Type 5–6 WC manually read meter	Non–capital	8.98	9.21	9.44	9.68	9.93
	Capital	11.71	12.01	12.32	12.63	12.95

AER Table 2.2AER Preliminary Decision X factors for annual metering charges (per cent) [6]

	2016–17	2017–18	2018–19	2019–20
X factor	0	0	0	0

AER Table 2.3Upfront capital charges – Preliminary Decision[6]

Meter	Upfront charge ($ Dec 2014)
Type 5	
Single element	160.80
Two element	230.54
Three phase	396.43
Type 6	
Single element	100.06
Two element	254.50
Three phase	298.40

AER Table 2.4AER Preliminary Decision X factors for upfront capital charge (per cent) [6]

	2015–16	2016–17	2017–18	2018–19	2019–20
X factor	–0.22	–0.44	–0.43	–0.44	–0.46

[6] AER, Preliminary Decision, April 2015, Attachment 16 pp.52.

2.4 Publication of information about tariffs and tariff classes

Clause 6.18.9 of the Rules requires SA Power Networks to publish the following information on its tariffs and tariff classes.

6.18.9 Publication of information about tariffs and tariff classes

(a) A *Distribution Network Service Provider* must maintain on its website:

(1) a statement of the provider's *tariff classes* and the tariffs applicable to each class; and

(2) for each tariff – the *charging parameters* and the elements of the service to which each *charging parameter* relates;

(3) a statement of expected price trends (to be updated for each *regulatory year*) giving an indication of how the *Distribution Network Service Provider* expects prices to change over the *regulatory control period* and the reasons for the expected changes.

(b) The information for a particular *regulatory year* must, if practicable, be posted on the website 20 *business days* before the commencement of the relevant *regulatory year* and, if that is not practicable, as soon as practicable thereafter.

The information on tariffs and tariff classes contained in the following Sections of this Pricing Proposal has been prepared and published in conformity with the requirements of this clause.

3 Business overview

This Section of the Pricing Proposal provides contextual information on SA Power Networks' business circumstances. This provides the backdrop both to SA Power Networks' existing network tariffs and the rationale for the changes to tariffs that are proposed during the 2015-20 regulatory control period.

3.1 SA Power Networks' business

SA Power Networks' distribution network covers the State of South Australia, a vast territory of about 178,200 square kilometres (km), with a coastline of over 5,000 km.

The network's route length extends to more than 87,000 km, with approximately 19% of that length underground. The network includes 403 zone substations, 72,600 distribution transformers, approximately 723,000 poles and 1.1 million meters.

The extent of SA Power Networks' operations in South Australia is shown in Figure 1. The South Australian distribution network is predominantly three-phase, with a single-phase system used mostly in rural and remote areas. A sub-transmission network supplies and links zone substations, operating at 66 kilovolts (kV) and 33 kV. In rural and remote areas the single-phase system operates at 19 kV. Overall, some 30% of the network is comprised of these long 'single wire earth return' (SWER) lines.

In higher density rural and urban locations, the three-phase feeder system operates at 11 kV. The standard low voltage customer supply is 230V at 50Hz.

3.2 State-wide pricing

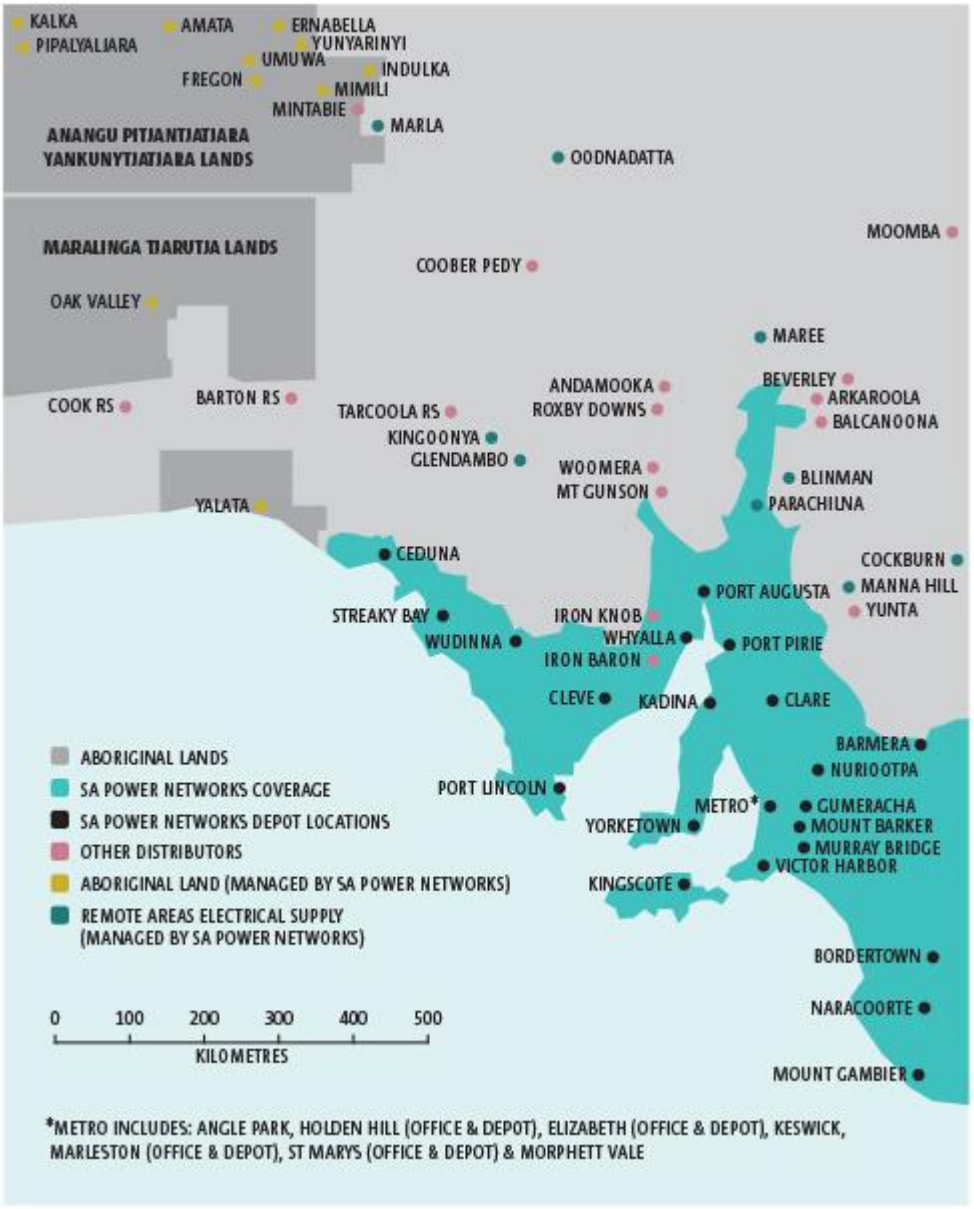
The South Australian government has imposed a requirement on SA Power Networks to maintain state-wide pricing for small customers (with annual consumption not exceeding 160 MWh)[7]. As a consequence, all of SA Power Networks' distribution tariffs are averaged. For larger business customers with energy consumption in excess of 40 GWh or a demand greater than 10 MW, locational transmission use of system (TUoS) charges apply.

[7] South Australian Treasurer, Electricity Act 1996 Section 35B Electricity Pricing Order, 11 October 1999. Cl 7.3 (f)-(h)

3.3 Characteristics of the region

With the exception of much of the coastal area and the hinterland, South Australia is very sparsely settled. The area serviced by SA Power Networks' distribution system is shown in Figure 1.

Figure 1 - SA Power Networks' service area



Approximately 70% of customers reside in Adelaide, including the great majority of business and commercial customers. However, the extensive area serviced by distribution means that 70% of the network infrastructure is required to deliver energy to the remaining 30% of customers. Compared with other states, there are relatively few regional centres, and they are generally small and located widely across the territory.

As a result, the average customer density across the State is very low.

3.4 Climatic conditions

Adelaide and much of South Australia has a dry climate featuring greater extremes of summer temperature than most other Australian capitals. Extended periods of heatwave conditions can occur in summer (March 2008, January-February 2009, November 2009 and January 2014 are recent examples of extended heatwaves).

During these heatwave periods, summer daytime temperatures can exceed 40^{o}C for several days in a row and overnight minimums can remain above 30^{o}C for some of those days.

3.5 SA Power Networks' customer and demand profile

The South Australian climate has led to lead to an extraordinary demand for air conditioning. Over 90% of homes are air conditioned with the air-conditioned floor space of these homes increasing each year. The consequent high peak network demand occurs for only a small part of the year. At other times in summer, milder weather often occurs which requires no air conditioning in most homes.

Extremely 'peaky' conditions such as these heatwaves require network assets and capacity that is under-utilised during much of the year, driving distribution costs higher on a per unit of energy served basis than comparable interstate networks. These conditions also provide the impetus for SA Power Networks' network tariff strategies and innovative tariff developments described in Sections 5.4 to 5.8.

A more recent development has been the customer uptake of PV systems by small customers. Over 23% of residential customers now have PV systems operating, reducing their use of energy when the sun is shining. The incentives of the solar PV feed-in tariff schemes have been popular, and customers have responded to the incentives provided.

4 Tariff Classes

This Section describes SA Power Networks' standard control service tariff classes and the way in which they have been constituted to comply with the requirements of the Rules and the AER's Determination.

In Attachment 13 of the Preliminary Decision, AER has classified the following distribution services provided by SA Power Networks as standard control services[8]:

B.1 'Standard' network services

a. All network services except:

   i. network services provided at the request of a distribution network user:

      (i) with higher quality or reliability standards, or lower quality or reliability standards (where permissible), than are required by the rules or any other applicable regulatory instruments, or

      (ii) in excess of levels of service or plant ratings required to be provided by SA Power Networks' assets, or

   ii. extension or augmentation of the distribution network associated with the provision of a new connection point or upgrading of the capability of a connection point to the extent that a distribution network user is required to make a financial contribution in accordance with the rules, or

   iii. other network services that are classified as negotiated distribution services in sections B.6 to B.15 of this appendix B.

B.2 Standard connection services

a. All connection services except:

   i. connection services provided at the request of a distribution network user:

      (i) with higher quality or reliability standards, or lower quality or reliability standards (where permissible), than are required by the rules or any other applicable regulatory instruments, or

      (ii) in excess of levels of service or plant ratings required to be provided by SA Power Networks assets, or

   ii. the provision of a new connection point or upgrading of the capability of a connection point to the extent that a distribution network user is required to make a financial contribution in accordance with the rules, or

   iii. other connection services that are classified as negotiated distribution services in sections B.6 to B.15 of this appendix B.

B.3 Unmetered metering services

a. The provision of metering services in respect of meters meeting the requirements of a metering installation type 7.

[8] AER, Preliminary Decision, April 2015, Attachment 13, pp. 17.

4.1 Regulatory requirements

4.1.1 Rule requirements

SA Power Networks' Pricing Proposal must contain the information on tariffs, tariff classes and charging parameters set out in clause 6.18.2 of the Rules.

6.18.2 Pricing proposals

(b) A *pricing proposal* must:

(1) set out the *tariff classes* that are to apply for the relevant *regulatory year*; and

(2) set out the proposed tariffs for each *tariff class*; and

(3) set out, for each proposed tariff, the *charging parameters* and the elements of service to which each *charging parameter* relates.

SA Power Networks is required to comply with the following requirements of clause 6.18.3 of the Rules with respect to tariff classes.

6.18.3 Tariff classes

(a) A *pricing proposal* must define the *tariff classes* into which customers for *direct control services* are divided.

(b) Each customer for *direct control services* must be a member of 1 or more *tariff classes*.

(c) Separate *tariff classes* must be constituted for customers to whom *standard control services* are supplied and customers to whom *alternative control services* are supplied (but a customer for both *standard control services* and *alternative control services* may be a member of 2 or more *tariff classes*).

(d) A *tariff class* must be constituted with regard to:

(1) the need to group customers together on an economically efficient basis; and

(2) the need to avoid unnecessary transaction costs.

4.1.2 Requirements of the AER's Decision

The AER has established procedures for assigning or reassigning customers to tariff classes in Attachment 14 of its Preliminary Decision. At the commencement of the regulatory control period, SA Power Networks' retail customers will be taken to be "assigned" to the tariff class which SA Power Networks was charging that retail customer immediately prior to 1 July 2015[9].

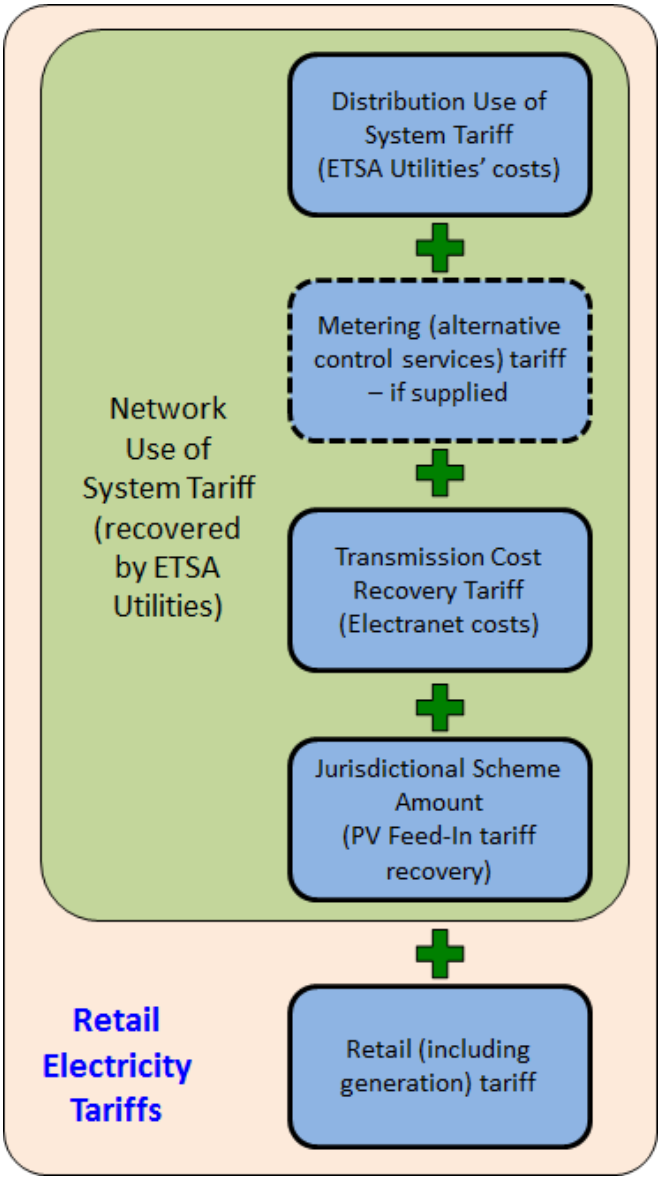
Attachment 14 Section D of the Preliminary Decision contains procedures for the reassigning of customers to tariff classes, with which SA Power Networks must comply during the 2015-20 regulatory control period. These procedures are set out in Appendix J of this Proposal.

[9] AER, Preliminary Decision, April 2015, Attachment 14, p. 21.

4.2 Standard control service tariffs and tariff classes

SA Power Networks' network use of system tariffs are an aggregation of distribution use of system tariffs, metering service tariffs and transmission cost recovery tariffs. The components of these tariffs are illustrated in Figure 2.

Figure 2 - Components of SA Power Networks' (formerly ETSA Utilities) network tariffs



Retailers may pass through the components of SA Power Networks' network tariffs to customers directly, or modify their structure by bundling with the retail component, which includes the cost of purchasing generated energy from the NEM and retail costs.

This Section outlines the distribution tariff arrangements, which are designed to recover the cost of providing prescribed control services to customers. These services are segregated into tariffs and tariff classes, which cover all of direct control services that SA Power Networks provides, as required by clauses 6.18.3(a) and 6.18.3(b).

Section 12 of this Pricing Proposal outlines the arrangements for SA Power Networks' alternative control metering service tariffs, which in accordance with clause 6.18.3(c) of the Rules has been constituted as a separate tariff class with separate charging parameters.

The transmission cost recovery Section 9 describes how the transmission costs incurred by SA Power Networks are recovered from customers, again with separate charging parameters.

The process by which SA Power Networks recovers the SA Government Solar PV FiT payments through the PV Jurisdictional Scheme Amount (JSA) is described in Section 10. This is applied as a percentage uplift to the DUoS charge.

The grouping of customers into standard control service tariffs has historically distinguished between customers on the basis of the following factors:

- The nature and extent of usage of different types of customer;
- For business customers, nature of connection to the network, including the capacity and location or voltage of connection;
- Whether the customer also receives a controlled load service; and

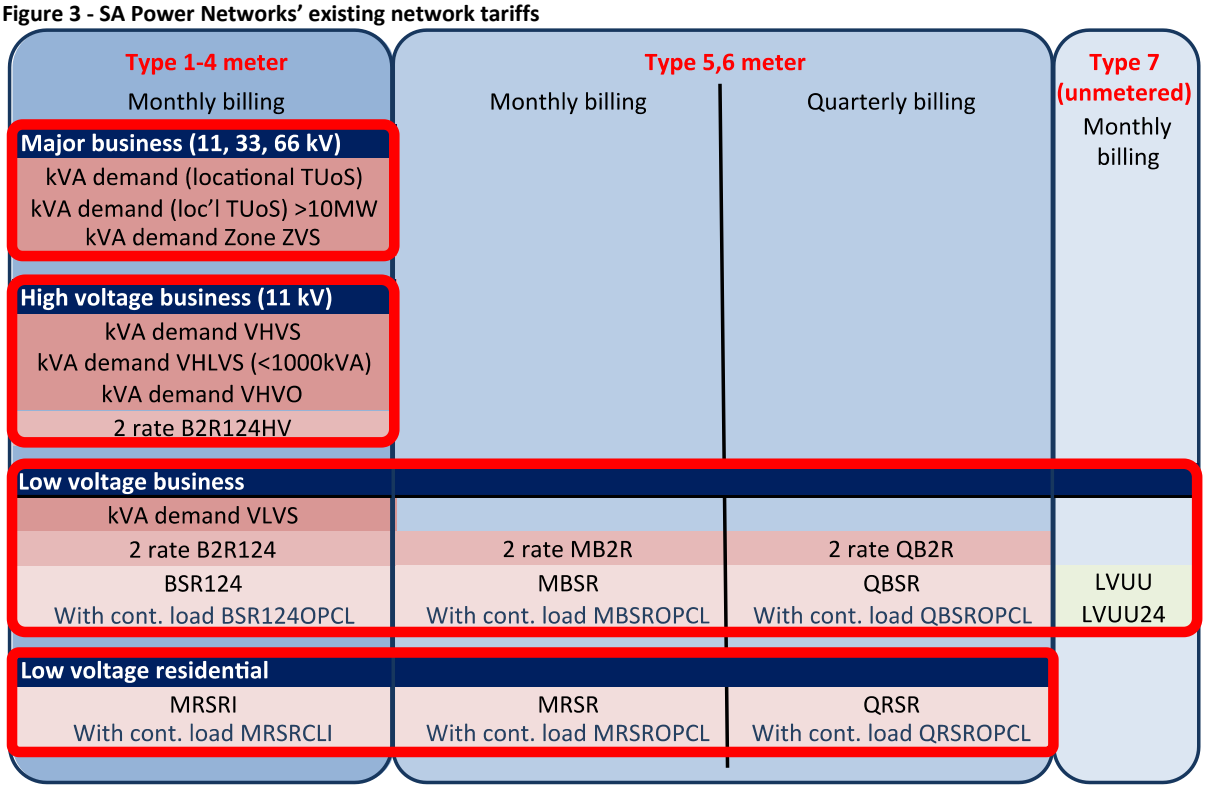
- The type of meter installed at the premises, with a distinction between Types 1-4 metering and Types 5-6 metering.

Clearly, in establishing tariff classes that are to be used for the purpose of monitoring pricing compliance, it is desirable and appropriate that similar individual tariffs should be grouped together. This is particularly the case for some business tariffs, where one or a few large customers would dominate the class and the side constraint would not apply to a tariff class but for those large customers.

SA Power Networks' network tariffs and tariff classes for 2015-16 are shown in Figure 3 below. The tariff classes have been constituted with regard to the provisions of clause 6.18.3(d) of the Rules concerning economic efficiency and transaction costs. As is apparent from the diagram, the suite of tariffs provides:

- A range of tariffs which are dependent upon a customer's size, consumption characteristics and voltage of connection (these factors are generally related); and
- A level of sophistication in the pricing and billing, in some cases facilitated by the metering arrangements.

Figure 3 - SA Power Networks' existing network tariffs



4.2.1 Standard control services tariffs

The tariffs in Figure 3 cover a diverse range of customer requirements.

Residential customer tariffs have a fixed daily charge (termed the Supply Rate) and an inclining block energy component, in common with the tariff structures of many utilities. In 2009/10, the inclining block energy charge was modified to include four block levels. In 2014/15 the tariff reverted to two blocks. A separate energy rate applies to the energy consumption within each block level. A residential actual demand tariff was introduced in 2014/15.

Business customer tariffs cover the range of:

- Inclining block energy tariffs for small Low Voltage connected customers;
- Two rate Time of Use (peak and off peak) for medium Low Voltage connected customers;
- kVA agreed demand tariffs for large customers at all voltage levels, with individually calculated (locational) transmission prices for those customers with a demand in excess of 10 MW. The demand charge is stepped according to the customer's size, to reflect the cost of providing network capacity at the particular voltage level and location; and
- From July 2015, 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. Medium business customers can also opt-in for this tariff.

4.2.2 Standard control services tariff classes

The four tariff classes that SA Power Networks has established are as follows:

- Major business (11 kV substation connection through to 66 kV);
- High Voltage business (typically at 11 kV)
- Low voltage business including unmetered supplies; and
- Residential.

SA Power Networks has illustrated the grouping of its individual tariffs into tariff classes in Figure 3 using red outlines.

A description of the tariffs in each of the tariff classes and their charging parameters follows. More detailed information on the application of the tariffs is available from SA Power Networks' website. This Section does not describe the range of obsolete tariffs.

Note that, for completeness, those components of charging parameters associated with transmission recovery tariffs and alternative control services have been shown in the following Section.

4.3 Low voltage residential tariff class

This tariff class includes the residential single rate and controlled load tariffs.

4.3.1 Low voltage residential single rate tariff

The low voltage residential single rate tariff is available to eligible residential customers taking supply at less than 1 kV. These customers ordinarily use a Type 1-6 NEM compliant meter and metered energy consumption is charged in two blocks. The low voltage residential single rate tariff incorporates the charging parameters set out in Table .

Table 2 - Low voltage residential tariff single rate charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Supply Rate	$/day	X	-	X	-	Fixed daily charge
Block 1 Usage Rate	$/kWh	X	X	X	-	For consumption up to and including 333.3 kWh/ month
Block 2 Usage Rate	$/kWh	X	X	X	-	For the balance of consumption

Metering charges are discussed in detail separately in this Pricing Proposal. From July 2015, they will be charged where applicable as a separate alternative control charge, not within the standard control tariff.

4.3.2 Controlled load tariff

The low voltage controlled load tariff is available for permanently installed storage water heaters with a rated delivery of not less than 125 litres, storage space heaters and other approved applications. A time switch for the control of the heater and separate metering is installed.

The controlled load tariff incorporates the charging parameters set out in Table .

Table 3 - Controlled load tariff charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Usage Rate	$/kWh	X	X	X	-	For all consumption

This tariff is available only to residential customers and to those business customers that were taking supply under the controlled load tariff previously. This tariff is invoiced at the same frequency as the primary tariff. Discussion on the time when controlled load can be used is included in the new tariff development section.

4.3.3 Low voltage residential monthly demand tariff

The low voltage residential monthly demand tariff is available to eligible residential customers taking supply at less than 1 kV. This is an optional tariff that commenced on 1 July 2014. These customers will require a Type 1-5 NEM compliant meter read at least monthly. Metered energy consumption is charged at a single rate. The maximum kW demand (measured over a half hour interval) between 4pm and 9pm on any day in the month is used to bill the monthly demand. A higher price applies for the five summer months (November to March) than the seven winter months (April to October).

Currently, there is no charge for demand that is higher outside of the peak 4pm to 9pm time period. There is a limit in 2015/16 of 1,000 customers able to utilise this tariff.

The low voltage residential monthly demand tariff incorporates the charging parameters set out in Table 4. There is a minimum quantity of 1.5 KW for peak or shoulder demand in any month.

Another variation of this tariff is being created for 2015/16 which has the same structure and demand measurement, but will bill the actual kW recorded for the number of days between the meter-read dates rather than for a month. This is expected to assist retailers with their billing where type 5 meters are used, as these are read during the month (or quarter) as opposed to the month-end associated with a type 4 meter. The use of a 'per day' charge for the maximum demand between read dates was a suggestion received via retailer consultation. It has also enabled the AER's 2015-16 metering charges to be implemented on a 'per day' basis.

Table 4 – Low voltage residential monthly demand tariff charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Supply rate	$/day	-	-	-	- Type 4 or 5 monthly meter required	Fixed daily charge
Usage Rate	$/kWh	X	X	X		For all consumption
Summer Demand Peak Rate	$/kW/mth	X	X	X		For Nov-March demand, 16:00-21:00 local time
Winter Demand Shoulder Rate	$/kW/mth	X	X	X		For Apr-Oct demand, 16:00-21:00 local time
Demand Off-peak Rate	$/kW/mth	-	-	-		For anytime demand each month.

Metering charges are discussed in detail separately in this Pricing Proposal. From July 2015, they will be charged where applicable as a separate alternative control charge, not within the standard control tariff.

4.4 Low voltage business tariff class

The low voltage business tariffs cover a broad range of customer sizes and types of metering installations. This tariff class is the most diverse in terms of its consumption range and the variety of end uses.

4.4.1 Business low voltage single rate tariff (obsolete)

The low voltage business single rate tariff was available for use at a Type 1-6 meter installation. As with the residential tariff, consumption is charged on an inclining scale in two consumption blocks. The low voltage business single rate tariff incorporates the charging parameters set out in Table . This tariff was closed to new applicants on 30 June 2010.

Table 5 - Low voltage business single rate tariff charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Supply Rate	$/day	X	-	X	-	Fixed daily charge
Block 1 Usage Rate	$/kWh	X	X	X	-	For consumption up to and including 833.3 kWh/ month
Block 2 Usage Rate	$/kWh	X	X	X	-	For the balance of consumption

Metering charges are discussed in detail separately in this Pricing Proposal. From July 2015, they will be charged where applicable as a separate alternative control charge, not within the standard control tariff.

4.4.2 Business low voltage 2-rate tariff

The low voltage business 2-rate tariff has a Time of Use (ToU) structure with peak and off-peak consumption charges, using a Type 1-6 meter. The customer's peak period energy consumption is charged in four consumption blocks. The low voltage business 2-rate tariff incorporates the charging parameters set out in Table . From 1 July 2014, the pricing of Block 1 through Block 4 is identical, effectively converting Business 2-rate into a single block tariff

Table 6 - Low voltage business 2-rate tariff charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Supply Rate	$/day	X	-	X	-	Fixed daily charge
Peak Usage Rate	$/kWh	X	X	X	-	For all peak period consumption
Off Peak Usage Rate	$/kWh	X	X	X	-	For all off-peak period consumption

Metering charges are discussed in detail separately in this Pricing Proposal. From July 2015, they will be charged where applicable as a separate alternative control charge, not within the standard control tariff.

4.4.3 Business low voltage kVA agreed demand tariff

The low voltage kVA agreed demand tariff generally applies to large business customers taking supply directly from a distribution transformer. This tariff requires a minimum of a type 5 (interval) meter capable of measuring both active and reactive power. The minimum demand of 70 kVA that previously applied has been removed from July 2015, although the tariff now includes a significant supply charge.

The peak demand is measured on work days between 12 noon and 9pm local time during the summer months of November to March. This is a slight change in 2015/16 as previously the peak demand was measured on workdays from December to March between 12 noon and 8pm local time. The expansion to 9pm and inclusion of November has been required because of significant co-incident network demands at these times when extreme weather occurs.

An alternate variation of this tariff is available for sporting clubs with significant floodlighting. The alternate tariff is the same, except that the peak demand period has been amended to 12noon-7pm December to February, Monday-Friday only rather than 12 noon-9*pm November* to *March,* Monday-Friday. The floodlights are not likely to be used on summer evenings when extreme temperatures occur due to health concerns, so peak charging for these lights is inappropriate.

This tariff has been simplified significantly. Previously there were 4 demand blocks. From July 2015 this has been reduced to two blocks, with the second block (above 1,000 kVA) utilised by only large businesses. The energy consumption of these customers is a simple anytime usage based charges. The primary pricing signal comes from the agreed demand charges.

The low voltage kVA demand tariff incorporates the charging parameters set out in Table 7.

Table 7 - Low voltage kVA agreed demand tariff charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Supply Rate	$/day	X	-	X	- Type 4 or 5 monthly meter required	Fixed daily charge
Annual Block 1 Demand Rate	$/kVA /mth	X	X	X	-	For peak demand up to and including 1000 kVA
Annual Block 2 Demand Rate	$/kVA /mth	X	X	X	-	For the balance of kVA demand
Additional demand	$/kVA /mth	X	-	X	-	Demand in excess of that required during summer peak hours.
Usage Rate	$/kWh	X	X	X	-	For all energy consumption

Metering charges are discussed in detail separately in this Pricing Proposal. From July 2015, they will be charged where applicable as a separate alternative control charge, not within the standard control tariff.

These tariffs are invoiced monthly. The charging will be amended in 2015/16 to a 'per day' basis rather than a 'per month' basis to enable implementation of the AER's 2015/16 metering charges.

4.4.4 Business low voltage kVA actual demand tariff

The business low voltage actual demand tariff is available to eligible business customers taking supply at less than 1 kV (the tariff is also available for business customers taking HV supply, typically at 11 kV). This is a tariff that commences on 1 July 2015. It is part of a suite of cost-reflective tariffs that are required to be used by large business customers. It will also be an optional tariff suitable for medium-sized businesses. These customers will require a Type 1-5 NEM compliant meter read at least monthly.

Metered energy consumption is charged at a single rate. The maximum kVA demand (measured over a half hour interval) between 12 noon and 4pm on any workday in the month is used to bill the shoulder actual demand across all 12 months of the year. A higher peak price applies for the five

summer months (November to March between 4pm and 9pm workdays when system co-incident peaks occur on extreme days). Currently, there is no charge for demand that is higher if it is outside of the peak and shoulder time periods.

Another variation of this tariff is being created for 2015/16 which has the same structure and demand measurement, but will bill the actual kVA recorded for the number of days between the meter-read dates rather than for a month. This is expected to assist retailers with their billing where type 5 meters are used, as these are read during the month (or quarter) as opposed to the month-end associated with a type 4 meter. The use of a 'per day' charge for the maximum demand between read dates was a suggestion received via retailer consultation. The low voltage Business actual demand tariff incorporates the charging parameters set out in Table 8.

Table 8 – Low voltage business actual demand tariff charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Supply rate	$/day	-	-	-	- Type 4 or 5 monthly meter required	Fixed daily charge
Summer Demand Peak Rate	$/kVA/mth	X	X	X		For Nov-March demand, 16:00-21:00 local time
Year-round Demand Shoulder Rate	$/kVA/mth	X	X	X		For July-June demand, 12:00-16:00 local time
Demand Off-peak Rate	$/kVA/mth	-	-	-		For anytime demand each month.
Usage Rate	$/kWh	X	X	X		For all consumption

Metering charges are discussed in detail separately in this Pricing Proposal. From July 2015, they will be charged where applicable as a separate alternative control charge, not within the standard control tariff.

4.4.5 Business low voltage kVA transition actual demand tariff

The business low voltage transition actual demand tariff is available to large business customers reassigned from a business energy tariff to a cost-reflective tariff in July 2015 but who would be worse off as a result. This is a tariff that commences on 1 July 2015. It is part of a suite of cost-reflective tariffs that are required to be used by large business customers. The tariff is a combination of 70% business 2-rate and 30% business actual demand. In 2016/17, the proportion of business 2-rate will reduce and the actual demand proportion will increase. Transition should be complete by 2020. These customers will require a Type 1-5 NEM compliant meter read at least monthly.

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All tariff elements used in the business 2-rate and agreed monthly demand tariffs are used in this transition tariff. The low voltage Business actual demand tariff incorporates the charging parameters set out in Table 9.

Another variation of this tariff is being created for 2015/16 which has the same structure and demand measurement, but will bill the actual kVA recorded for the number of days between the meter-read dates rather than for a month. This is expected to assist retailers with their billing where type 5 meters are used, as these are read during the month (or quarter) as opposed to the month-end associated with a type 4 meter. The use of a 'per day' charge for the maximum demand between read dates was a suggestion received via retailer consultation.

Table 9 – Low voltage business transition actual demand tariff charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Supply rate	$/day	X	-	X	- Type 4 or 5 monthly meter required	Fixed daily charge
Summer Demand Peak Rate	$/kVA/mth	X	X	X		For Nov-March demand, 16:00-21:00 local time
All Year-Demand Shoulder Rate	$/kVA/mth	X	X	X		For July-June demand, 12:00-16:00 local time
Demand Off-peak Rate	$/kVA/mth	-	-	-		For anytime demand each month.
Peak Usage Rate	$/kWh	X	X	X		For all peak period consumption
Off-Peak Usage Rate	$/kWh	X	X	X		For all off-peak period consumption

Metering charges are discussed in detail separately in this Pricing Proposal. From July 2015, they will be charged where applicable as a separate alternative control charge, not within the standard control tariff.

4.4.6 Unmetered supply tariffs

Unmetered supply tariffs are applicable to supply points that are not metered. Energy consumption is calculated using the appropriate algorithm in the applicable Metrology Procedure. Unmetered tariffs comprise of an energy rate that is applied to the calculated electricity consumption.

There are two unmetered supply tariffs that are assigned by SA Power Networks, depending upon the customer's consumption profile:

- Unmetered Overnight Usage supply is for overnight use for public lighting.
- Unmetered 24 hour usage supply is for constant 24 hour per day use, typically public phones, traffic lights and telecommunications installations.

The low voltage unmetered usage tariffs incorporate the charging parameters set out in Table .

Table 10 - Unmetered overnight and 24 hour usage tariff charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Anytime Usage Rate	$/kWh	X	X	X	-	For estimated energy consumption

Unmetered supply tariffs are generally invoiced monthly.

4.5 High Voltage Business tariff class

There is also a broad range of customer sizes and types connected to SA Power Networks' system at high voltage. They are predominantly manufacturing and commercial installations.

4.5.1 High voltage business 2-rate tariff (closed from July 2015)

This business 2-rate tariff for customers connected at high voltage was similar in all respects, including the charging parameters, to the low voltage equivalent described in Section 4.4.2.

It has been closed from July 2015 with all five previous users reassigned to an appropriate cost-reflective tariff.

4.5.2 High Voltage kVA agreed demand tariff

The kVA agreed demand tariff for business customers connected at high voltage is similar in structure to the low voltage equivalent described in Section 4.4.3.

Two variants of this tariff are available with different charging parameters, depending upon whether the customer's maximum demand is in excess of about 400 kVA. Lower demands of up to 400 kVA can use the equivalent of the Business LV agreed demand tariff whilst larger HV customers are more suited to this HV variation. HV customers can also elect to use the actual demand tariff discussed above for LV businesses. The boundaries between tariffs are informal, with the customer able to elect either near this cross-over point.

The HV agreed demand tariff previously contained three blocks of demand, plus peak and off-peak usage. The tariff has been simplified to a single block of peak demand, a single usage price for energy and a significant supply charge has been added. The tariff minimum of 1,000 kVA has been removed from July 2015.

Demand is measured on workdays between 12 noon and 9pm local time from November through March, as this is the time when co-incident demand affects the network during extreme weather.

The charging parameters of these tariffs are set out in Table and Table . The charging will be amended in 2015/16 to a 'per day' basis rather than a 'per month' basis to enable implementation of the AER's 2015/16 metering charges. Metering charges are discussed in detail separately in this Pricing Proposal. From July 2015, they will be charged where applicable as a separate alternative control charge, not within the standard control tariff.

Table 11 - High voltage kVA agreed demand tariff charging parameters <400 kVA

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Pass Through	Alternative control Metering	Description
Supply Rate	$/day	X	-	X	- Type 4 monthly meter required	Fixed daily charge
Agreed Peak Demand Rate	$/kVA /mth	X	X	X	-	For all peak demand
Agreed Additional demand	$/kVA /mth	X	-	X	-	Demand in excess of that required during summer peak hours.
Usage Rate	$/kWh	X	X	X	-	For all energy consumption

Table 12 - High voltage kVA agreed demand tariff charging parameters 400 kVA and above

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Supply Rate	$/day	X	-	X	- Type 4 monthly meter required	Fixed daily charge
Annual Peak Demand Rate	$/kVA /mth	X	X	X	-	For all peak demand
Additional demand	$/kVA /mth	X	-	X	-	Demand in excess of that required during summer peak hours.
Usage Rate	$/kWh	X	X	X	-	For all peak period energy consumption

4.6 Major Business tariff class

The major business customers are the largest connected to SA Power Networks' network. They comprise a range of industrial, manufacturing and mining enterprises.

4.6.1 Zone substation kVA demand tariff

This kVA demand tariff is for larger high voltage connected business customers that take supply on direct distributors from a zone substation. The tariff has a minimum agreed anytime demand of 5,000 kVA. The minimum annual usage requirement of 25 GWh has been removed from July 2015. A Type 1-4 interval meter is required with the ability to measure both active and reactive power. The charging parameters for this tariff are set out in Table .

Table 13 - Zone substation kVA demand tariff charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Supply Rate	$/day	-	-	-	- Type 4 monthly meter required	Fixed daily charge
Annual Demand Rate	$/kVA /mth	X	X	X	-	For peak demand > 5,000 kVA
Additional demand	$/kVA /mth	X	-	X	-	Demand in excess of that required during summer peak hours.
Usage Rate	$/kWh	X	X	X	-	For all p energy consumption

The charging will be amended in 2015/16 to a 'per day' basis rather than a 'per month' basis to enable implementation of the AER's 2015/16 metering charges. Metering charges are discussed in detail separately in this Pricing Proposal. From July 2015, they will be charged where applicable as a separate alternative control charge, not within the standard control tariff.

4.6.2 Zone substation kVA demand locational tariff

This kVA demand tariff is similar in structure to the high voltage zone substation kVA demand tariff described in Section 4.6.1. It applies to those customers having a demand in excess of 10 MVA or annual consumption greater than 40 GWh. A Type 1-4 interval meter is required with the ability to measure both active and reactive power.

The tariff has averaged distribution charges, but a locational TUoS component is applied.

The TUoS component typically comprises a locational supply charge (for exit charges) and a locational peak demand charge. Some customers with a low load factor may have a lower demand charge but also have a usage charge.

The charging parameters of this tariff are shown in Table 5.

Table 54 - Zone substation kVA demand locational tariff charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Supply Rate	$/day	-	Locational		- Type 4 monthly meter required	Fixed daily charge
Annual Demand Rate	$/kVA /mth	X	Locational	X	-	For peak demand
Additional demand	$/kVA /mth	X	-	X	-	Demand in excess of that required during summer peak hours.
Usage Rate	$/kWh	X	X	X	-	For all energy consumption

The charging will be amended in 2015/16 to a 'per day' basis rather than a 'per month' basis to enable implementation of the AER's 2015/16 metering charges. Metering charges are discussed in detail separately in this Pricing Proposal. From July 2015, they will be charged where applicable as a separate alternative control charge, not within the standard control tariff.

4.6.3 Subtransmission kVA demand locational tariff

Subtransmission customers are connected to SA Power Networks' network at 66 or 33 kV and have a minimum anytime agreed demand of 5 MVA. Previously, the minimum was 10 MVA. The tariff for these customers is similar in structure to the zone substation kVA demand locational tariff.

The TUoS component typically comprises a locational supply charge (for exit charges) and a locational peak demand charge. Some customers with a low load factor may have a lower demand charge but also have a usage charge.

The charging parameters for the tariff are set out in Table .

Table 15 - Subtransmission kVA demand locational tariff charging parameters

Charging Parameter	Units	Element of service				
		Direct control DUoS	Transmission recovery TUoS	Jurisdictional Scheme Amount Pass Through	Alternative control Metering	Description
Supply Rate	$/day	-	Locational		- Type 4 monthly meter required	Fixed daily charge
Annual Demand Rate	$/kVA /mth	X	Locational	X	-	For peak demand
Additional demand	$/kVA /mth	X	-	X	-	Demand in excess of that required during summer peak hours.
Usage Rate	$/kWh	X	X	X	-	For all energy consumption

The charging will be amended in 2015/16 to a 'per day' basis rather than a 'per month' basis to enable implementation of the AER's 2015/16 metering charges. Metering charges are discussed in detail separately in this Pricing Proposal. From July 2015, they will be charged where applicable as a separate alternative control charge, not within the standard control tariff.

5 Network tariff strategy

This Section contains the objectives that SA Power Networks applies to the development of its network tariffs. It goes on to outline the strategies SA Power Networks proposes to pursue in developing tariffs during the 2015-20 regulatory control period.

5.1 Regulatory Requirements

The information in this Section concerning potential future network tariff developments is provided pursuant to clause 6.18.9 of the Rules.

6.18.9 Publication of information about tariffs and tariff classes

(a) A *Distribution Network Service Provider* must maintain on its website:

(3) a statement of expected price trends (to be updated for each *regulatory year*) giving an indication of how the *Distribution Network Service Provider* expects prices to change over the *regulatory control period* and the reasons for the expected changes.

5.2 Network tariff objectives

This Section presents the high level framework that SA Power Networks applies to the development of its network tariff strategy. The major objectives of network pricing are to some extent conflicting and therefore involve making compromises. They are as follows:

- ***Revenue sufficiency*** - prices are formulated to recover permitted revenue under the determination.
- ***Revenue volatility*** - to the extent possible, tariffs will be structured to minimise monthly and annual variations in revenue.
- ***Pricing efficiency*** - through their variable components, prices will signal the economic cost of providing network service. Residual costs will be recovered in a manner which least distorts customers' consumption decisions.
- ***Customer equity*** - customers should pay a reasonable allocated share of costs and moves towards pricing cost reflectivity need to be tempered to limit their impact on some customers.
- ***Pricing stability*** - to the extent possible undue variation in price levels should be avoided. Side constraints must be complied with
- ***Pricing simplicity*** - price structures should be understandable, simple and transparent.

5.3 The need for tariff reform

As explained in Section 3.5, to a greater extent than any other Australian distributor, SA Power Networks' summer demand is sensitive to the effect of air conditioning demand. High summer peak demands occur during heat wave conditions, which correspond with periods when the elements of the system have least capacity and the power factor of loads is poor.

Over the last five years, the new development has been solar PV systems, especially within the residential networks. We now have over 23% penetration of these systems and there can be in excess of 500 MW of generation occurring near midday for over half of the year when the sun is shining. The network challenges are different today, with problems of low load during days with mild but sunny weather. In summer, the peaks that used to occur between 2pm and 5pm have moved to

become slightly lower peaks between 5pm and 8pm. There are still business network peaks during the day but residential systems and co-incident systems are now peaking later.

The next development coming is battery storage, and perhaps electric vehicles. The battery storage has the potential to soak up a lot of the excess energy being generated during sunshine and shift that to later in the day when the network peaks. How this will develop in summer is unclear, but network tariffs that give good signals for economic peak-lopping will assist in the development of a more efficient and economic network. If electric vehicles do take off, we will again need clear signals to customers that enable them to recharge their car with convenience but without creating new peaks on the network. Technologies over the next five years will create quite strong pathways and opportunities for the future development of the network.

As a consequence, the management of summer demand has a high priority in SA Power Networks' tariff reform strategies. This leads to an emphasis on providing network price signals that will encourage both residential and business customers to manage their demand by the following means:

- The price levels of existing tariff structures;
- The development of more cost reflective tariff structures; and
- The development of innovative new tariff structures.

5.4 Network tariff strategy

SA Power Networks has a pricing strategy that will, within the limitations of metering arrangements and efficient tariff structures, signal the costs associated with increased demand placed on the network, including the use of air conditioning. Where metering arrangements don't allow efficient pricing structures to be used (eg with type 6 meters) then we will endeavour to ensure that a fair level of cost-recovery occurs with those customers. We will endeavour to ensure that one group of customers do not need to pay an unfair amount of network charges as a result of another group of customers avoiding a fair share by exploiting any type 6 meter tariff structure deficiency.

Consistent with the network tariff objectives outlined in Section 5.2, SA Power Networks' network tariff strategy aims to:

- Attain revenue sufficiency under the Revenue Cap;
- Signal the long run marginal cost of supply through its network tariffs;
- Improve cost reflectivity and reduce revenue variability by reducing the reliance on usage based tariff components where appropriate;
- Pass on the cost of ElectraNet's transmission services to customers; and
- Explore tariff based demand management opportunities, including voluntary capacity based tariffs. Sections 5.6 through 5.8 outline future tariff reform options under consideration and development.

5.5 Tariff reform 2005 to 2015

Over the last two regulatory control periods (2005-10 and 2010-15), SA Power Networks undertook a number of tariff reforms, including the following:

- Large businesses have been encouraged to adopt kVA demand price structures where favourable, and have been mandatorily applied to customers using more than 250 kVA, and since July 2010 for new customers (and alterations to supply) requiring more than 70 kVA. Some medium-sized businesses have also opted-in to the kVA demand prices;

- Power factor correction for businesses has been facilitated through the use of an excluded/negotiated service charge for excess reactive power requirements;
- Simplifying the small customer tariffs used by residential and business customers to reduce the number of steps. Prices in higher usage blocks have also been reduced relative to the first block, reflecting better understanding of actual costs of supply to these customers; and
- A residential actual demand tariff (optional) was established in 2014/15, although its adoption to date is limited. This remains a trial tariff program with up to 1,000 customers able to use the tariff. It plays an important role in indicating to customers and the electricity industry the sort of tariff structures and incentives around which new housing and new technology considerations should be made.

5.6 Cost-Reflective Tariffs for large businesses July 2015

In South Australia, there are some 4,500 large businesses and/or medium businesses on cost-reflective tariffs. There are a further 1,000 large businesses not yet on cost-reflective tariffs. There are about 250 large customers who still have type 6 metering which limits tariff options. The other 750 customers have either only recently acquired interval metering or have had load profiles which meant that energy tariffs were more advantageous than agreed demand tariffs.

SA Power Networks proposes that assigning all large customers to cost-reflective tariffs in July 2015 is a critical step in the general implementation of such tariffs. With the large distribution price reductions (and PV FiT recovery reductions), such transfers are easier to achieve whilst still giving price reductions. To enable this tariff reform program to occur, we have created two new tariffs to complement the agreed demand tariff. We have also restructured the current agreed demand tariff to simplify it and remove the constraints of minimum quantities.

The key steps being undertaken to progress this initiative involve significant outcomes by July 2015, including:

- Transferring 500 customers from energy tariffs to agreed demand;
- Offering 1200 customers currently on agreed demand a lower agreed demand;
- Advising those 1200 customers and a further 2,000 customers that the agreed demand period now includes November, and extends to 9pm;
- Transferring 900 customers from agreed demand to actual demand (typically monthly);
- Transferring 350 customers from energy to actual demand;
- Transferring 64 customers from energy to a transition actual demand tariff, with 27 of these customers requiring a small rebate to ensure they do not face an increase in price in 2015/16. The average rebate is $2,700 (total rebates are less than $100,000);
- Transferring the 250 large business customers still with type 6 meters to a legacy tariff that retains the 2014/15 NUoS prices for business single and business 2-rate. These customers will receive price reductions when they have interval metering installed and switch to a cost-reflective tariff. We expect such changes will occur quite quickly;
- Review the 200 High Voltage customers for the best tariff option and offer a lower agreed demand where suitable; and
- Review the 20 Major Businesses, ensuring proper determination of locational TUoS charges and agreed demands.

We do not intend to review the agreed demand of customers who have recently connected to the network, eg since 2013. However, the operations of other customers may have changed and so a review of demands and tariffs is timely at this time of regulatory Reset and significant bill reduction.

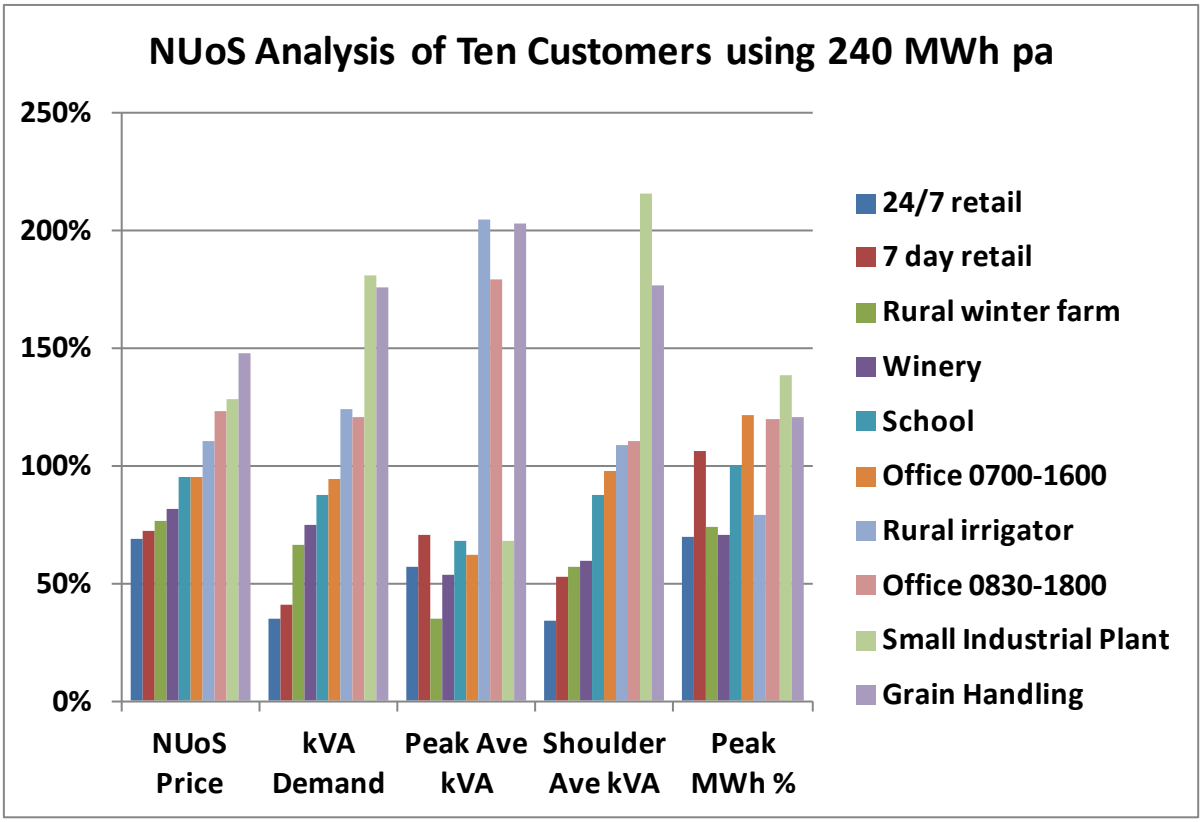
We continue to liaise with retailers on these arrangements, trying to ensure a smooth transition for customers to the July 2015 pricing.

We expect there will be some customers who will elect a different cost-reflective tariff and/or agreed demand. It may be that some large customers will dispute whether they are indeed using more than 160 MWh pa. In these cases we will use the same dispute resolution processes for managing the assignment/reassignment of customers to tariff classes set out in Attachment J.

After this initiative has been completed, we will look at the optimal cost-reflective arrangements for the medium businesses that have interval metering. We do not expect to commence implementation of this prior to 2016Q1, and any such tariff assignment will be optional for these customers.

To illustrate the potential impacts of cost-reflective tariffs and the nature of the pricing signals felt by various large businesses, an analysis of ten such customers each using about 240 MWh pa was conducted. The following Figure 4 chart shows the outcome for the ten different businesses. The chart shows the individual outcome relative to the average outcome of the 10 customers.

Figure 4 – Ten large Business Customers



The first two customers are retail facilities with good load factor. These customers will utilise agreed demand.

The next four customers have reasonable price outcomes using actual (monthly) demand. Their monthly summer peak (1600-2100) demands and annual shoulder demands (1200-1600) are not too high. There is a mixture of customer types here, but none of them use significant demand during summer peak periods.

The last four customers have higher NUoS prices, and these are due to either high late afternoon demands in summer (peak), eg the irrigator, the office and the grain handler, or because of very high afternoon shoulder loads all year (the small industrial plant). These last four customers will be

paying a fair price for their network use and have an incentive to reduce these high demands during peak and shoulder periods if that is efficient for them.

The use of energy in peak or off-peak periods has little effect on the network price outcome, although it will be important for the cost of energy from the retailer.

Detailed analysis similar to the above chart is conducted in determining the optimal tariff for each of the large customers.

5.7 New Residential tariffs for 2015/16

SA Power Networks introduced an actual demand tariff option for residential in 2014/15 We are only allowing for limited take-up during 2015/16 (up to 1,000 customers only until relevant systems and processes are bedded in). The large business tariff reform initiative will take much of that resource over the next 12 months.

We have proposed a solar sponge for hot water, and will introduce that from July 2015. Customers with controlled load can elect to have their time clocks adjusted (as a negotiated service) which will enable overnight hot water/floor heating load with additional daytime usage between 10am and 3pm. The aim is to get more flexible load using the network at those times when Solar PV is at its maximum and residential networks potentially have negative load. We have been careful in selecting times for this initiative as we do not want to increase loads when SA pool prices are high. It appears that the 10am to 3pm window does not have high prices (probably due to the high PV output at these times) so a good fit with this objective is apparent. Different time options are proposed depending on whether the customer has electric storage heating, a heat pump or floor heating.

5.8 Future tariff reform options

SA Power Networks proposes to explore any benefits capable of being realised from continuing the network tariff reform process. Within the limitations of the AER's DMIA provisions, SA Power Networks may obtain more first-hand information on customers' usage of the network through trials and associated customer research.

The following network tariff reforms may be pursued by SA Power Networks during the 2015-20 regulatory control period. They will be discussed in more detail in our Tariff Structure Statement which is due for submission to the AER in November 2015 following consultation with customers and stakeholders during 2015 quarter 3:

- Improving the design of demand tariffs, to enhance their cost reflectivity;
- Continuing to assign more business customers to network demand tariffs where it is economically efficient to do so;
- Exploring tariff based demand management opportunities at specific locations where network constraints are developing; and
- Encouraging more consumption use of the residential network during sunny periods as loads can be negative because of solar PV production. This may be from a 'solar sponge' whereby flexible loads use energy during the day (perhaps for storage heating of water, for swimming pool pumps or for charging of batteries) and possibly reduce the need for capacity at the peak time of late afternoon/evening.

In relation to the reassignment of customers to individual tariffs within the tariff classes, SA Power Networks believes that it is appropriate to actively encourage and facilitate the development of more

cost reflective distribution network tariffs. Such tariffs may well include those that are enabled by the use of developing technologies, such as:

- Communications signalling and load management technologies; or
- Remotely read interval meters.

These developments will need to consider the effects of metering contestability from 2017 and how such tariff changes and metering arrangements can be best aligned. SA Power Networks envisages that it may be seeking to implement the following tariff initiatives:

- Increasingly, interval meters are being chosen by customers as an alternate meter for replacements and new connections. This would permit the introduction of more cost reflective demand based prices for some small customers, especially the medium-sized customers.
- In specific situations/locations where network demand management is sought, SA Power Networks may offer voluntary tariffs from time to time and, should the customer or their retailer accept this offer, they would be reassigned to the new tariff. We expect such arrangements will be optional, with arrangements that enable these customers to revert back to the standard state-wide price should they so choose.

These proposed initiatives are intended to improve the cost reflectivity of the existing tariffs and whilst involving the reassignment of customers to new tariffs, would not require their reassignment to a new or different tariff class.

6 Standard control services tariffs

Within the framework of SA Power Networks' longer term tariff strategy set out in Section 5 of this Pricing Proposal, this Section sets out the proposed rates for tariff charging components of standard control services for 2015/16 and provides a comparison with the rates in place during 2014/15. It should be noted that the information and comparisons in this Section relate solely to SA Power Networks' standard control services. NUoS charges to customers are bundled charges that contain:

- SA Power Networks' standard control services (DUoS);
- SA Power Networks' Vegetation Management passthrough in 2014/15 (included in the DUoS comparison);
- Transmission cost recovery components (TUoS); and
- PV FiT 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 separately in a later section.

A discussion of customer impacts from all NUoS charges including transmission cost recovery and PV JSA cost recovery is set out in Section 10.

6.1 Regulatory Requirements

The information in this Section concerning the change in standard control service rates is provided pursuant to clause 6.18.9 of the Rules.

6.18.9 Publication of information about tariffs and tariff classes

(a) A *Distribution Network Service Provider* must maintain on its website:

(3) a statement of expected price trends (to be updated for each *regulatory year*) giving an indication of how the *Distribution Network Service Provider* expects prices to change over the *regulatory control period* and the reasons for the expected changes.

6.2 Tariff changes in 2015/16

The tariff changes in 2015/16 have been made within the overall tariff strategy for the 2015-20 regulatory control period set out in Section 5. They have been set to meet the specific outcomes of the AER's 2015/16 smoothed revenue requirement of $682 M in their recent Preliminary Decision.

Most tariffs have had significant decreases resulting from the 28% reduction in distribution revenue from the AER's Preliminary Decision. The level of PV FiT recovery has also declined by nearly 30% (see chapter 10).

There are three tariff elements which have not been reduced, but rather held at 2014/15 levels (for NUoS). They are:

- Controlled load (a low priced tariff);
- Business 2-rate off-peak (a low-priced tariff element); and
- The supply charge (the supply charge increases were constrained in the last regulatory period by the $10 price cap. Consequently, the price reductions have been focussed on the tariffs that went up by more over the last regulatory period, not on the supply charge. The

supply charge still reflects the costs of the house service and 20% of the LV distribution system at the current price).

Otherwise, all tariffs have had significant reductions. The agreed demand tariff customers have received the largest reductions, particularly those who were charged agreed demand between 70 and 200 kVA in 2014/15.

6.3 Calculation of network use of system tariffs

The following Sections provide information on the DUoS component of SA Power Networks' existing tariffs and the price movement proposed for 2015/16. The following Tables do not include TUoS or PV JSA cost recovery components.

It should be noted that this information is provided for the purpose of showing the relative change in the price of each tariff charging parameter. Compliance with clause 6.18.2(8) of the Rules, concerning the demonstration that price changes comply with the Rules and the AER's Determination, is set out in Section 8 and Appendix G of this Pricing Proposal.

All prices in the following Sections are exclusive of GST and have been rounded.

6.4 Low Voltage Residential tariff class

6.4.1 Low voltage residential tariff

Table 6 contains the proposed 2015/16 prices for single rate residential customers.

Note that the NUoS supply rate has been retained at 2014/15 prices. The distribution price reduction shown below is off-set by a PV FiT recovery now levied on the supply rate.

The greater reduction in block 2 usage distribution rates is in line with cost-of-supply information.

Table 6 - Proposed 2015/16 low voltage residential tariff single rate

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.	109.87	93.81	-16.06
Block 1 Usage Rate	¢/kWh	9.83	7.45	-2.38
Block 2 Usage Rate	¢/kWh	13.61	9.90	-3.71

6.4.2 Low voltage residential actual demand tariff

Table 6 contains proposed 2015/16 prices for residential actual demand tariff.

This tariff is limited to 1,000 customers in 2015/16.

Table 17 - Proposed 2015/16 low voltage residential tariff actual demand

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.	0.00	0.00	0.00
Peak demand (Nov-March)	$ /kW/mth	11.62	9.06	-2.56
Shoulder Demand (April-Oct)	$ /kW/mth	5.81	4.53	-1.28
Off-pk Demand (2100-1600)	$ /kW/mth	0.00	0.00	0.00
Usage Rate	¢/kWh	6.46	4.83	-1.63

6.4.3 Controlled load tariff

Table 78 contains the proposed 2015/16 prices for controlled load customers.

The NUoS rate for this tariff has been retained at 2014/15 levels. The DUoS reduction shown below is offset by a higher TUoS price, determined from ElectraNet's 2015/16 pricing structure. The controlled load NUoS price continues to be set at a low rate.

Table 7 - Proposed 2015/16 controlled load tariff

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Usage Rate	¢/kWh	3.87	3.11	-0.76

6.5 Low Voltage Business tariff class

6.5.1 Low voltage business single rate tariff (obsolete)

Table 89 contains the proposed 2015/16 prices for low voltage business single rate tariff customers. These customers were using this tariff prior to 30 June 2010 when the tariff was made obsolete.

Note that the NUoS supply rate has been retained at 2014/15 prices despite the distribution price reduction as a PV FiT recovery is now levied on the supply rate.

Table 89 - Proposed 2015/16 low voltage business single rate tariff

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.	109.87	93.81	-16.06
Block 1 Usage Rate	¢/kWh	11.28	9.06	-2.22
Block 2 Usage Rate	¢/kWh	13.38	9.67	-3.71

6.5.2 Low voltage business 2-rate tariff

Table contains the proposed 2015/16 prices for low voltage business 2-rate tariff customers.
The NUoS supply rate has been retained at 2014/15 prices as a PV FiT recovery is now levied on the supply rate.
The NUoS rate for the off-peak element of this tariff has been retained at 2014/15 levels. The DUoS reduction shown below is offset by a higher TUoS price, determined from ElectraNet's 2015/16 pricing structure. The off-peak price continues to be set at a low rate.

Table 20 - Proposed 2015/16 low voltage business 2-rate tariff

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.	109.87	93.81	-16.06
Peak Usage Rate	¢/kWh	14.31	11.30	-3.01
Off Peak Usage Rate	¢/kWh	5.22	4.56	-0.66

6.5.3 Low voltage business kVA demand tariff

Table 9 contains the proposed 2015/16 prices low kVA demand business tariff customers.
The new version of the tariff does not utilise four blocks but for comparison purposes with 2014/15 we have shown it as if it did. The new tariff has a supply charge and a first block covering the old tariff first three blocks. Peak demand is measured between 12 noon and 9pm on work days between November and March. There is no minimum level of agreed demand for this tariff from July 2015 (was 70 kVA)

Table 9 - Proposed 2015/16 low voltage business kVA demand tariff

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.	0.00	3,600.00	3,600.00
Annual Block 1 Demand Rate	$/kVA/mth	14.25	6.11	-8.14
Annual Block 2 Demand Rate	$/kVA/mth	8.31	6.11	-2.20
Annual Block 3 Demand Rate	$/kVA/mth	6.08	6.11	0.03
Annual Block 4 Demand Rate	$/kVA/mth	4.60	4.58	-0.02
Additional demand	$/kVA/mth	4.60	3.46	-1.14
Usage Rate	¢/kWh	2.94	2.04	-0.90

Since July 2014, there is also a variant to this tariff available for sportsgrounds with significant floodlighting. This tariff variant has a slightly different definition of peak demand period, using 12:01 to 19:00 local time for December to February. The tariff variant is otherwise in line with the original tariff.

6.5.4 Low voltage business actual demand tariff

Table 9 contains proposed 2015/16 prices for low voltage business actual demand tariff.
This is a new tariff in 2015/16 and will be used initially by large customers and some small customers previously on agreed demand tariffs. Some small businesses currently on energy tariffs may opt-in to this tariff during 2015/16.

Table 22 - Proposed 2015/16 low voltage business tariff actual demand

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.		0.00	
Peak demand (Nov-Mar)	$/kVA/mth		10.18	
Shoulder Demand (July-June)	$ /kVA/mth		5.09	
Off-pk Demand	$ /kVA/mth		0.00	
Usage Rate	¢/kWh		3.46	

6.5.5 Low voltage business actual demand tariff Transition

Table 9 contains proposed 2015/16 prices for low voltage business actual demand Transition tariff. This is a new tariff in 2015/16 and will be used initially by large customers previously on energy tariffs who might otherwise have faced an increase in prices when reassigned to a cost-reflective tariff. There are less than 100 customers that require this transition tariff.

Each year, this tariff will progressively increase the proportion of the cost-reflective actual demand tariff and reduce the proportion of the business 2-rate tariff. In 2015/16, the tariff weighting is 30% actual demand and 70% 2-rate. By July 2020, the transition should be complete.

Table 23 - Proposed 2015/16 low voltage business tariff actual demand Transition

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.		65.66	
Peak demand (Nov-Mar)	$/kVA/mth		3.05	
Shoulder Demand (July-June)	$ /kVA/mth		1.53	
Off-pk Demand	$ /kVA/mth		0.00	
Peak Usage Rate	¢/kWh		8.95	
Off-peak Usage Rate	¢/kWh		4.29	

6.5.6 LV Unmetered supply tariffs

Proposed 2015/16 prices for the unmetered supply tariff customers are set out in Table 10 and Table 11.

Table 10 - Proposed 2015/16 Unmetered Overnight tariff

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Anytime Usage Rate	¢/kWh	6.50	5.09	-1.41

Table 11 - Proposed 2015/16 Unmetered 24 hour Usage tariff

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Anytime Usage Rate	¢/kWh	5.79	5.09	-0.70

6.6 High Voltage Business tariff class

6.6.1 High voltage business 2-rate tariff (closed)

This tariff has been closed and the few customers using it will be reassigned to another appropriate HV tariff.

6.6.2 High voltage kVA demand tariff < 400 kVA

The proposed 2015/16 prices for high voltage demand tariff < 400 kVA business customers are the same as those for the low voltage equivalent tariff in Table . Previously this tariff was used by customers up to 1,000 kVA but the removal of tariff demand minimums has lowered the threshold typically used for this option.

There is also a variant to this tariff available for any sportsgrounds with significant floodlighting, as discussed in 6.5.3 above.

6.6.3 High Voltage kVA demand tariff

Table 12 contains the proposed 2015/16 prices for High Voltage kVA demand business tariff customers.
The new version of the tariff does not utilise 3 blocks but for comparison purposes with 2014/15 we have shown it as if it did. The new tariff has a supply charge and a single block covering all of the old tariff's three blocks. Peak demand is measured between 12 noon and 9pm on work days between November and March. There is no minimum level of agreed demand for this tariff from July 2015 (was 1,000 kVA). The balance between demand and usage charges has been rebalanced this year.

Table 12 - Proposed 2015/16 high voltage business kVA demand tariff

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.	0.00	26,000.00	26,000.00
Annual Block 1 Demand Rate	$/kVA/mth	5.85	3.77	-2.08
Annual Block 2 Demand Rate	$/kVA/mth	3.55	3.77	0.22
Annual Block 3 Demand Rate	$/kVA/mth	2.73	3.77	1.04
Additional demand	$/kVA/mth	2.73	3.21	0.48
Usage Rate	¢/kWh	2.53	1.47	-1.06

6.7 Major Business tariff class

6.7.1 Zone substation kVA demand tariff

Table 13 contains the proposed 2015/16 prices for zone substation kVA demand business customers. Peak demand is measured between 12 noon and 9pm on work days between November and March. The minimum level of agreed demand (annual plus additional) for this tariff from July 2015 is 5,000 kVA.

Table 13 - Proposed 2015/16 zone substation kVA demand business tariff

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.	0.00	0.00	0.00
Annual Demand Rate	$/kVA/mth	2.73	2.65	-0.08
Additional demand	$/kVA/mth	1.90	2.65	0.75
Usage Rate	¢/kWh	0.89	0.67	-0.22

6.7.2 Zone substation kVA demand locational tariff

Table 14 contains the proposed 2015/16 prices for zone substation kVA demand locational tariff business customers. The arrangements are the same as the non-locational tariff above in 6.7.1.

Table 14 - Proposed 2015/16 Zone substation kVA demand locational tariff

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.	0.00	0.00	0.00
Annual Demand Rate	$/kVA/mth	2.73	2.65	-0.08
Additional demand	$/kVA/mth	1.90	2.65	0.75
Usage Rate	¢/kWh	0.89	0.67	-0.22

6.7.3 Subtransmission kVA demand tariff

Table 159 contains the proposed 2015/16 prices for subtransmission kVA demand business customers. It is used by those customers connected at sub-transmission that have not had a locational tariff defined for them. Peak demand is measured between 12 noon and 9pm on work days between November and March. The minimum level of agreed demand (annual plus additional) for this tariff from July 2015 is 5,000 kVA (was 10,000 kVA).

Table 29 - Proposed 2015/16 Subtransmission kVA demand tariff

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.	0.00	0.00	0.00
Annual Demand Rate	$/kVA/mth	0.83	0.56	-0.27
Additional demand	$/kVA/mth	0.83	0.56	-0.27
Usage Rate	¢/kWh	0.29	0.19	-0.10

6.7.4 Subtransmission kVA demand locational tariff

Table 15 contains the proposed 2015/16 prices for subtransmission kVA demand locational tariff business customers. The arrangements are the same as the non-locational tariff above in 6.7.3.

Table 15 - Proposed 2015/16 Subtransmission kVA demand locational tariff

Charging Parameter	Units	Existing 2014/15	Proposed 2015/16	Variance
Supply Rate	$ p.a.	0.00	0.00	0.00
Annual Demand Rate	$/kVA/mth	0.83	0.56	-0.27
Additional demand	$/kVA/mth	0.83	0.56	-0.27
Usage Rate	¢/kWh	0.29	0.19	-0.10

7 Customer Impacts

In this Section, customer impacts are calculated for the individual components and the total of the proposed bundled NUoS tariffs. The use of these network tariffs results in customer impacts that include the following components:

- DUoS charges, for SA Power Networks' standard control services;
- Vegetation Management passthrough (2014/15), to recover the additional costs SA Power Networks' incurred in meeting vegetation clearance statutory obligations over and above that provided under standard control services. For simplicity, this has been included with DUoS charges;
- Transmission cost recovery tariffs, to recover costs associated with ElectraNet's standard control services and any avoided TUoS payments made by SA Power Networks to embedded generators; and
- The PV Jurisdictional Scheme Amount, which recovers the cost of payments made by SA Power Networks for SA Government Feed-in Tariffs to customers with solar PV generators.

All of the customer impact presented in this Section is GST exclusive. Metering charges for SA Power Networks' alternative control services may also apply, but are not included in this analysis.

The price changes for individual tariffs have been calculated on the basis of customer consumption volume levels, for the 12 months to March 2015. This will be a reasonable proxy for likely 2015/16 usage patterns. Where the number of customers on a tariff is sufficient, the distribution of price impacts has been presented.

7.1 Regulatory Requirements

7.1.1 Rules requirements

Rules clause 6.18.2 imposes a requirement for the Pricing Proposal to set out the nature of variations that may take place during 2015/16.

6.18.2 Pricing proposals

(b) A *pricing proposal* must:

(5) set out the nature of any variation or adjustment to the tariff that could occur during the course of the *regulatory year* and the basis on which it could occur;

Clause 6.18.9 requires the publication of price trends over the 2015-20 regulatory control period and the reasons for expected variations.

6.18.9 Publication of information about tariffs and tariff classes

(a) A *Distribution Network Service Provider* must maintain on its website:

(3) a statement of expected price trends (to be updated for each *regulatory year*) giving an indication of how the *Distribution Network Service Provider* expects prices to change over the *regulatory control period* and the reasons for the expected changes.

7.2 Overall price trends during the 2015-20 regulatory control period

The expected overall price trends over the course of the determination are built up from the following components:

- SA Power Networks' distribution prices for standard control services, in accordance with the AER's Preliminary Decision of a revenue cap with smoothed annual revenue for 2015/16 of $682M;
- SA Power Networks' prices for alternative control metering services, in accordance with the AER's Preliminary Decision;
- Transmission related prices, determined from ElectraNet's approved 2015/16 prices; and
- Forecasts for future period recovery of the SA Government PV FiT payments to qualifying generators under the JSA arrangement.

The outcomes for SA Power Networks' charges for the recent part of the 2010-15 regulatory period is shown below in Table 16. Charges may vary in future years following Tariff Structure Statement preparation and consultation. At this time, we have not prepared forward forecast of prices beyond 2015/16. We note the Preliminary Decision predicts a 10% reduction in 2016/17 distribution prices, and that transmission and PV FiT recoveries should be at similar levels next year.

Table 16 – SA Power Networks' distribution price trends (nominal).

$ nominal DUoS excl GST $/MWh	2014/15	2015/16
Residential	$128	$98
Residential & Hot Water	$94	$73
Business Single	$129	$98
Business 2-Rate	$100	$75
Business LV Demand	$77	$51
Business HV Demand	$45	$32
Zone S/Stn Locational	$16	$14
Sub Trans Locational	$7	$5

In addition to SA Power Networks' distribution charges, the bundled NUoS price includes the pass-throughs of the transmission and SA Government PV feed-in payments.

Table 17 –NUoS price trends (nominal). Includes Pass-through costs for Transmission and SA Government PV Feed-In as well as SA Power Networks' charges

$ nominal NUoS excl GST $/MWh	2014/15	2015/16
Residential	$178	$146
Residential & Hot Water	$132	$112
Business Single	$186	$148
Business 2-Rate	$144	$115
Business LV Demand	$117	$85
Business HV Demand	$76	$61
Zone S/Stn Locational	$19	$16
Sub Trans Locational	$8	$5

7.3 Variations to prices

Clause 6.18.2(b)(5) requires SA Power Networks to set out the nature of any variations and adjustments that could occur to tariffs during the course of future years. In addition, clause 6.18.9(a)(3) requires an indication of how SA Power Networks expects prices to change over the regulatory control period and the reasons for the expected changes. Some information has been provided below, with further information being prepared for the Tariff Structure Statement. As this will address other tariff reforms and incorporate the AER's Final Decision, we consider that limited information on future years is appropriate in this Pricing Proposal.

The average price trends mask the variation in price that has taken place for individual customers. Each customer's price will vary depending upon their level of consumption, and for business customers, the load profile and monthly demand.

7.4 Low Voltage Residential tariff class

7.4.1 Low voltage residential tariff

The low voltage residential tariff has a single-rate with an inclining block structure and two consumption steps. The 2015/16 annual bill and price change for this tariff is shown in Table 18, for a range of different customer consumption levels.

The table shows NUoS being the impact of distribution, transmission and PV JSA FiT pass-throughs on the annual electricity bill (inclusive of the retail charges as submitted by AGL in August 2014 after carbon tax removal). The table also shows (as DUoS) the SA Power Networks' related price changes (including 2014/15 Vegetation Management). Note that the table does not include the Alternative Control Services Type 6 metering charge typically associated with this tariff.

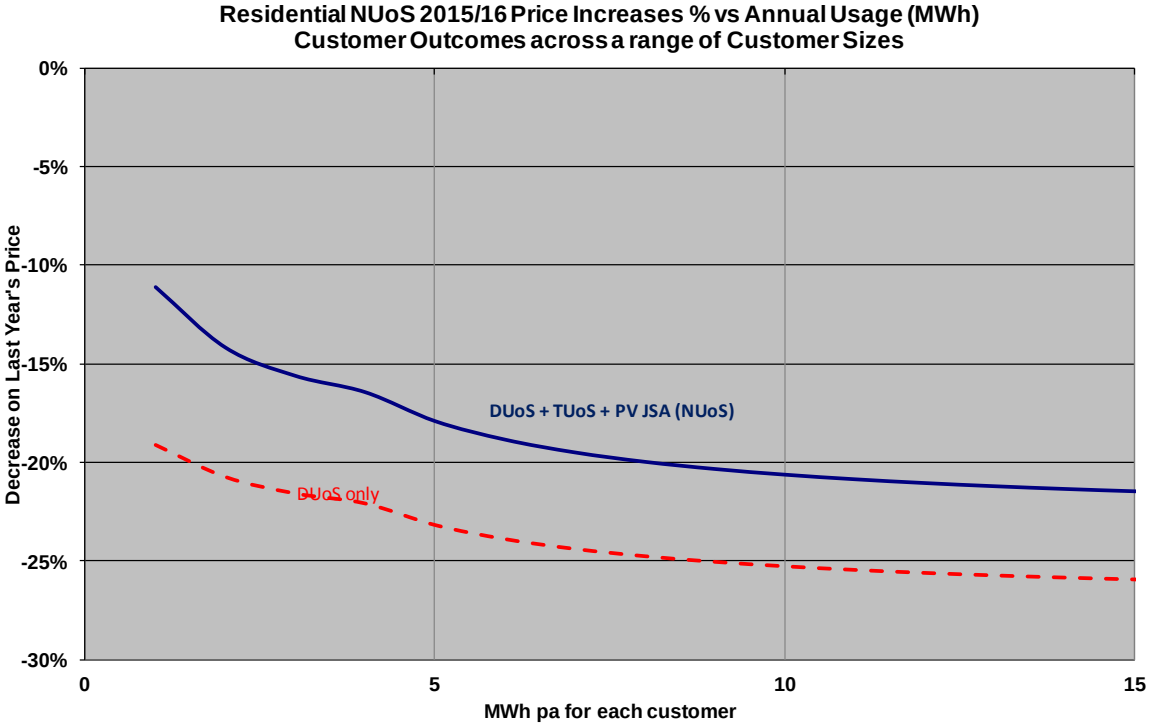
Table 18 - Low voltage residential price change in 2015/16

Annual Usage	NUoS 2014/15	NUoS 2015/16	Change in NUoS	Change in Retail	DUoS 2014/15	DUoS 2015/16	Change in DUoS	Change in Retail
MWh pa	$ pa	$ pa	%	%	$ pa	$ pa	%	%
2	402	345	-14%	-7%	306	243	-21%	-8%
4	694	580	-16%	-9%	503	392	-22%	-8%
5	892	732	-18%	-10%	639	491	-23%	-9%
8	1,486	1,189	-20%	-11%	1,047	788	-25%	-10%
16	3,070	2,408	-22%	-13%	2,136	1,580	-26%	-11%

Note NUoS = DUoS + TUoS + PV JSA

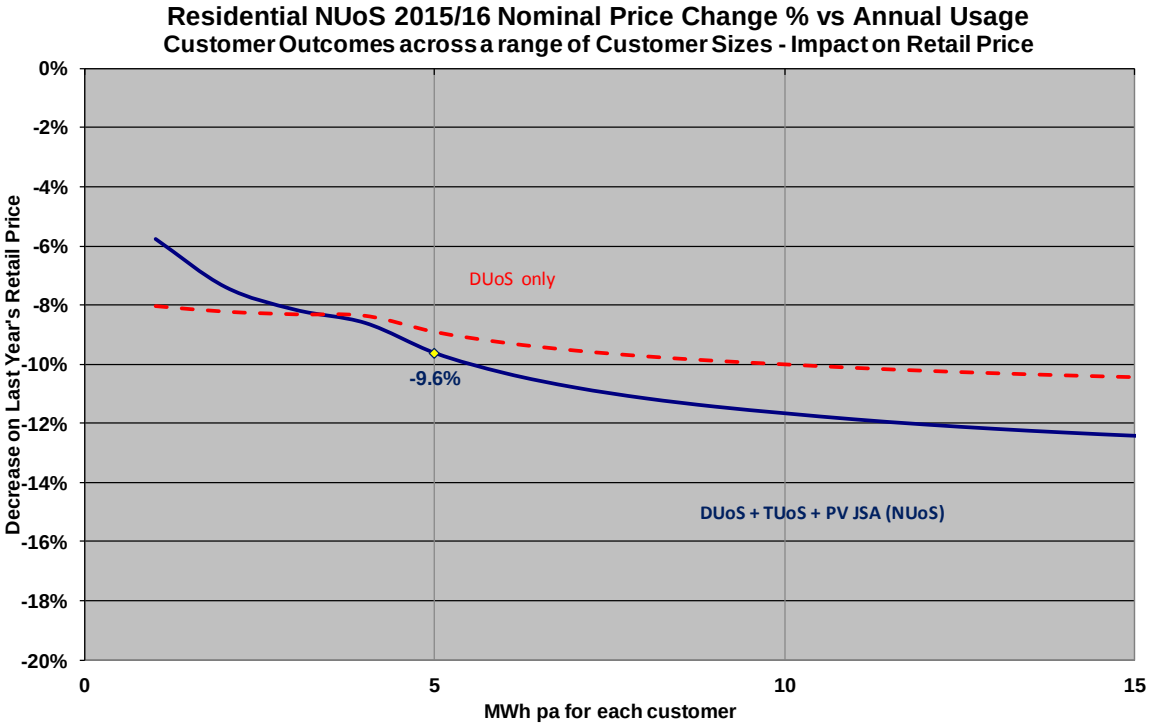
Figure illustrates how the effect of the price change varies with customers' annual energy consumption. Within this chart, the impacts of the DUoS change and the cumulative effects of the TUoS change and the PV JSA, recovered through NUoS are separately indicated.

Figure 5 - Low voltage residential NUoS price change in 2015/16



The equivalent impact of the 2015/16 price change on the August 2014 AGL transitional retail rates is shown in Figure .

Figure 6 - Low voltage residential Retail price change in 2015/16



7.4.2 Residential with Controlled load tariff

The controlled load tariff has a single block. The 2015/16 annual bill and price change shown in Table 19 for residential customers with hot water, for a range of representative consumption levels. The table shows NUoS being the impact of distribution, transmission and PV JSA FiT pass-throughs on the annual electricity bill (inclusive of the retail charges). The table also shows (as DUoS) the SA Power Networks' related price changes.

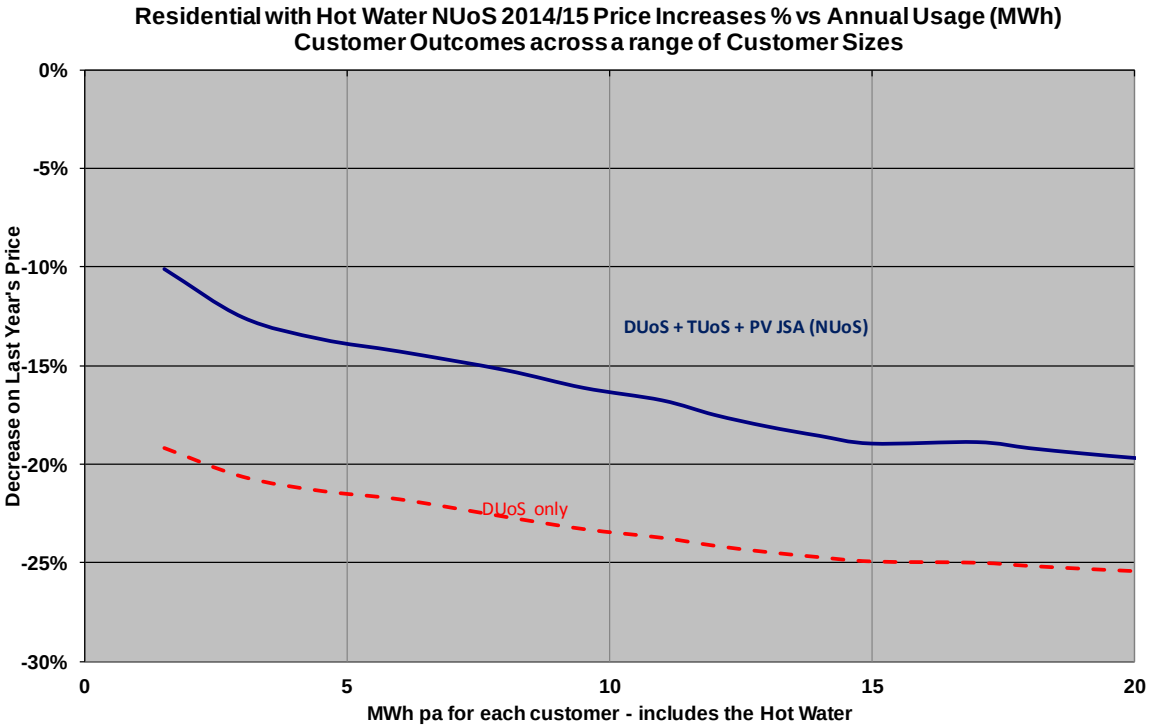
Table 19 - Low voltage residential + hot water price change in 2015/16

Annual Usage	NUoS 2014/15	NUoS 2015/16	Change in NUoS	Change in Retail	DUoS 2014/15	DUoS 2015/16	Change in DUoS	Change in Retail
MWh pa	$ pa	$ pa	%	%	$ pa	$ pa	%	%
2 + 1	456	399	-13%	-6%	345	274	-21%	-8%
4 + 2	802	688	-14%	-7%	580	454	-22%	-8%
5 + 3	1,054	894	-15%	-8%	755	584	-23%	-8%
8 + 4	1,702	1,405	-17%	-9%	1,202	912	-24%	-9%
16 + 5	3,340	2,677	-20%	-11%	2,330	1,735	-26%	-10%

Note NUoS = DUoS + TUoS + PV JSA

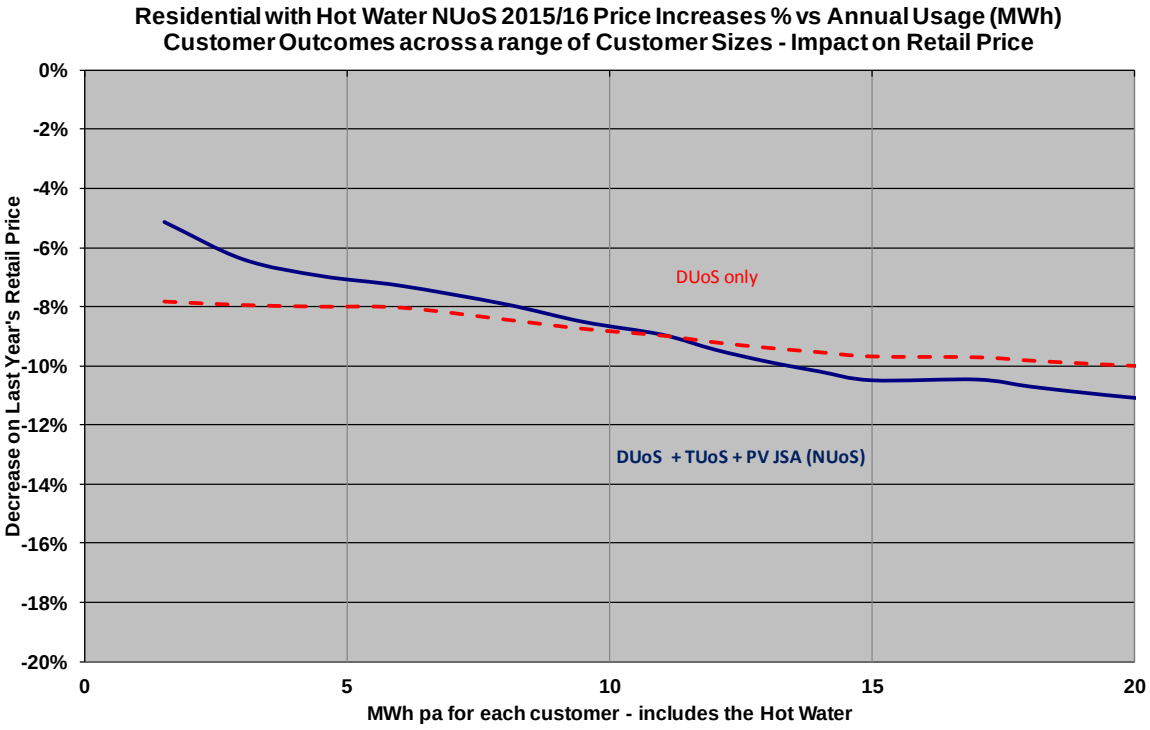
Figure illustrates how the effect of the price change varies with customer's annual energy consumption where hot water is used. Within this chart, the impacts of the DUoS change and the cumulative effects of the TUoS change and the PV JSA, recovered through NUoS are separately indicated.

Figure 7 - Low voltage residential + hot water NUoS price change in 2015/16



The equivalent impact of the 2015/16 price change on the current AGL transitional contract retail rates is shown in Figure .

Figure 8 - Low voltage residential + hot water Retail price change in 2015/16



7.5 Low Voltage Business tariff class

7.5.1 Low voltage business single rate tariff (obsolete)

The low voltage business single rate tariff has an anytime consumption charge with an inclining block structure and two consumption steps. Table 20 shows the 2015/16 annual bill and price change for this tariff, for a range of annual consumption levels.

The table shows NUoS being the impact of distribution, transmission and PV JSA FiT pass-throughs on the annual electricity bill (inclusive of the AGL transitional contract retail charges). The table also shows (as DUoS) the SA Power Networks' related price changes but excludes the Alternative Control Services Type 6 metering typically associated with this customer.

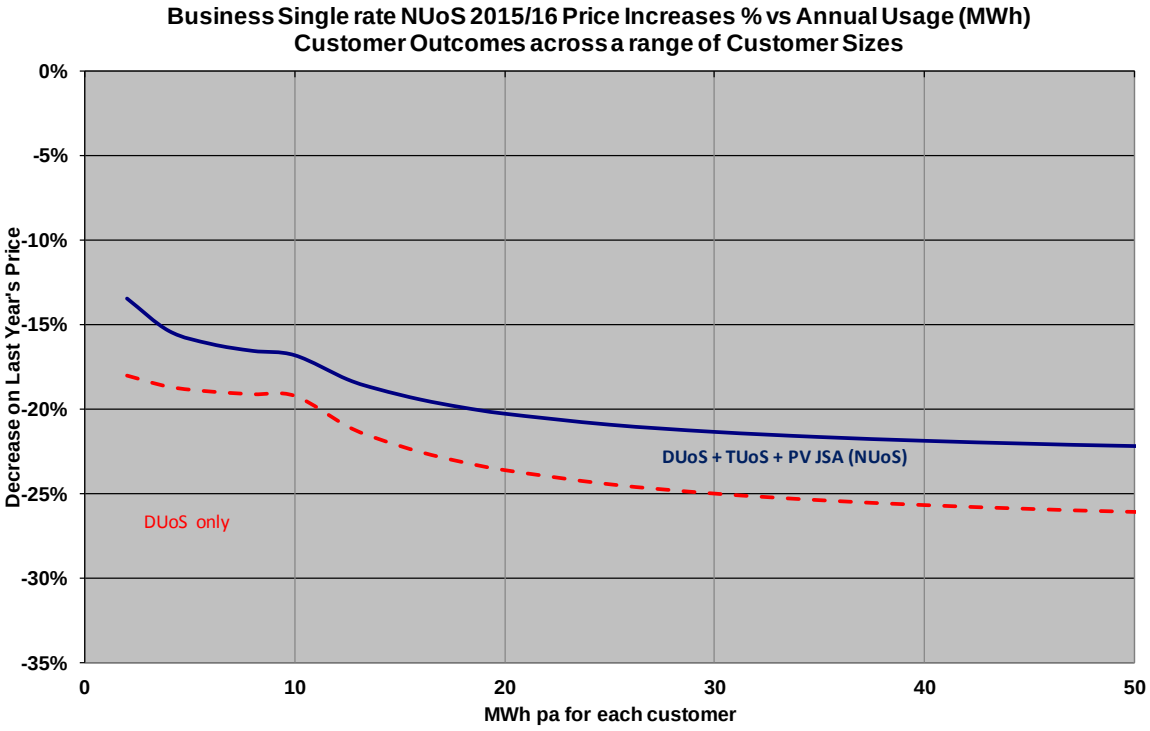
Table 20 - Low voltage business single rate NUoS price change in 2015/16

Annual Usage	NUoS 2014/15	NUoS 2015/16	Change in NUoS	Change in Retail	DUoS 2014/15	DUoS 2015/16	Change in DUoS	Change in Retail
MWh pa	$ pa	$ pa	%	%	$ pa	$ pa	%	%
4	775	656	-15%	-8%	561	456	-19%	-7%
10	1,772	1,474	-17%	-9%	1,238	1,000	-19%	-7%
20	3,725	2,970	-20%	-11%	2,576	1,967	-24%	-9%
40	7,631	5,962	-22%	-12%	5,252	3,901	-26%	-10%
80	15,443	11,946	-23%	-13%	10,604	7,769	-27%	-11%

Note NUoS = DUoS + TUoS + PV JSA

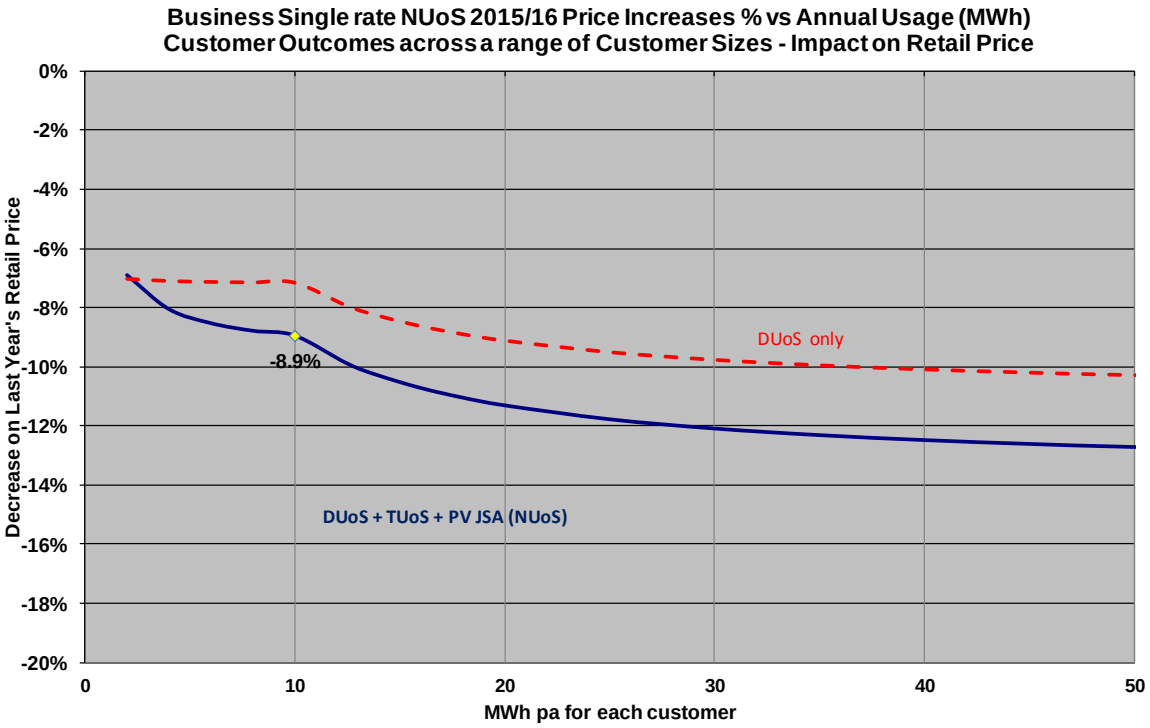
The price change versus annual consumption and the distribution of customers for the low voltage business single rate tariff is illustrated in Figure . Within this chart, the impacts of the DUoS change and the cumulative effects of the TUoS change and the PV JSA, recovered through NUoS are separately indicated.

Figure 9 - Low voltage business single rate NUoS price change in 2015/16



The equivalent impact of the 2015/16 price change on the current AGL transitional contract retail rates for business single rate customers is shown in Figure .

Figure 10 - Low voltage business single rate Retail price change in 2015/16



7.5.2 Low voltage business 2-rate tariff

The effect of the price change in 2015/16 for low voltage business 2-rate will depend upon the customer consumption profile, in particular the ratio of peak to off-peak period usage. Table 21

shows how the 2015/16 annual bill has changed for this tariff, for different customer consumption levels and average peak to off peak consumption proportions of 50%.

The table shows NUoS being the impact of distribution, transmission and PV JSA FiT pass-throughs on the annual electricity bill (inclusive of the AGL transitional tariff retail charges). The table also shows (as DUoS) the SA Power Networks' related price changes but excludes the Alternative control Type 6 metering charge typically associated with this customer.

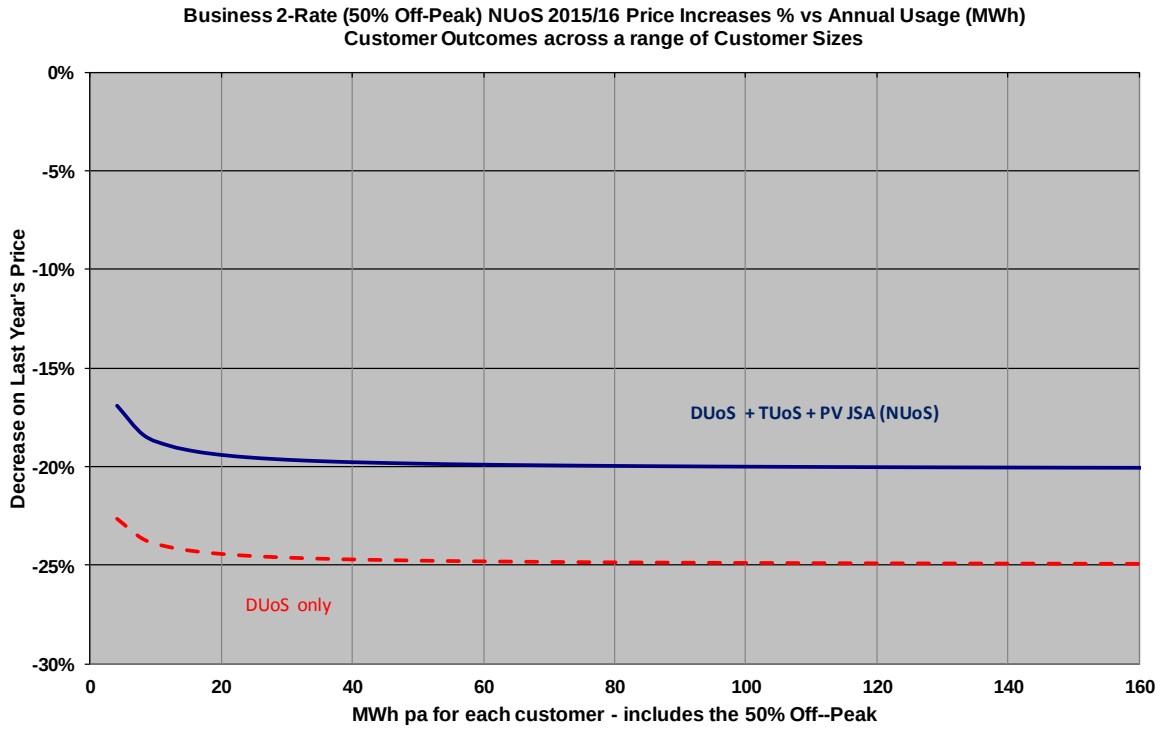
Table 21 - Low voltage business 2-rate NUoS price change in 2015/16

Annual Usage	NUoS 2014/15	NUoS 2015/16	Change in NUoS	Change in Retail	DUoS 2014/15	DUoS 2015/16	Change in DUoS	Change in Retail
MWh pa	$ pa	$ pa	%	%	$ pa	$ pa	%	%
8	1,241	1,013	-18%	-9%	891	680	-24%	-9%
20	2,939	2,368	-19%	-10%	2,063	1,559	-24%	-9%
50	7,182	5,755	-20%	-10%	4,992	3,757	-25%	-9%
100	14,255	11,400	-20%	-11%	9,875	7,419	-25%	-9%
160	22,742	18,174	-20%	-11%	15,734	11,814	-25%	-9%

Note NUoS = DUoS + TUoS + PV JSA

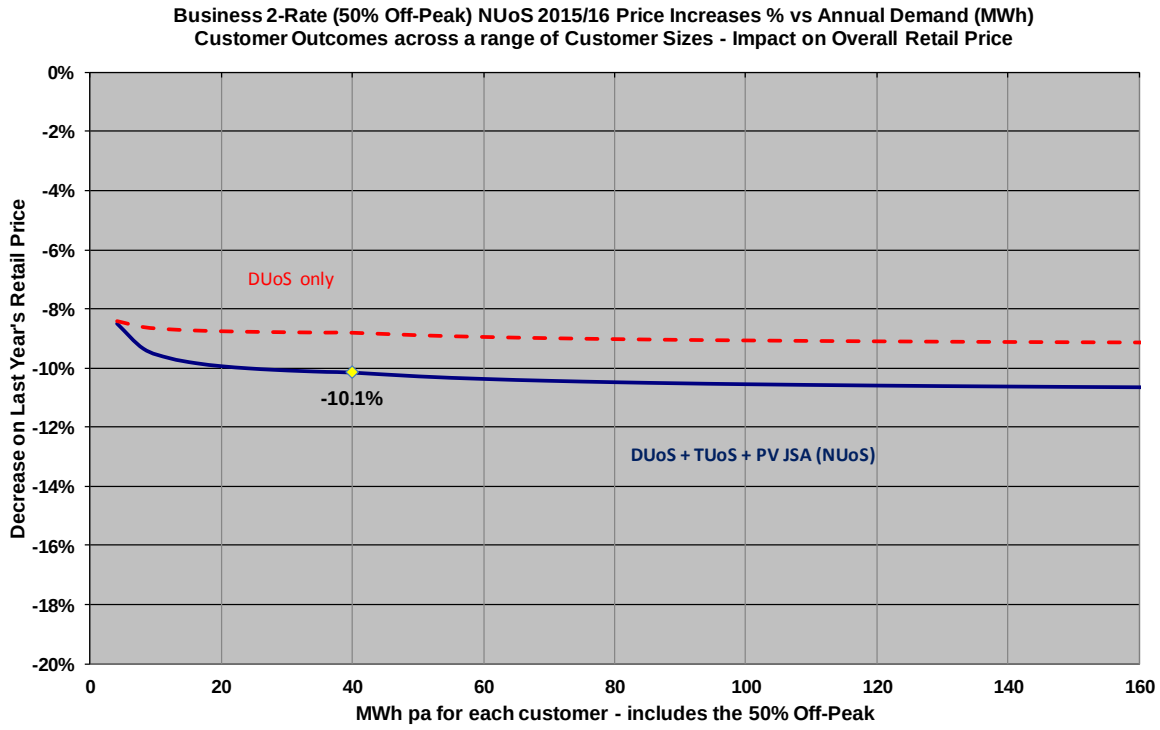
A chart displaying the bill impact vs customer consumption is shown in Figure 4. Within this chart, the impacts of the DUoS change and the cumulative effects of the TUoS change and the PV JSA, recovered through NUoS are separately indicated.

Figure 4 - Low voltage business 2-rate NUoS change in 2015/16, 50% peak consumption



The equivalent impact of the 2015/16 price change on the current AGL transitional contract retail rates for business two rate customers is shown in Figure 52.

Figure 5 - Low voltage business 2-rate Retail change in 2015/16, 50% peak consumption



Some business 2-rate customers use more than 50% of their energy during peak times. These customers will receive a slightly larger price decrease than indicated above. Other customers use more than 50% of their energy in off-peak times and will receive a smaller decrease. Off-peak NUoS prices were held at the low 2014/15 price level whilst peak prices were reduced from a high price level. The charts below indicate the outcomes for customers using 75% of their energy in off-peak times.

Figure 6 - Low voltage business 2-rate NUoS change in 2015/16, 25% peak consumption

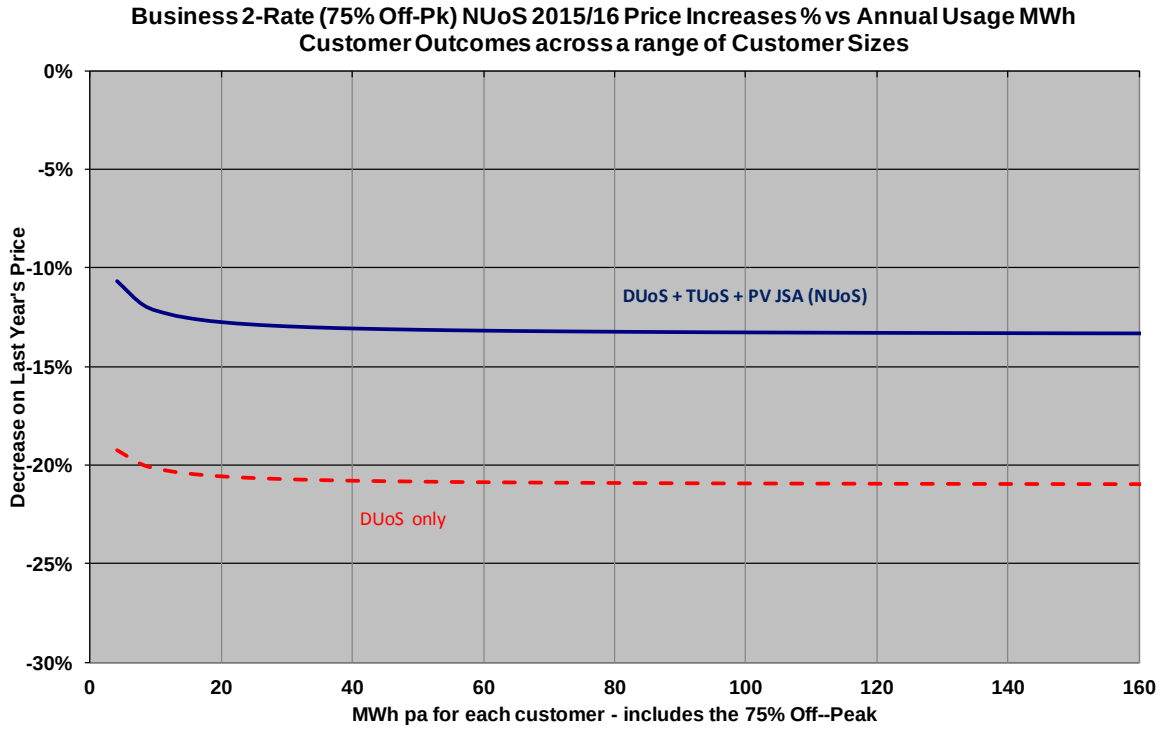
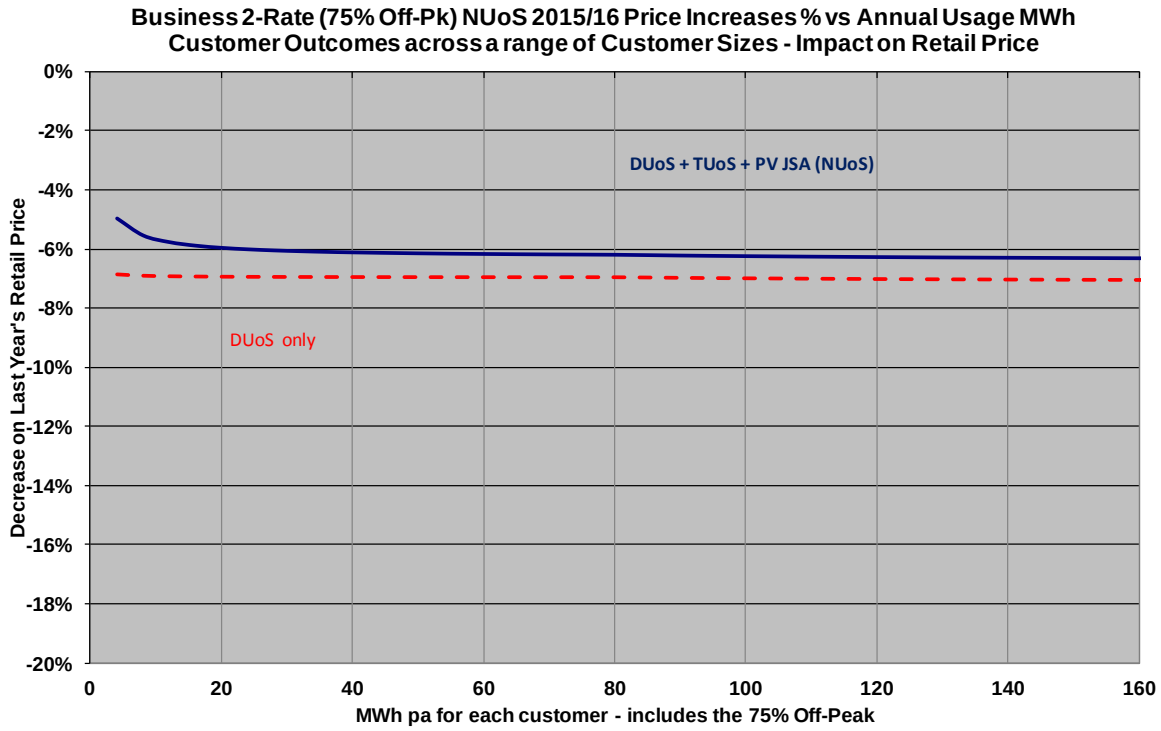


Figure 74 - Low voltage business 2-rate Retail change in 2015/16, 25% peak consumption

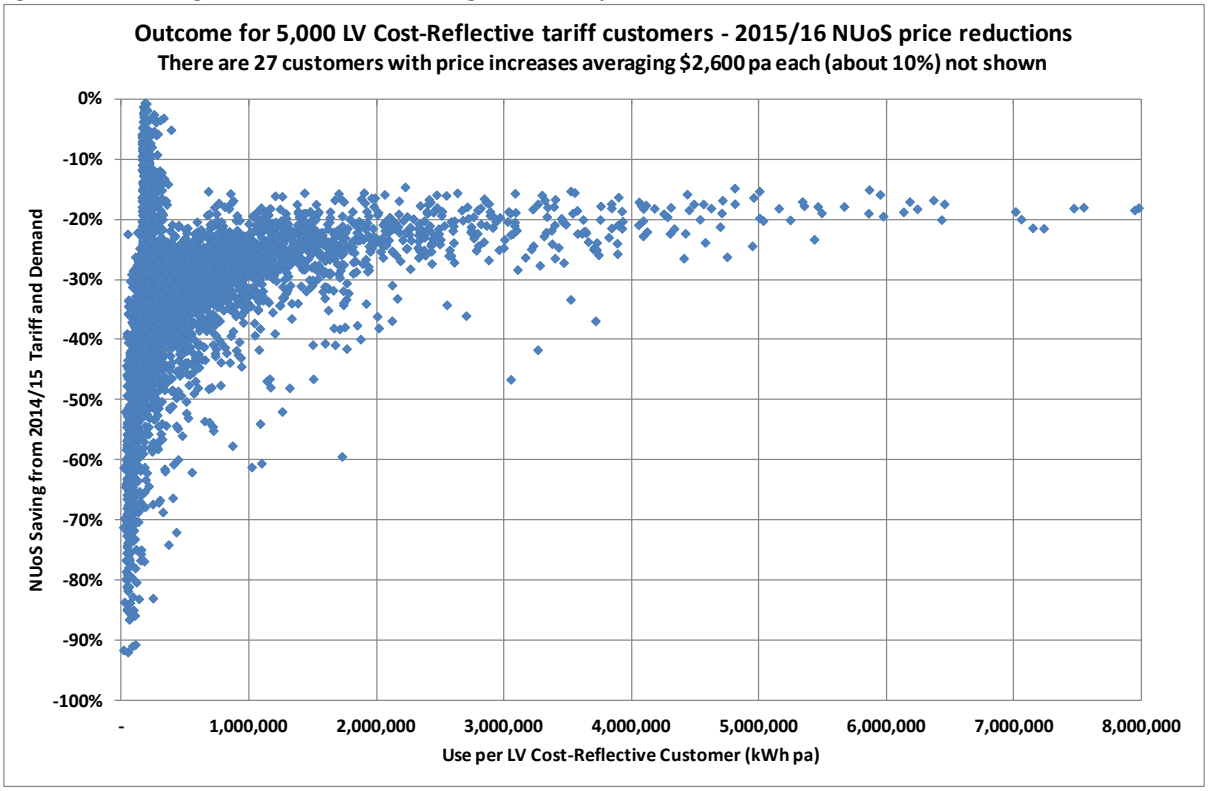


7.5.3 Low Voltage kVA agreed demand/actual demand/transition actual demand tariff

The average NUoS price decrease of low voltage kVA cost reflective customers in 2015/16 is -20%. This will be spread across customers on actual demand transition (64), actual demand (1250) and agreed demand (3700).

A scatter chart displaying the bill impact vs customer annual energy consumption in MWh is shown in Figure 85. Within this chart, the cumulative effects of the TUoS change and the PV JSA, recovered through NUoS are indicated.

Figure 8 - Low voltage business kVA NUoS change vs consumption in 2015/16



7.5.4 Unmetered supply tariffs

The average 2015/16 price and price change from 2014/15 for the two unmetered supply tariffs is shown in Table 22.

The table shows (as NUoS) the impact of all network related charges (including transmission and PV JSA FiT pass-throughs).

Table 22 - Unmetered supply NUoS 2015/16 average price and price change

Tariff	NUoS			DUoS		
	2014/15 $/MWh	2015/16 $/MWh	change %	2014/15 $/MWh	2015/16 $/MWh	change %
Unmetered 12	91.80	72.70	-20.8%	65.00	50.90	-21.7%
Unmetered 24 hour	81.20	72.70	-10.5%	57.90	50.90	-12.1%

Note NUoS = DUoS + TUoS + PV JSA

7.6 High Voltage Business tariff class

7.6.1 High voltage business 2-rate tariff (closed)

This tariff has been closed and all customers reassigned to another HV tariff.

7.6.2 High voltage kVA agreed demand < 400 kVA tariff

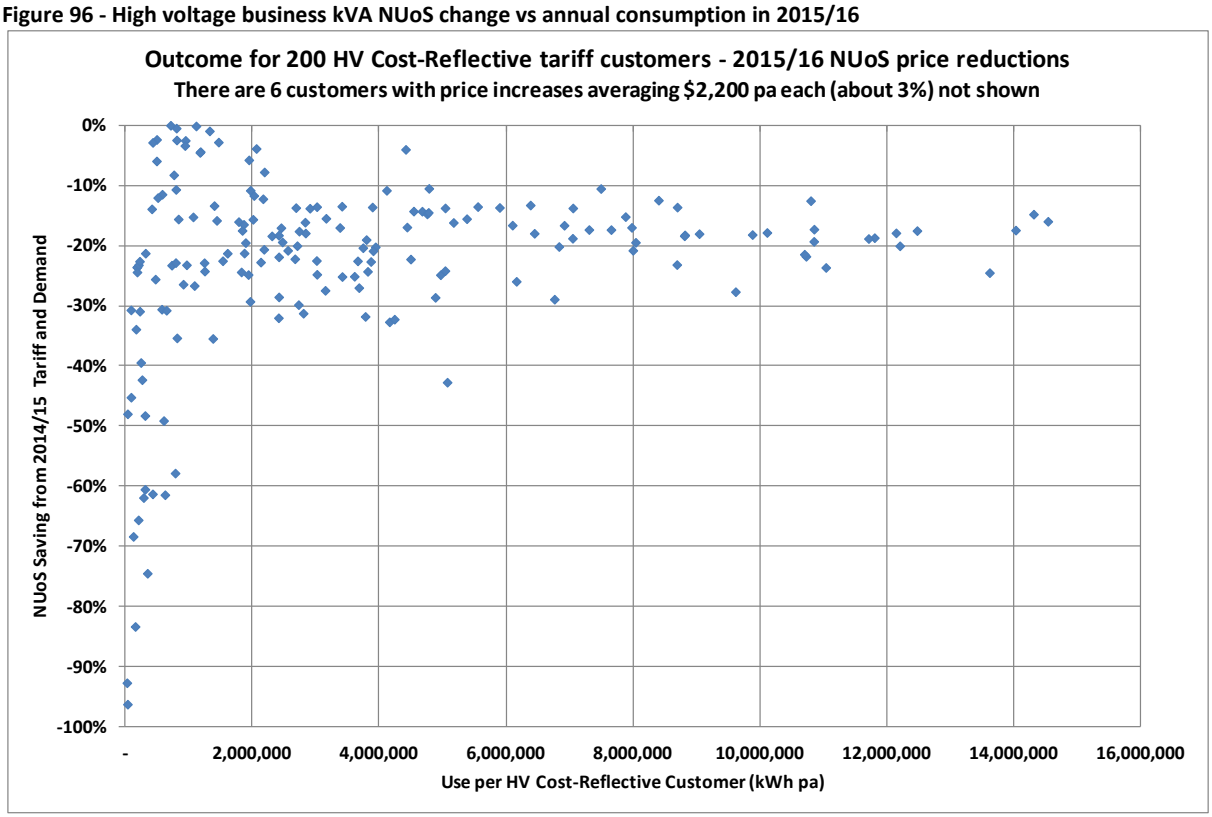
The rates of the high voltage < 400 kVA and the low voltage kVA agreed demand tariffs are the same. The information in Section 7.5.3 above mimics the outcome for these customers.

7.6.3 High Voltage kVA agreed demand/actual demand tariff

The average NUoS price decrease of high voltage kVA agreed demand customers in 2015/16 is -20%. This will be spread across customers on actual demand (28), agreed demand <400 kVA (39) and HV agreed demand (124).

A scatter chart displaying the bill impact vs customer annual energy consumption in MWh is shown in Figure 96. Within this chart, the cumulative effects of the TUoS change and the PV JSA, recovered through NUoS are indicated.

Figure 96 - High voltage business kVA NUoS change vs annual consumption in 2015/16



7.7 Major Business tariff class

7.7.1 Zone substation and Subtransmission kVA agreed demand locational tariffs

There are a relatively small number of major business customers (most with locational TUoS charges) and accordingly these are not amenable to a scatter chart illustration of the 2015/16 price change. For simplicity, the DUoS outcomes only are detailed below.

There is little variability between the individual price changes for these customers and the averages for the tariff. The average DUoS price change for these customers in 2015/16 is a decrease of -33% for the major businesses.

8 Pricing of standard control services

This Section demonstrates how SA Power Networks' network tariffs for 2015/16 comply with the requirements of the Rules and the AER's Preliminary Decision in respect of the pricing X factors, side constraints and pricing principles.

8.1 Regulatory requirements

8.1.1 Rules requirements

Rules clause 6.18.2(b) specifies that SA Power Networks' Pricing Proposal must contain information concerning the expected revenue to be derived from its tariff classes and tariffs, as follows.

6.18.2 Pricing proposals

(b) A *pricing proposal* must:

(4) set out, for each *tariff class* related to *standard control services*, the expected weighted average revenue for the relevant *regulatory year* and also for the current *regulatory year*; and

In setting its prices for standard control services, clause 6.18.5 of the Rules requires SA Power Networks to comply with the following pricing principles.

6.18.5 Pricing principles

(a) For each *tariff class*, the revenue expected to be recovered should lie on or between:

(1) an upper bound representing the stand alone cost of serving the customers who belong to that class; and

(2) a lower bound representing the avoidable cost of not serving those customers.

(b) A tariff, and if it consists of 2 or more *charging parameters*, each *charging parameter* for a *tariff class*:

(1) must take into account the long run marginal cost for the service or, in the case of a *charging parameter*, for the element of the service to which the *charging parameter* relates; and

(2) must be determined having regard to:

(i) transaction costs associated with the tariff or each *charging parameter*; and

(ii) whether customers of the relevant *tariff class* are able or likely to respond to price signals.

(c) If, however, as a result of the operation of paragraph (b), the *Distribution Network Service Provider* may not recover the expected revenue, the provider must adjust its tariffs so as to ensure recovery of expected revenue with minimum distortion to efficient patterns of consumption.

In respect of pricing side constraints, SA Power Networks is required to comply with clause 6.18.6 of the Rules:

6.18.6 Side constraints on tariffs for standard control services

(a) This clause applies only to *tariff classes* related to the provision of *standard control services*.

(b) The expected weighted average revenue to be raised from a *tariff class* for a particular *regulatory year* of a *regulatory control period* must not exceed the corresponding expected weighted average revenue for the preceding *regulatory year* by more than the permissible percentage.

(c) The permissible percentage is the greater of the following:

(1) the CPI-X limitation on any increase in the *Distribution Network Service Provider*'s expected weighted average revenue between the two *regulatory year*s plus 2%;

Note:

The calculation is of the form (1 + CPI)(1 – X)(1 + 2%)

(2) CPI plus 2%.

Note:

The calculation is of the form (1 + CPI)(1 + 2%)

(d) In deciding whether the permissible percentage has been exceeded in a particular *regulatory year*, the following are to be disregarded:

(1) the recovery of revenue to accommodate a variation to the distribution determination under rule 6.6 or 6.13;

(2) the recovery of revenue to accommodate pass through of charges for *transmission use of system services* to customers.

(e) This clause does not, however, limit the extent a tariff for customers with remotely-read interval metering or other similar metering technology may vary according to the time or other circumstances of the customer's usage.

8.1.2 Requirements of the AER's Decision

The principal elements of the AER's Preliminary Decision are set out in Attachment 14 (Control Mechanisms) Decision and form the major determinants of prices for standard control services for 2015/16. Sections 2.2 and 2.3 of this Pricing Proposal have set out the specific formulae.

8.2 2015/16 prices for standard control services

The fundamental pricing criteria that SA Power Networks has factored into this Pricing Proposal are that prices should be set to recover the allowed revenue of $682 M assuming forecast quantities.

SA Power Networks has determined the likely sales volumes by customer segment for 2015/16 and utilised them in the sales forecast attached to this proposal. The demand quantities forecast to be billed include the various large customer initiative outcomes from the reassigning of customers to different tariffs plus the agreed demand reset adjustments. We have also allowed for the residential solar PV tariff reassignments.

We have not made any adjustment for Service Incentive Scheme outcomes from 2013/14, as we propose to bank that outcome until 2016/17. We are expecting a favourable outcome for 2014/15 which will offset the 2013/14 outcome. Banking the 2013/14 outcome this year will reduce the price volatility associated from dropping prices this year and then increasing prices significantly next year.

There are no other parameters to consider in this first year of 2015-20. Even the CPI adjustment was determined when the AER set the Preliminary Decision smoothed revenue allowance of $682M.

8.3 Compliance with the Revenue Cap

The AER's WAPC model has been used and amended for the purposes of demonstrating compliance with the provisions of the 2015-20 Revenue Cap. This model is submitted as Appendix G (confidential) and forms part of this Pricing Proposal.

A summary of the tariff class revenue is presented in Table 23. This uses estimated outcomes for 2014/15 and forecast outcomes for 2015/16.

Table 23 – Weighted Average Revenue

Tariff class	2014/15 $'000	2015/16 $'000	Change in %
Major business	12,023	9,225	-23%
HV Business	42,235	30,358	-28%
LV Business	419,713	291,480	-31%
LV Residential	453,110	350,915	-23%
Total	927,081	681,977	-26%

Table 23 demonstrates that SA Power Networks' 2015/16 Network Pricing Proposal complies with the Revenue Cap constraint of $682.000 M, with forecast recoveries of $681.977 M. The use of simpler tariffs with fewer significant figures has resulted in a rounding outcome of -$0.023 M.

8.4 Tariff class side constraints

8.4.1 Tariff class movement side constraint

The side constraint formula does not apply in the first year of the Reset.

That said, table 38 in section 8.3 above shows that all tariff classes have received significant reduction in distribution charges in 2015/16 which would meet any side constraint rule.

8.4.2 Fixed supply charge side constraint for small customers

In the transitional Rules, Clause 9.29.5(d) limited the maximum increase in the fixed supply charge component for small customers to $10 per annum. This obligation no longer applies from July 2015. However, we have attached Table 39 below to show that, despite the removal of the fixed charge side constraint for small customers, the annual supply charge has been reduced by $11.79 in 2015/16.

The fixed NUoS charges for small customers are illustrated in Table .

Table 39 – Compliance with the fixed charge side constraint for small customers

Tariff class	2014/15 Fixed charge		2015/16 Fixed charge		Difference
	¢/day	$ p.a.	¢/day	$ p.a.	$ p.a
LV residential					
DUoS	30.100	$109.87	25.630	$93.81	-$16.06
TUoS	0.000		0.000	$0.00	$0.00
PV JSA	0.000		4.410	$16.14	$16.14
WC type 5-6 meter	0.089	$32.56	0.057	$20.69	-$11.87
Total	$30.19	$142.42	$30.10	$130.64	-$11.79
LV Business					
DUoS	30.100	$109.87	25.630	$93.81	-$16.06
TUoS	0.000		0.000	$0.00	$0.00
PV JSA	0.000		4.410	$16.14	$16.14
WC type 5-6 meter	0.089	$32.56	0.057	$20.69	-$11.87
Total	$30.19	$142.42	$30.10	$130.64	-$11.79

8.5 Compliance with pricing principles

This Section demonstrates SA Power Networks' compliance with the pricing principles set out in clause 6.18.5 of the Rules, which requires SA Power Networks to ensure that the revenue recovered for each tariff class lies between:

- An upper bound, representing the stand-alone cost of serving the customers who belong to that class; and
- A lower bound, representing the avoidable cost of not serving those customers.

The Stand-alone and Avoidable cost methodologies are described in detail in Appendix F of this Proposal. These approaches are used to calculate the revenues for each standard control services

tariff class associated with each cost methodology. These costs are compared with the weighted average revenue derived from SA Power Networks' proposed tariffs.

8.5.1 Definition of Stand-alone and Avoidable costs

These two categories of cost may be defined for tariff classes, as follows:

- The ***Stand-alone cost*** for a tariff class is the cost of supplying only the tariff class concerned, with all other tariff classes not being supplied. If customers were to pay above the stand-alone cost then it would be economically beneficial for customers to switch to an alternative provider, and economically feasible for an alternative provider to operate. This creates the possibility of inefficient bypass of the existing infrastructure; and
- The ***Avoidable cost*** for a tariff class is the reduction in network cost that would take place if the tariff class were not supplied (whilst all other tariff classes remained supplied). If customers were to be charged below the avoidable cost, it would be economically beneficial for the business to stop supplying the customers and as the associated costs would exceed the revenue obtained from the customer.

There are two alternative concepts that could be used to calculate these costs:

- To ignore the sunk nature of the existing network and estimate the costs which would be associated with an optimally designed network, constructed to supply standard control services to the tariff class(es) concerned; or
- To base the estimation of costs on the modification of the existing network to provide standard control services to the tariff class(es) concerned

The Rules do not prescribe the methodology that should be used to calculate the Stand-alone and Avoidable costs of tariff classes of the network. SA Power Networks has chosen to base its cost estimations on the second concept, with hypothetical modification of the existing network, rather than by devising and costing optimal new network structures. This has been done for two reasons:

- To avoid the very substantial resource requirements that would be involved in a full network redesign; and
- In recognition that the economic regulatory framework for distribution supports the existence and value of existing (sunk) network investments and does not support the optimisation of existing networks.

The derivation of the stand-alone and avoidable cost for tariff classes uses a methodology based on SA Power Networks' cost of supply model. This model has been in use for a decade and was formulated to permit the efficient allocation of network costs to tariff classes and the formulation of network prices. The cost allocation model has been adapted to include the allocation of non system costs to tariff classes.

This model is described in the following Sections. This approach was independently reviewed by KPMG, and certified to be compliant with the Rules in 2010. The approach has not been altered from that used in the 2010/11 Pricing Proposal and the sole change has been to index the outcomes by CPI each year.

8.6 Stand-alone costs

The stand-alone cost for each tariff class was derived from an engineering estimate of the proportions of the cost of providing network capacity that would need to remain in place to service the load in each of the four tariff classes in turn if the other three tariff classes were no longer required to be supplied.

The resulting cost allocation for each tariff class has been expressed in $/kVA, using the estimated coincident contribution to SA Power Networks' peak system demand and after adjustment for the average power factor of the tariff class.

The detailed procedure used to calculate the stand-alone cost of tariff classes is set out in Appendix F of this Pricing Proposal.

8.7 Avoidable costs

In similar manner to the stand-alone cost, the avoidable cost associated with each of the four tariff classes were derived from an engineering estimate made of the network cost that could be avoided, in the event that each of the four tariff classes were to be removed in turn.

As with the stand-alone cost, the avoidable network cost was expressed in $/kVA for each tariff class. The procedure used to calculate the avoidable cost of tariff classes is also set out in Appendix F of this Pricing Proposal.

8.8 Compliance with Rules clause 6.18.5(a)

The revenue expected to be recovered from each of SA Power Networks' tariff classes in 2015/16 is compared with the stand-alone and avoidable costs calculated in Sections 8.6 and 8.7 in Table 24.

Table 24 - Stand-alone and avoidable distribution network costs ($ M)

Tariff class	Stand-alone cost	Tariff revenue	Avoidable cost
Major business	$82	$9	$4
HV business	$92	$30	$4
LV business	$424	$291	$78
LV residential	$577	$351	$229

SA Power Networks' network tariff classes lie within the subsidy free range, in that the expected DUoS revenue collected from the tariff class lies between the avoidable and stand alone costs of supply and therefore meet the requirements of Section 6.18.5(a) of the Rules.

8.9 Long Run Marginal Costs

In the context of an infrastructure business with assets lives of typically 40 years, short run costs are effectively zero up to the point where the capacity of the network is exceeded. It is therefore important to use the Long Run Marginal Cost (LRMC) in any consideration of the marginal cost of providing network service.

There are three general approaches to the calculation of LRMC. Marsden Jacob Associates articulated these alternatives in its review of possible approaches, for the Queensland Competition

Authority. This review was undertaken in the context of determining efficient prices for the Gladstone Area water Board. The alternatives are as follows[10]:

- ***Marginal Incremental Cost*** (MIC) - where a scenario involving increased demand is tested for its incremental effect on capex. The associated marginal cost is calculated as the difference between the present value of the investment programs divided by the increment in demand;
- ***Average Incremental Cost*** (AIC) - is the present value of the incremental investment associated with increasing demand divided by the present value of the increment in demand; and
- ***Long Run Incremental Cost*** (LRIC) - is the annuitised value of the capital expenditure divided by the increment in demand.

In comparing the suitability of these three approaches, the first requires scenario definition and analysis, which although not impracticable would be very resource intensive in the context of a distribution business. Marsden Jacob make the point that because the AIC approach is based on a long term planning period, it takes a longer view of costs and provides more stable prices than the LRIC approach[11].

The approach used by SA Power Networks in this Pricing Proposal to determine the LRMC of its tariff classes may be characterised as the AIC. However, the calculation has been extended to incorporate the incremental operating cost associated with new capital investment. This is the same as the approach taken by Energy Australia in its 2009 Pricing Proposal[12].

SA Power Networks' approach to the calculation of the network LRMC for its tariff classes is set out in Appendix E of this Proposal. The approach has not been altered from that used in the 2010/11 Pricing Proposal and the sole change has been to index the outcomes by CPI each year.
These calculations are carried out at the following voltage levels of the network:

- Subtransmission;
- High voltage; and
- Low voltage.

The marginal cost at each network voltage level has been determined using the following relationship:

$$LRMC(AIC) = \frac{PV(growth\ \ related\ \ capex) + PV(growth\ \ related\ \ opex)}{PV(incremental\ \ demand)}$$

Where:

growth related capex is the annualised capital expenditure to meet the additional demand and new customer connections forecast over the forecast period;

growth related opex is the incremental annual cost of operating and maintaining the newly constructed network and connection assets over the forecast period; and

incremental demand is the forecast change in kVA demand compared with the base year of 2009/10

[10] Marsden Jacob Associates, Estimation of Long Run Marginal Cost (LRMC) - A report prepared by the Queensland Competition Authority - Final, 3 November 2004

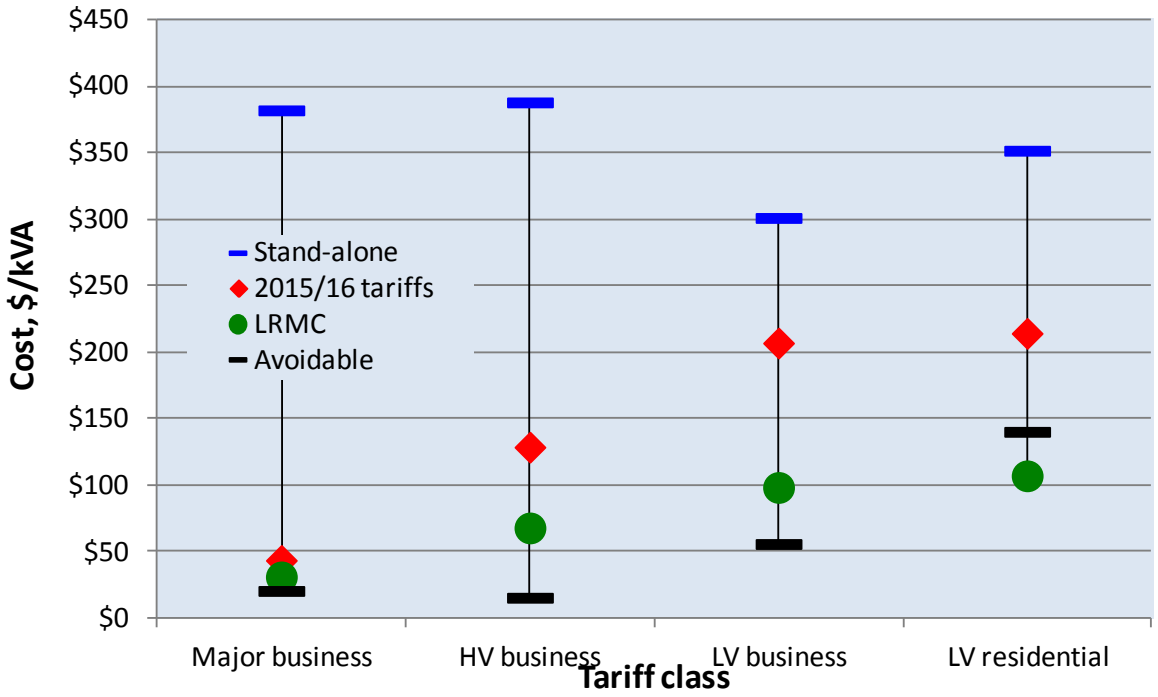
[11] Marsden Jacob, LRMC, November 2004, p.16.

[12] EnergyAustralia, Network Pricing Proposal, May 2009.

The LRMC outcomes at the subtransmission and high voltage levels are directly applicable to the Major Business and High Voltage Business tariff classes. At low voltage, a small difference between the LRMC of the Low Voltage Business and Residential tariff classes arises because of their different power factors.

A comparison of the stand-alone, avoidable, LRMC and 2015/16 tariff rates for SA Power Networks' four tariff classes are shown in Figure 10[13].

Figure 107 - Cost comparison ($/kVA per annum)



It can be noted from Figure 17 that:

- The 2015/16 prices for each network tariff class fall within the bounds of the stand-alone and avoidable costs and hence are subsidy-free;
- The LRMC of each tariff class determined from the approach described above yields a cost that is less than that expected to be recovered through the 2015/16 prices in the case of all tariff classes. The tariffs therefore do not over signal the incremental cost imposed by the customer on the network; and
- For the formulation of these estimates, kVA peak demands coincidental with SA Power Networks' peak were estimated for each tariff. In the case of the low voltage business tariff class, its relatively lower contribution to SA Power Networks' coincidental peak demand (compared with residential tariff which tends to drive a greater proportion of the overall peak) has resulted in a tariff rate which is higher in $/kVA terms.

8.9.1 Application of the LRMC to price formulation

As required by clauses 6.18.5(b)(1) and 6.18.5(c) of the Rules, SA Power Networks has taken into account the calculated values of LRMC in establishing the charging parameters for each of SA Power Networks' 2015/16 network tariffs.

[13] The stand-alone, 2015/16 tariff and avoidable tariff class rates are expressed as their $ contribution divided by the forecast coincident peak kVA for SA Power Networks' system demand in 2015/16, with a 10% PoE.

SA Power Networks

Charging parameters of tariffs that are related to volume may be expected to influence customers' consumption decisions. Those parameters are:

- Monthly demand;
- Peak period energy; and
- To a much less significant extent, anytime energy.

On the other hand, charging parameters that are effectively fixed would be unlikely to affect customer consumption patterns, throughout a very broad range.

SA Power Networks' tariffs for larger business customers have a ToU structure, having demand charges that apply or are higher during a defined peak consumption period. Business 2-rate has energy charges that are higher during what has traditionally regarded as peak times.

The revenue that is forecast to be recovered in 2015/16 from these peak period business kVA demand and 2-rate tariff components is compared with the LRMC for tariff classes in Table 25 and Table 26. This Table also illustrates the proportions of tariff revenue recovered from peak period demand charges and peak energy usage rates.

In order to convert the price signalling components of tariffs to the equivalent annual $/kVA charges in this price comparison, the revenue per annum derived from the application of each price component during peak periods was divided by the kVA demand for the tariff. The associated calculations are described in Appendix E.

Table 25- LRMC and volume related charging parameters for Time of Use

	Major Business tariff class			HV Business tariff class	LV Business tariff class	
	Sub-trans	Zone sub (loc TUoS)	Zone sub			
	kVA demand					2-rate
LRMC $/kVA/yr	$30			$67	$98	
Price signalling						
Peak demand rate $/kVA/yr	$7	$32	$32	$45	$73	
Peak energy rate $/kVA/yr	$4	$19	$17	$27	$36	$201
Total peak charge $/kVA/yr	$11	$51	$49	$72	$110	$201

NoteEnergy rate is charged in $/MWh but is expressed here in equivalent $/kVA terms over the period of peak demand. The revenue recovery forecast by each charge during the peak period is divided by the associated peak kVA demand.

The equivalent LRMC and revenue information for SA Power Networks' single rate energy tariffs is illustrated in
Table 26. For the purpose of estimating an equivalent $/kVA rate, it was assumed that all traditional peak energy (ie 0700-2100 work days) should be used. This is a broad definition that reflects a historic view of peak, but it doesn't reflect the true peak demand periods of the low voltage

If the Peak energy rate effective $/kVA/year was to be amended to better reflect the proportion of tariff charged at true times of peak demand, then that number would only be a small fraction of that shown below, perhaps 5% to 10% depending on assumptions. This reflects the lack of granularity available from energy-based charges when dealing with occasional demand spikes, as experienced in a generally mild climate with the occasional extreme weather event like South Australia. The residential monthly demand tariff has a summer demand charge of about $88/kW ($11/kW for 5 months for a customer with 50% diversity and 80% average monthly demand vs peak) and a winter

demand charge of about $62/kW ($5.60/kW for 7 months at 50% diversity and 80% average monthly demand vs peak). This is much closer to the LRMC figures than the existing energy usage tariff. The balance of charges is recovered by a usage charge on the residential actual demand tariff.

Table 26- LRMC and volume related charging parameters for single rate

	LV Business tariff class		Residential tariff class
	Single rate	Unmetered	Residential + CL
LRMC $/kVA/yr	$98		$107
Price signalling			
Energy rate $/kVA/yr	$136	$160	$103

Note Energy rate is charged in $/MWh but is expressed here in equivalent $/kVA terms over the period of peak demand. The revenue recovery forecast by each charge during the peak period is divided by the associated peak kVA demand.

The way in which the tariff class LRMC has been taken into account by SA Power Networks in establishing the 2015/16 tariff components has involved the following considerations:

- ***Ensuring that price signalling components do not over signal the LRMC:*** As customers' consumption decisions will be influenced by the charging parameters of tariffs related to volume, SA Power Networks has confirmed that, expressed on a common basis, the price signalling tariff components have all been set less than the LRMC of supply. The network tariffs will therefore not over-signal the marginal cost of supply;
- ***Use of price signalling components where practicable:*** Where permitted by the metering arrangements, volume related charges that reflect the customers' demand or incremental energy consumption have been used to improve signalling of the tariff class LRMC; and
- ***Revenue recovery through non-distortionary charging parameters:*** For each tariff, price signalling charging parameters recover a proportion of the total revenue during peak consumption periods. The balance of revenue recovery takes place in the least distortionary manner possible, through fixed supply charges and through the single rate energy rates that apply during off peak periods.

SA Power Networks' 2015/16 tariffs have therefore been established in compliance with the provisions of clauses 6.18.5(b)(1) and 6.18.5(c) of the Rules.

8.10 Transaction costs

Clause 6.18.5(b)(2)(i) of the Rules requires SA Power Networks to have regard to the transaction costs arising from its network tariffs, by limiting the complexity of tariff structures and the number of charging parameters within each tariff. The charging parameters applicable to each tariff are provided in Section 4 of this Pricing Proposal.

SA Power Networks has simplified the legacy tariffs (residential usage, controlled load, business single and business 2-rate) and has also reduced the number of significant values in each tariff element. This should reduce some transaction costs and improve the comprehension of these tariffs by customers.

SA Power Networks will be reviewing the response by customers and retailers to the opt-in residential monthly demand tariff. The tariff has been structured as simply as possible within key design criteria, having two elements only each month – a monthly demand charge based on peak demand between 4pm and 9pm daily, and a usage charge. The quantum of the network bill is

evenly split between the two items. The absence of any time-of-use energy signals in the network tariff leaves such developments to a retailer if they so choose, to reflect whatever pricing signals are relevant from the energy market.

Retailers have advised through consultation that they would prefer the actual demand tariffs to be structured around a "$/kVA per day" basis rather than a "$/kVA per month" basis. The pricing outcome is the same as if monthly billing/reading is undertaken, as the actual demand charged is the maximum between the monthly reads. It is just the number of days between reads that can vary. Given the retailer support for this initiative and its importance to the large customer cost-reflective initiative, we are endeavouring to have this alternate format of the actual demand tariff available from 1 July 2015.

8.11 Customer response to price signals

SA Power Networks is required to have regard to the ability of customers to respond to the price signals provided by its network tariffs, in accordance with clause 6.18.5(b)(2)(ii) of the Rules. The efficiency gains of marginal cost pricing are realised when a tariff based on the marginal cost of supply induces the customer to make behavioural change.

To the extent possible within the limitations imposed by network tariff structures and metering constraints, SA Power Networks signals the long run marginal cost of supply through those tariff charging parameters with the greatest price elasticity of demand, namely the variable consumption charges that are based on the customers energy use and maximum demand.

In relation to the operation of clause 6.18.5(c) of the Rules, it is noted that SA Power Networks' current estimate of LRMC falls near most of the price signalling charging parameters for most of the tariff classes, as described in Section 8.9 .

If the price signalling charging parameters alone (which were set taking into account the LRMC) were used, the revenue for each tariff class would be insufficient to recover the expected revenue. The revenue shortfall is recovered through the use of tariff components which would cause minimal distortion in efficient patterns of consumption, namely:

- Fixed charges; and
- Anytime energy charges during off peak periods.

SA Power Networks is therefore compliant with this Rules provision. We will be undertaking further analysis of our pricing structures as part of the imminent Tariff Structure Statement submission, due for lodgement in November 2015. We will also be updating our calculations of LRMC for that submission.

9 Transmission cost recovery tariffs

This Section sets out the procedures that SA Power Networks will follow to enable the recovery of transmission related charges, including any avoided TUoS charges paid to the embedded generators connected to SA Power Networks' distribution network.

ElectraNet is the Transmission Network Service Provider in South Australia and calculates location specific transmission prices for the connection points to SA Power Networks' network, in accordance with the provisions of the Rules.

ElectraNet's 2015/16 revenue will again be offset by some amount for revenue from settlement residue auctions. ElectraNet has not advised the amount of discount that has been applied in tariffs.

This Section 9 has been prepared using the May 2015 approved prices from ElectraNet which advised of a -2.7% decrease in charges.

9.1 Regulatory Requirements

9.1.1 Rules requirements

SA Power Networks' Pricing Proposal is required under clause 6.18.2(b) of the Rules to set out how the TUoS charges it incurs are passed on to customers.

6.18.2 Pricing proposals

(b) A *pricing proposal* must:

(3) set out, for each proposed tariff, the *charging parameters* and the elements of service to which each *charging parameter* relates; and

(6) set out how charges incurred by the *Distribution Network Service Provider* for *transmission use of system services* are to be passed on to customers and any adjustments to tariffs resulting from over or under recovery of those charges in the previous *regulatory year*;

Clause 6.18.7 of the Rules sets out the requirement concerning the recovery of transmission related charges by SA Power Networks.

6.18.7 Recovery of charges for transmission use of system services

(a) A *pricing proposal* must provide for tariffs designed to pass on to customers the charges to be incurred by the *Distribution Network Service Provider* for *transmission use of system services*.

(b) The amount to be passed on to customers for a particular *regulatory year* must not exceed the estimated amount of the *transmission use of system* charges for the relevant *regulatory year* adjusted for over or under recovery in the previous *regulatory year*.

(c) The extent of the over or under recovery is the difference between:

(1) the amount actually paid by the *Distribution Network Service Provider* by way of *transmission use of system* charges in the previous *regulatory year*; and

(2) the amount passed on to customers by way of *transmission use of system* charges by the *Distribution Network Service Provider* in the previous *regulatory year*.

9.1.2 Requirements of the AER's Decision

The AER requires SA Power Networks as part of its Pricing Proposal to provide the amounts for the following entries in its TUoS unders and overs account for the most recently completed regulatory year, the current regulatory year and the next regulatory year[14]:

1. Opening balance for each year.
2. Interest accrued on the opening balance for each year, calculated at the rate of the post–tax nominal rate of return as approved by the AER in its distribution determination.
3. The amount of revenue recovered from TUOS charges applied in respect of that year, less the amounts of all transmission related payments made by the DNSP in respect of that year.
4. Six months interest on the net amount in item 3, accrued at the approved post–tax nominal rate of return.
5. Summation of the above amounts to derive the closing balance for each year.

In the Preliminary Decision, the AER reiterated (in Attachment 14 B) the requirement for SA Power Networks to maintain a TUoS unders and overs account in a specific format. The AER also requires SA Power Networks to target a zero expected balance on its TUoS unders and overs account in each Pricing Proposal.

9.2 Transmission cost recovery tariff methodology

The key principles of SA Power Networks' transmission cost recovery tariff (TCR) methodology are:

- The total TUoS allocated to network tariffs aligns with the total estimated transmission charge to be paid by SA Power Networks, adjusted for any overs and unders account balance;
- To the extent possible given the constraints of metering and tariff structures, transmission charges are allocated to network tariffs in a manner that reflects the cost drivers present in transmission pricing;
- Customers with a demand of 10 MW or consumption in excess of 40 GWh have individually calculated tariffs with transmission charges allocated in a manner that preserves the location and time signals of transmission pricing in accordance with the principles in Part J of Chapter 6A of the Rules; and
- Network tariffs for smaller customer classes have transmission charges allocated on an energy basis, as location signals cannot be preserved. Small customers are assumed to have a load factor better suited to using ElectraNet's Non-locational energy prices than the capacity-based price. Large business cost-reflective tariffs have costs allocated on a capacity basis, but is then priced partly as demand and partly as energy. This ensures a reasonable outcome across the large business tariff classes that do not receive an individually calculated transmission price.

9.2.1 Avoided TUoS payments

With respect to avoided TUoS for embedded generators, SA Power Networks calculates the avoided TUoS for all embedded generators that export to its distribution network at the same rates for the

[14] AER, Final Decision - South Australia distribution determination 2010–11 to 2014–15, May 2010, pp. 322-323.

locational component which would be applied to a load of similar size at the same connection point. These calculations are prepared on a with/without basis.

This payment of avoided TUoS charges to embedded generators is as required under clauses 5.5(h), 5.5(i) and 5.5(j) of the Rules. These avoided TUoS payments to embedded generators would be recouped through the recovery mechanism for the TUoS charges.

SA Power Networks proposes to make payments in 2015/16 to the Adelaide-based land-fill gas generators and to the Bordertown generator, but only to the extent that these generators are providing network support or have historically reliable generation. These payments will be at the TUoS locational price for the level of reliable generation.

9.3 Transmission use of system overs and unders account balance

In accordance with Attachment 14 B of the 2015-20 Preliminary Decision, Table 27 provides the forecast 30 June 2016 balance of SA Power Networks' transmission use of system overs and unders amounts. It is close to zero.

Table 27 - Transmission overs and unders account balance ($'000)

		2013/14 Actual	2014/15 Expected	2015/16 Forecast
Revenue from Transmission Cost Recovery charges	$'000	246,630	259,893	263,472
Transmission charges to be paid to TNSPs	$'000	251,110	264,106	257,042
(Settlement residue payments)	$'000	-	-	-
Avoided TUoS payments	$'000	-	-	118
Inter-DNSP payments	$'000	-	-	-
Total transmission related payments	$'000	251,110	264,106	257,160
Unders and overs account				
Annual rate of interest applicable to balances	%	9.76%	9.76%	5.45%
Half-year rate of interest	%	4.74%	4.74%	2.69%
Opening balance	$'000	2,821	(1,597)	(6,166)
Interest on opening balance	$'000	275	(156)	(336)
Under/over recovery for financial year	$'000	(4,480)	(4,213)	6,312
Interest on under/over recovery	$'000	(214)	(201)	170
Closing balance	$'000	(1,597)	(6,166)	(21)

Note that as a result of reducing the number of significant figures used in pricing, the June 2016 closing balance cannot be predicted at $0. However, a forecast closing balance of minus $0.021 M compared to forecast annual recovery of $263.472 M is effectively a zero balance.

9.4 Charging parameters for transmission recovery tariffs

SA Power Networks' transmission recovery tariffs are included in the bundled NUoS Rates of customer tariffs. The charging parameters associated with transmission cost recovery tariffs are shown in Sections 4.3 to 4.6, in Table through to Table . For customers with a demand greater than 10 MW or consumption in excess of 40 MWh the transmission cost recovery tariff is location specific; for all other customers including small customers it is averaged.

Transmission cost recovery amounts are billed at the same frequency as the relevant tariff for standard control services.

9.5 Transmission recovery tariffs for 2015/16

SA Power Networks' 2015/16 recovery through transmission tariffs is forecast to increase from an estimated $260 M in 2014/15 to $263 M in 2015/16. This is a 1.2% increase, which arises for the following reasons:

- The forecast $7 M decrease in annual ElectraNet charges. These result from either;
    - Different revenues under their 2013-2018 Price Reset, and also the recovery of approved MurrayLink revenue,
    - any change in 'discount' and 'surcharge' in ElectraNet's charges in 2015/16, due to settlement residues and payments for interstate networks (new arrangements for interstate networks charges have started in 2015/16); and
    - The level of over/under-recovery by ElectraNet of the allowed annual revenue in 2015/16 versus 2014/15. ElectraNet endeavour to set their prices each year to achieve a zero balance at the end of each year but variations in revenue recovery and settlements residue occur every year.
- The $6 M over -recovery in pricing required by SA Power Networks in 2015/16 to achieve a near nil balance. Prices in 2014/15 are expected to over-recover by -$6 M.

SA Power Networks has prepared prices for 2015/16 that recover these ElectraNet charges. Locational customers have had prices developed directly from the ElectraNet price list according to their location and usage parameters.

All other customers have had prices applied on a State-wide non-locational basis, using the pricing signals provided by ElectraNet, the billing parameters available for that customer segment and the customer demand assumptions for that customer segment.

For example, business customers on a demand tariff will incur a mixture of demand and energy charges for transmission, whilst residential and small business customers will incur an energy-based charge. In 2015/16, the prices for all non-locational customers have been revisited with proportional increases to:

- residential first block of usage (from 2.48 c/kWh in 2014/15 to 3.0 c/kWh in 2015/16),
- controlled load (from 0.83 c/kWh to 1.75 c/kWh) ; and
- business 2-rate off-peak (from 0.76 c/kWh to 1.75 c/kWh).

These increases have been offset by the reductions in DUoS and PV FiT charges. Other tariffs have had reductions to their transmission charges, with a simplification to the agreed demand tariff charges (all of these have had similar prices before, they now have the same price, ie $3.32/kVA/month for agreed demand and 0.91 c/kWh for usage).

10 Recovery of the PV Jurisdictional Scheme Amount

The solar feed-in scheme is a South Australian Government initiative which commenced on 1 July 2008 and is to apply for 20 years. It was reviewed by the SA Government in 2009/10 and amendments to the legislation took effect from 29 July 2011[15]. The amendments to the legislation introduced two further schemes – one which required application by September 2011 which also applies till June 2028 and a further scheme for subsequent applications which applies till September 2016. Entry to these schemes has now closed. Under the SA Government legislation, SA Power Networks is obliged to make FiT payments to qualifying customers that have solar PV generators, for energy they export to the grid.

The purpose for the PV Jurisdictional Scheme Amount is to allow SA Power Networks to recover from all of its customers the cost of the SA Government legislated Feed-in Tariff payments that SA Power Networks is required to make to those customers that have qualifying solar PV generators.

Under the Jurisdictional Scheme Amount arrangements, SA Power Networks is required to provide information on the payments and recoveries of PV FiT in the same manner to that used for transmission (see 9.1.2 above for these requirements). The AER has confirmed in the Preliminary Decision (Attachment 14 C) that these requirements continue. SA Power Networks recovers the PV JSA as an additional component of its bundled NUoS charges.

The PV JSA is being recovered as uniform percentage uplift across all customer groups on each component of their DUoS charge. This has resulted in a further charge for all customers to recover the amounts incurred under the SA Government legislation. All tariff elements receive about +17% uplift to their distribution charge, including supply charges.

This approach to the recovery of the PV JSA has the following characteristics:

- It is simple, and readily understood;
- By being applied as a uniform uplift to all charging components, it is not likely to unduly influence customers' consumption decisions;
- As it is scaled to the customer's DUoS charge
    - It does not unduly penalise high load factor commercial and industrial customers,
    - It can be applied to each and every customer, and
    - Is therefore equitable.

The recovery of the PV JSA has been included as an additional charging component in the NUoS tariffs, as described in Section 4.

10.1 PV Jurisdictional Scheme Amount overs and unders account balance

In accordance with Attachment 14 C of the Preliminary Decision, Table 28 provides the forecast 2015/16 balance of SA Power Networks' PV JSA overs and unders amounts.

[15] Government of South Australia, Electricity (Feed-In Scheme—Solar Systems) Amendment Act 2008.

Table 28 – PV JSA overs and unders account balance ($'000)

		2013/14 Actual	2014/15 Expected	2015/16 Forecast
Revenue from Jurisdictional Scheme Obligations Recovery (JSO PV) Tariffs	$'000	126,756	164,132	116,601
PV Incentive Scheme Payments for Export PV - 2028 Scheme	$'000	16,087	16,285	16,508
PV Incentive Scheme Payments for Export PV - 2028S Scheme	$'000	71,392	72,662	73,582
PV Incentive Scheme Payments for Export PV - 2016 Scheme	$'000	31,999	39,437	40,448
Total JSO (PV Pass-Through) payments (net of 2010/11 Opex allowance)		119,478	128,384	130,538
Audited opening balance of trans overs/(unders) account	$'000	(26,764)		
Unders and overs account				
Annual rate of interest applicable to balances	%	9.76%	9.76%	5.45%
Half-year rate of interest	%	4.74%	4.74%	2.69%
Opening balance	$'000	(26,773)	(21,762)	13,566
Interest on opening balance	$'000	(2,613)	(2,124)	739
Under/over recovery for financial year	$'000	7,278	35,748	(13,937)
Interest on under/over recovery	$'000	347	1,704	(375)
Closing balance	$'000	(21,762)	13,566	(7)

The reconciliation in Table 28 demonstrates a near-zero closing balance of -$0.007 M for the overs and unders account in 2015/16 and thence SA Power Networks' compliance with the provisions of clause 6.18.7 of the Rules and the AER's Preliminary Decision. Forecasting a zero balance is more difficult to achieve with the simplified approach to pricing now being used, as less significant figures in prices result in larger steps in tariff recovery.

10.2 Charging parameters for PV JSA cost recovery tariffs

SA Power Networks' PV JSA cost recovery tariffs are included in the bundled NUoS Rates of customer tariffs. The charging parameters associated with PV JSA cost recovery tariffs are shown in Sections 4.3 to 4.6, in Table through to Table .

PV JSA cost recovery amounts are billed at the same frequency as the relevant tariff for standard control services.

The charging parameters are those used for distribution services, with prices set at about 17% of the standard control price.

10.3 PV JSA cost recovery tariffs for 2015/16

SA Power Networks' 2015/16 PV JSA recovery tariffs are forecast to recover $117 M in 2015/16 ($164 M is estimated for 2014/15). This will recover three series of payments:

- Payments under the original scheme (the '2028' Scheme). This scheme closed to new applicants in August 2010. Payments of $16.3 M are estimated for 2014/15 and $16.5 M forecast for 2015/16;
- Payments under the subsequent scheme (the '2028 Stepped' Scheme). This scheme opened to new applicants when the 2028 scheme closed, and required applications to be approved by September 2011. The number of generators approved under this scheme is much higher than under the 2028 scheme, and the size of the PV generation in each installation is also much higher. As a result, payments under this scheme are significantly

higher, with estimated payments in 2014/15 of $72.7 M and forecast payments in 2015/16 of $73.6 M.

- Payments under the third scheme (the '2016' Scheme). This scheme opened to new applicants when the 2028 Stepped scheme closed, ie from 30 September 2011. Payments are at the rate of 16 cents/kWh until September 2016, whereas the other two schemes have payments at 44 cents/kWh for qualifying generation until June 2028. Applications were at a high rate for this scheme, with the size of installation continuing to grow, resulting in increasing levels of export. As a result, payments under this scheme are significant despite the lower FiT rate of 16 cents/kWh. Estimated payments in 2014/15 are $39.4 M and forecast payments in 2015/16 are $40.4 M.

There is also an interest allowance for the timing of these cashflows, as shown in Table 28 above.

11 Customer tariff class assignment and reassignment

The requirements concerning the assignment and reassignment of customer to tariff classes are set out in clause 6.18.4 of the Rules and Attachment 14 Appendix D of the AER's Preliminary Decision.

11.1 Regulatory Requirements

11.1.1 Rules requirements

In making a distribution determination, the AER is required to formulate provisions for the assignment and reassignment 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.

11.1.2 Requirements of the AER's Decision

In accordance with the principles in clause 6.18.4 of the Rules, Attachment 14, Appendix D of the AER's decision sets out the procedures to apply to assigning or reassigning customers to tariff classes[16]. 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;
- Reassignment of existing retail customers to another existing or a new tariff during the next regulatory control period;
- Objections to proposed assignments and reassignments; and
- System of assessment and review of the basis on which a retail customer is charged.

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
   - 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.

[16] AER, Preliminary Decision, April 2015, Attachment 14 pp. 21-23.

3. In determining the tariff class to which a retail customer or potential retail customer will be assigned, or reassigned, 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[17]

   (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 reassigning a retail customer to a tariff class, must ensure:

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

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

Reassignment of existing retail customers to another existing or a new tariff during the next regulatory control period

5. SA Power Networks may reassign 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 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 reassign that retail customer to another tariff class. In determining the tariff class to which a retail customer will be reassigned, SA Power Networks must take into account paragraphs 3 and 4 above.

Objections to proposed assignments and reassignments

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 reassigned, prior to the assignment or reassignment 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 reassignment. This notice must specifically include:

   a. a written document describing SA Power Networks' internal procedures for reviewing objections, if the customer's retailer provides express consent, a soft copy of such information may be provided via email

   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 South Australian Energy Industry Ombudsman, or like officer, the customer's retailer is entitled to escalate the matter to such a body

   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

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

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 reassignment, SA Power Networks must reconsider the proposed assignment or reassignment. 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 reassignment 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.

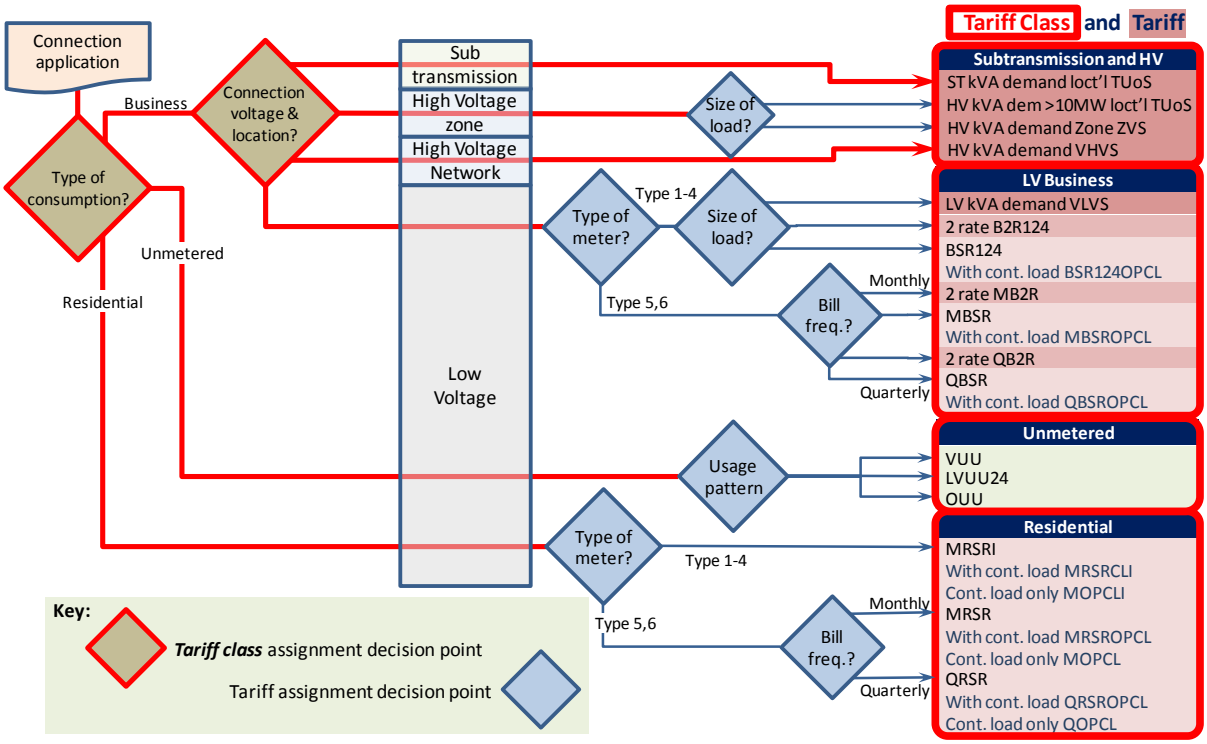
11.2 Assignment of new customers to a tariff class during the next regulatory control period

The approach that SA Power Networks applies to the tariff assignment of new and upgraded customer connections has been developed over the years since the formation of the NEM.

In this Section of the Pricing Proposal, SA Power Networks describes the process it applies to the initial assignment of customers to tariffs and to their reassignment. Notwithstanding that the individual tariffs have been grouped within tariff classes in this Pricing Proposal, the existing approach to managing tariff assignment and reassignment is demonstrated to align with the requirements established by the AER. Accordingly, no change is required to current practices.

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 the decision tree shown in Figure 11. 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 11 – Assignment of new and upgraded customer connections to tariff classes



This decision tree in Figure 11 highlights the existing process whereby customers are assigned to a tariff class and then to an individual tariff. The process relies upon a systematic sequence of decisions based on the information provided with the customer's application for supply. Decisions associated with assignment to the four tariff classes have been separately identified in red. Second-order decisions on individual tariffs are also shown. These relate to type of meter, load size and billing frequency, and lead to the customer's assignment to a specific tariff within the tariff class.

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

- The nature of a customer's usage: (ie residential, business, or unmetered); 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).

The process employed by SA Power Networks therefore appropriately takes account the factors in clause 3(a) and 3(b) of the AER's Appendix D.

Moreover, in the event that remotely–read interval metering or other similar metering technology is installed at the customer's premises as a result of a regulatory obligation or requirement during the 2015-20 regulatory control period, SA Power Networks will review this procedure.

11.2.1 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.

SA Power Networks' tariff assignment process therefore ensures that the requirements in clause 4(a) and 4(b) of the AER's Appendix D are met.

11.3 Reassignment 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 on the Low Voltage Business tariff class

The four 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.

Notwithstanding that the reassignment of customers' tariff classes is unlikely during the 2015-20 regulatory control period, SA Power Networks would do so in accordance with the provisions of the AER's Decision.

SA Power Networks follows the same processes for customers being reassigned to another tariff within a tariff class as would apply to customers being reassigned to another tariff class. Customers are able to object to such reassignments in the same manner that they are permitted to object to a tariff class reassignment.

11.4 Objections to proposed assignments and reassignments

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 attached as to this Pricing Proposal as Appendix K and is published on SA Power Networks' web site.

12 Alternative Control Services – metering services

In the Preliminary Decision, the AER has determined a price cap for Alternative control services (metering services). Attachment 16 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 16.13) and the upfront capital charges (AER Table 16.15, with annual X-factors set out in AER Table 16.16).

The annual metering charges contain a Capital and a non-Capital charge, with different prices applying to the three categories of alternative control services metering, ie WC, CT and Exceptional meters.

There are four different combinations of metering fees possible:

- Existing customers using SA Power Networks' meters. These customers continue to pay the capital and non-Capital charges.
- Where an existing customer at June 2015 has the meter replaced by an alternate meter provider eg a type 4 meter, the customer will continue to pay the Capital-related charge, but will cease paying the non-Capital related charge.
- 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.
- Where an existing customer at June 2015 was not using an SA Power Networks meter but that of an alternate meter provider, eg a type 4 meter, the customer is not liable for any annual metering charges to SA Power Networks.

We will be implementing the AER's preferred system of meter service pricing. We are planning on implementing a new meter charging system which can be separated from the standard control services tariffs. However, in the meantime, we will be using a mixture of bundled tariffs to manage the appropriate pricing of WC meters (the significant majority of customers). We will use separate, more manual systems to manage the exceptional and CT metering pricing, as occurs at present. We will also probably use a separate manual process to manage the pricing where an existing customer's meter churns to another meter provider. We will need nearly three times as many bundled network prices for the small customer tariffs to cater for the difference between charging Capital and non-Capital, non-Capital only (new customers) and no charge (existing customers with alternate meter providers already). We will work with retailers to endeavour having a smooth implementation for customers of the new AER-determined arrangements.

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Table 29 sets out the tariffs that correspond to the price terms contained in the alternative control services metering services in 2014/15 and 2015/16. The table shows the change in price outcome for those customers who use a type 5-6 WC meter. This is the overwhelming majority of our customers today.

Table 29 – Alternative control services tariffs for 2015/16

Tariff			Existing Rate 2014/15	Proposed Rate 2015/16	Variance
Type 6	DC Meter Provision	$ p.a.	$33	$21	-36%
Type 6	CT Meter Provision	$ p.a.	$142	$169	19%
Type 1-4	Exceptional Meter Provision	$ p.a.	$499	$311	-38%
Type 1-4	Other Meter Provider Service	$ p.a.	$0	$0	
Type 6	Meter Exit Fee Service	$	$264	$0	
Type 1-4	Meter Exit Fee Service	$	$590	$0	

Proposed rate combines the non-capital and capital charges that can apply
Not all customers pay both components.
Exit fees have been discontinued.
Customers who churn to another meter provider continue to pay the capital component of metering fees

Table 46 shows the annual metering charges that apply in 2015-16.

Table 46 – Alternative Control Services – Annual metering charges

Annual Metering Charges - Alternate Control (excludes GST) $pa

Metering Traiff	Non-capital only	Capital Only	Non-Capital and Capital
Type 1-4 'Exceptional' remotely read	$135.07	$176.18	$311.25
Type 5-6 CT connected manually read	$73.52	$95.90	$169.42
Type 5-6 WC manually read	$8.98	$11.71	$20.69

Annual Metering Charges on a per day basis (excludes GST) $/day

Metering Traiff	Non-capital only	Capital Only	Non-Capital and Capital
Type 1-4 'Exceptional' remotely read	$0.3690	$0.4814	$0.8504
Type 5-6 CT connected manually read	$0.2009	$0.2620	$0.4629
Type 5-6 WC manually read	$0.0245	$0.0320	$0.0565

Table 47 shows the derivation of the 2015/16 Upfront capital charges. The AER prices have been escalated by CPI from December 2014 values and by the application of the X-factor.

Table 47 – Alternative Control Services – Upfront Capital charges

Upfront capital charges for metering 2015/16

$ Dec 2014	Type 5	Type 6
Single element meter	$160.80	$100.06
Two element meter	$230.54	$254.50
Three phase meter	$396.43	$298.40

	CPI	X 2015-16	(CPI)*(1-X)
Escalation by CPI and X factor	1.0172	-0.22%	1.0194

2015/16 prices	Type 5	Type 6
Single element meter	$163.92	$102.00
Two element meter	$235.02	$259.44
Three phase meter	$404.13	$304.19

Appendices

Appendix A. Network Use of System Tariffs and explanatory notes

Appendix B. CONFIDENTIAL – Audit of 2013/14 quantities

Appendix C. CONFIDENTIAL – STPIS Approval Advice from the AER – 2013/14 for 2015/16 tariffs

Appendix D. Transmission Prices from ElectraNet – 2015/16 TUoS prices

Appendix E. Long Run Marginal Cost Methodology

Appendix F. Stand-alone and Avoided Cost Methodologies

Appendix G. CONFIDENTIAL – Revenue and Price Compliance Model (standard control)

Appendix H. Not used

Appendix I. Not used

Appendix J. SA Power Networks' procedure for assigning and reassigning customers to tariff classes (Tariff Manual)

Appendix K. SA Power Networks' Regulatory Compliance Checklist