



ES7

**Application of Network Use of
System Charges**

July 2010



SCOPE

This publication details the conditions applicable to the various Network Use of System (NUoS) prices that are available to Ausgrid's Network customers.

Note: Network charges are applied to Retailers who in turn recover both network and retail charges from end use business and domestic customers.

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DOCUMENT AND AMENDMENT HISTORY

Issue No.	Date	Approved by	Summary of Changes
1	December 1996	M - NAP	
2	October 1997	M – NP&M	Title Change and Part B added
3	February 2002	M – NP&M	Rewrite to provide Network Use of System terms and conditions appropriate to the commencement of FRC, 1 January 2002
4	September 2002	M- NRA	Update for Network Use of System prices commencing from 1 August 2002 plus minor updates.
5	July 2002	M – NP&CC	Update for Network Use of System prices commencing from 1 July 2003 plus minor updates.
6	July 2004	M – NP&CC	Revised to reflect IPART June 2004 Determination and prices commencing from 1 July 2004. Name changed from ES7 to NCP7.
7	July 2007	Executive Manager – Network Regulation and Pricing	Revised to reflect recent tariff reform and Network Use of System prices commencing from 1 July 2007. Name changed from NCP7 to ES7.
8	July 2010	Executive Manager – Regulation and Pricing	1. Revised appropriate sections to reflect; <ul style="list-style-type: none"> a) the removal of the demand component b) structural changes to the capacity charge c) changes to Daylight Savings Time d) policy changes on network price reviews and the Big Blue Continuous Price 2. Removed the eligibility criteria for the Domestic price. 3. Updated for 2010 price change; including tariff names and tariff allocation policy

INQUIRIES

For inquiries about prices and charges contact the Customer Call Centre on 13 13 67.

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1 GENERAL CONDITIONS APPLICABLE TO NETWORK PRICES

1.1 Introduction

New South Wales is part of the National Electricity Market (NEM). One of the features of the NEM is the separation of electricity charges into two components, a retail charge (for electrical energy consumed) and a network charge. The network charge covers the availability and use of the transmission and distribution electricity networks which physically deliver the energy from generators to business and domestic customers. The network charge is often known as the Network Use of System (NUoS) charge.

The price that Ausgrid may charge for its transmission and distribution services is subject to Regulation by the Australian Energy Regulator (AER). The AER makes a five yearly determination, which sets a limit on the increase in distribution and transmission prices (X Factors) that can be applied by Ausgrid. On 30 April 2009, the AER made a determination on the X Factors to apply to Ausgrid's distribution and transmission services for the 2009-2014 period. In addition Ausgrid must prepare an annual pricing proposal which sets out how Ausgrid proposes to set network tariffs and the price for those tariffs for that year which must also be submitted to the AER for approval.

Since the introduction of Full Retail Contestability (FRC), all customers have had the right to choose the retailer from which they purchase their energy. Network services however have and will continue to be supplied by Ausgrid's Network as the local Distribution Network System Provider (DNSP) for supply to Sydney's inner metropolitan area, the Central Coast and Hunter regions.

Normally, Ausgrid Network bills retailers for the network services that their customers utilise. The retailers in turn bill their customers for both electricity (energy) and network services. Whether the cost of these network services is separately identified on the bill depends on a customer's arrangements with their retailer.

More information on the contestable market and methodology used to determine Network Use of System Charges is provided in the Ausgrid Network document, Network Pricing Proposal 2010, and Appendix D of this document "Calculation of Network Price Components".

For each financial year commencing 1st July, Ausgrid Network publishes a *Network Price List*, which sets out the applicable Network Use of System Charges as the price for each individual tariff and supersedes the previous financial years set of charges. These publications can be obtained from our either our website www.ausgrid.com.au/network_prices, any Customer Service office or by calling our Business Services Centre on 13 13 67.

1.2 Default Network Tariffs

A default tariff is the network tariff to which Ausgrid assigns a customer based on its tariff assignment and re-assignment policies. A customer may apply to move away from its assigned default tariff after 12 months of load history has been accumulated. This is achieved by the customer, or their retailer, making an application to transfer to an alternative network tariff using the Network Tariff Application Form available in appendix A of this document. This application must be submitted to the Manager, Network Pricing, System Planning and Regulation. Applications for tariff transfers are usually the result of annual consumption changes, or requests for a

substation tariff (discussed below). Backdating of new network prices is not permitted and customers may only have their prices changed once in a 12 month period.

The procedure for assigning customers to tariff classes is explained further below in sections 1.2.2 and 1.2.3. This procedure is consistent with Ausgrid's *Procedure for Assignment and Re-assignment of Tariffs* which is set out in Ausgrid's annual Network Pricing Proposal and reproduced at Appendix H.

1.2.1 Tariff Classes

Before a connection or a customer is assigned to a tariff, Ausgrid firstly assigns it to a tariff class. A tariff class is defined in the National Electricity Rules as a class of customers for one or more direct control services who are subject to a particular tariff or particular tariffs. Therefore in most circumstances a tariff class is a bundle of tariffs. Similar tariffs become part of a tariff class on the basis of the extent and nature of customer usage, and the nature of their connection to the network. Ausgrid will assign customers to tariff classes using the following procedure:

1. If the customer uses a demand in excess of 10 MW more than three times in a 12 month period, then regardless of the connection voltage, the customer is eligible to be assigned to the CRNP tariff class.
2. If the customer is a residential supply, then the customer is assigned to the Domestic tariff class.
3. If the supply is unmetered then the customer is assigned to the Unmetered tariff class.
4. If the voltage of the supply is 33 kV, 66 kV or 132 kV then the customer is assigned to the Sub-Transmission tariff class (unless already assigned to the CRNP tariff class).
5. If the voltage of the supply is 5 kV, 11 kV or 22 kV then the customer is assigned to the HV Business tariff class (unless already assigned to the CRNP tariff class).
6. If the voltage of the supply is 415V or 240 V and the customer is not a residential supply, the customer is assigned to the LV Business tariff class.

This procedure can also be represented by the following table:

Figure 1 Criteria for assigning customers to tariff classes

Tariff class	Extent of usage	Nature of usage	Nature of connection to network	
			Metering	Voltage
Unmetered	N/A	Business	Unmetered	415V/240V
Domestic		Domestic	Metered	
LV Business		Business		5kV, 11kV, 22kV
HV Business				33kV, 66kV, 132kV
Sub-transmission				
CRNP	>10MW			Any voltage

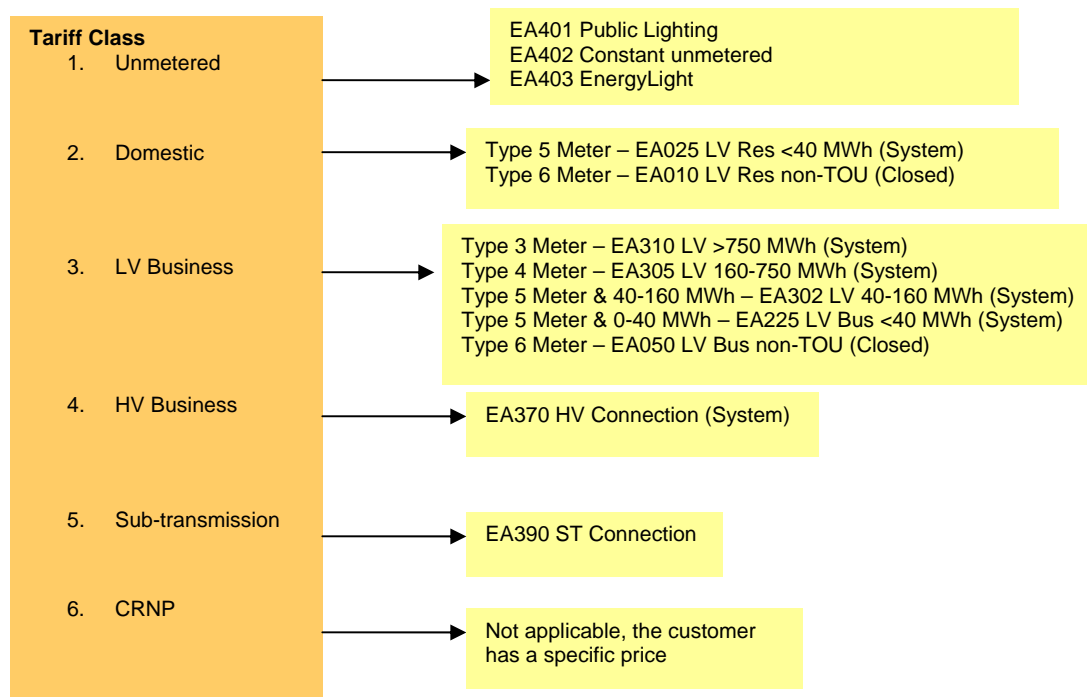
Cost Reflective Network Price (CRNP) customers are defined as customers with a demand in excess of 10 MW on at least three half hour periods within a 12 month period. Once a customer is accepted as eligible for a CRNP, a site specific price is calculated each year. If an annual review discloses that a customer has fallen below this threshold, then Ausgrid will review the

application of a CRNP and if it is no longer appropriate a default network is applied, consistent with the decision tree above.

1.2.2 Tariff Assignments for Existing Connections

Ausgrid's default tariff allocation procedure for existing customers is shown in Figure 2. It is noted that a customer can only be allocated to a tariff after it has been allocated to a tariff class.

Figure 2: Decision Tree of Assigning Existing Customers to Default Tariffs



It can be seen from figure 2 that the tariffs applicable to Type 6 metering installations are no longer available. It is Ausgrid's policy that all new and upgraded connections (eg single phase to multiple phase connections) must install a Type 5 or better (Types 1 to 4) meter.

1.2.3 Tariff Assignments for New Connections

New connections (where there is no previous load history) are assigned to a default tariff which is based on tariff class, metering installation type and metering phase. Table 1 shows the way in which new customers are allocated to default tariffs.

Table 1 The assignment of New Customers to Default Tariffs

Tariff Class	Metering Installation Type (if applicable)	Connection phase (if applicable)	Default Principal Network Price Code	Default Principal Network Price Name
Domestic			EA025	LV Res < 40 MWh (System)
Sub-transmission			EA390	ST Connection
HV Business			EA370	HV Connection (System)
LV Business	3		EA310	LV >750 MWh (System)
	4		EA305	LV 160-750 MWh (System)
	5	Three phase	EA302	LV 40-160 MWh (System)
		Single phase	EA225*	LV Bus <40 MWh (System)*
Unmetered	7		EA401	Public Lighting
			EA402	Constant Unmetered

* These customers have traditionally been on the EA025 LV Res < 40 MWh (System) price, but will be migrated to EA225 from 1 July 2009

1.3 Principal and Secondary Tariffs

Tariffs are also categorised as either Principal or Secondary tariffs. This distinction is required as it is possible to have more than one tariff applicable to a customer connection.

The principal tariff applies to the principal load connected usually on a 24 hour, seven day a week basis and is either residential or business oriented. **Only one principal tariff may be applied to each electrical installation.**

Secondary tariffs apply to those separately metered loads which are controlled or interrupted by Ausgrid Network, such as off-peak hot water. A secondary tariff is only available to a premise where a principal tariff is also in place. Only one controlled load secondary tariff is permitted at a physical electrical installation. Equipment supplied with electricity at a controlled load price has no effect in determining the price applicable to the remainder of the installation. Section 8 of this document has further information on controlled load pricing.

Thus, an installation:

- (a) must have a principal tariff for the principal load connection.
- (b) may have Controlled Load 1 or Controlled Load 2 for separately controlled appliances on dedicated circuits.

Figure 4: Principal and Secondary Tariff

Principal Tariff	Permitted Secondary Tariff
EA025 LV Res <40 MWh (System) EA225 LV Bus <40 MWh (System) EA302 LV 40-160 MWh (System) EA305 LV 160-750 MWh (System) EA310 LV >750 MWh (System) EA010 LV Res non-TOU (Closed) EA050 LV Bus non-TOU (Closed) <i>Note: Only one principal price is permitted at an installation.</i>	A customer may have: Either EA030 Controlled Load 1 or EA040 Controlled Load 2 <i>(that is, only one Controlled Load Price is permitted at an installation)</i>

Note:

1. Low voltage secondary tariffs are not normally permitted with the HV or ST principal tariffs.
2. The above primary and secondary tariff principles apply to both system and substation prices.

1.4 Tariff Components

Each tariff is made up of two or more components except for street lighting and some other unmetered loads which each have a single component. As far as possible what a customer pays is related to the cost of providing network service to them. The Price Components of each network price (ie each Default Principal Network Tariff) are summarised in Figure 4.

Figure 5: Tariff Components

Network Tariff	Network Access Charge	Non-ToU Network Variable Usage Charge	Time of Use Network Variable Usage Charge	Network Capacity Charge
EA010 LV Res non-TOU (Closed)	Yes	Yes		
EA025 LV Res <40 MWh	Yes		Yes	
Controlled Loads	Yes	Yes		
EA050 LV Bus non-TOU (Closed)	Yes	Yes		
EA225 LV Bus <40 MWh	Yes		Yes	
EA302 LV 40-160 MWh	Yes		Yes	Yes
EA305 LV 160-750 MWh	Yes		Yes	Yes
EA310 LV >750 MWh	Yes		Yes	Yes
EA370 HV Connection	Yes		Yes	Yes
EA390 ST Connection	Yes		Yes	Yes

Notes to Figure 5:

Network Tariff

The tariffs are listed according to supply voltage, meter type and energy usage. Note that network tariffs are also referred to as Network Prices, strictly the network price is the actual price assigned to a particular tariff.

Network Access Charge (NAC)

Fixed charge per day per NMI that recovers the fixed costs of providing network service to the customer.

Network Usage Charge Is based on a customer’s consumption of electricity and may be dependent on the time of day (see Section 1.5) that the energy is used.

Capacity Charge Is based on the maximum power (in kW or kVA) measured in peak times over the previous 12 month period. Further information is in Appendix E and F of this document.

1.5 Time Periods

Figure 6: Time Periods Used for Differential ToU Charging excluding EA025 and EA225

Charging Period	Time Period
Peak	From 2 pm – 8 pm on working weekdays.
Shoulder	From 7 am – 2 pm and 8 pm – 10pm on working weekdays.
Off-Peak	All other times.

Note: 1. All times take into account daylight saving during the period gazetted by the NSW Government, generally from 3 am on the first Sunday in October to 2 am on the first Sunday in April.

Figure 7: Time Periods Used for EA025 LV Res <40 MWh and EA225 LV Bus <40 MWh

Charging Period	Time Period
Peak	From 2 pm – 8 pm on working weekdays.
Shoulder	From 7 am – 2 pm and 8 pm – 10pm on working weekdays and 7 am – 10pm on weekends and public holidays.
Off-Peak	All other times.

Note: 1. All times take into account daylight saving during the period gazetted by the NSW Government, generally from 3 am on the first Sunday in October to 2 am on the first Sunday in April.

1.6 Network Price List

Network Prices are the annual price set for each tariff, including their price components and rates as published in the *Network Price List*. As further information, the *Network Price List* also contains the distribution loss factors used to determine energy consumption. The network price for each tariff and tariff component are set in accordance with Ausgrid’s annual pricing proposal which must be approved by the AER.

1.7 Annual Tariff Review

As explained in section 1.2 above, customers are initially assigned a ‘default’ Network Tariff. Default Network Tariffs are applied according to the annual energy consumption at a connection point, the supply voltage, and the type of meters installed. Discounts are not available off the regulated network prices that apply to customers’ premises.

Every 12 months Ausgrid will automatically review customers’ annual consumption and if that review discloses that the customer should be assigned to a more appropriate tariff class or tariff re-assign that customer to the more appropriate tariff class or tariff. Ausgrid reserves the right to transfer a customer to another tariff if their annual consumption has been assessed to fall outside of its existing network tariff category. If a customer’s

annual electricity consumption is 20% outside of the consumption thresholds of its tariff category, it will be moved to the correct tariff category.

One example is where a customer is currently on an LV Res <40 MWh tariff (which applies to 0-40MWh p.a. customers) and their consumption increases to greater than 48 MWh usage over a 12 month period. The customer will be transferred to the LV 40-160 MWh tariff (which applies to 40-160MWh p.a. customers) and their retailer will be notified.

Further, if a customer's electricity consumption is less than 20% outside of its existing usage band, it will remain with its existing price for a further 12 months. If after that time it is still outside of its consumption band, it will be moved to the appropriate price category, even if it is still within the 20% threshold.

The customer's retailer will be notified of the tariff change. When an existing customer changes retailer, the annual energy consumption of the installation may be reviewed and the default network price according to Section 1.2.1 may be applied from the transfer date. In addition, if the customer is re-assigned to a different tariff class, this re-assignment will occur in accordance with Appendix A of the AERs 2009 Distribution Determination for Ausgrid.

1.8 Changing the Network Tariff

As has been explained above, the Network Tariff applied to a specific connection is dependent on a number of factors including the supply voltage, metering type and annual energy consumed.

Applications for a customer to be assigned to a different network tariff or tariff class should be made in writing with supporting documentation on a *Network Tariff Application Form* (Appendix A) and submitted to the Manager, Network Pricing, System Planning and Regulation. If approved, the tariff change will apply from the start of the next billing period following the date of receipt of the price change application. No backdating of a change to the customers applicable Network tariff is permitted unless specifically approved as part of the tariff change. Customers may apply to have their tariff changed only once per 12 month period, and must have at least 12 months of consumption history to support the price change application.

Where a customer has funded a substation as part of their connection arrangements, the customer can apply for a substation tariff from Ausgrid. A substation tariff recognises that the substation was funded by the customer and therefore only includes operational and maintenance costs in the tariff related to the substation. A substation tariff is cheaper than the equivalent default system tariff. Please view Ausgrid's latest set of network prices at www.ausgrid.com.au/network_prices for a comparison of substation and system prices. Substation prices are explained in further detail in section 1.15.2.

It is the responsibility of the customer or their agent to request a substation tariff. Without a request for a substation tariff, the customer will be placed on a default system tariff.

1.9 Metering

All new meters installed in Ausgrid Network's distribution area for both domestic and non-domestic installations must be Type 5 or better (i.e. Types 1, 2, 3, 4 or 5, refer to Figure 8 below). These include but are not limited to:

- both single phase and multi-phase installations (including upgraded network connections or new installations)
- installations taking a controlled load or Time of Use prices

Consistent with the Rules, Ausgrid Network also requires communications to be installed on all Type 1 to 4 metering installations that consume 160 MWh per annum or more.

A customer's retailer or the Local Network Service Provider (LNSP) may apply a charge to cover their role as the *Responsible Person* (as outlined in the National Electricity Rules). For metering installation types 5 and 6 (as defined in Schedule 7.2 of the Rules), Ausgrid Network will recover the costs of Responsible Person Services via network charges. For Types 1 -4 metering installations the charge will be applied by a customer's retailer as the Financially Responsible Market Participant (FRMP). Where Ausgrid has been requested by the FRMP to provide Responsible Person Services, Ausgrid Network will charge that retailer directly.

The type of meter installed at premises must comply with the requirements of all of the following:

- Chapter 7 of the National Electricity Rules,
- National Electricity Market Metrology Procedures
- Market Operations Rules (NSW Rules for Electricity Metering) No. 3 of 2001,
- Service and Installation Rules of NSW,
- Any requirements imposed under Ausgrid's Standard Form Customer Connection Contract and any relevant advice published by Ausgrid Network.

Figure 8: National Electricity Rules Compliant Metering

Meter Type	Meter Capability	MSATS Code
1 to 3	Measures both real (kW) and reactive (kVAR) energy on a half-hourly basis. Has a facility to enable the meter to be remotely read. Usually read monthly.	COMMS1 COMMS2 COMMS3
4	As for types 1 to 3 except that it does not measure reactive (kVAR) energy. Usually read monthly.	COMMS4
5	As for type 4 but has no remote read facilities connected to the meter. Also known as 'Manually Read Interval Meters' (MRIM) or 'Smart' meter. Type 5 meters can be either 3-phase (or single phase) The single phase meters may have multiple measuring elements enabling them to measure multiple network prices such as LV Res <40 MWh and Controlled Load. Usually read quarterly or monthly depending on the network tariff.	MRIM
6	Records accumulated consumption, (no half-hour interval data), but may store consumption in pre-specified time bands. This meter is manually read. Usually read quarterly.	BASIC
7	Virtual meters used to assess usage on unmetered connections.	UMCP

1.10 Meter Reading

Type 6 (basic) meters will normally be read quarterly. Manually Read Interval Meters or Type 5 meters will normally be read quarterly except where the network tariff has a capacity component, in which case they will normally be read on a monthly basis. Customers will be billed at the same frequency that their meters are read. Where the retailer or customer requests a Type 5 meter to be read monthly (that would otherwise be read quarterly), additional

meter reading, data processing and invoicing fees may be charged for the service.

Monthly read type 5 meters will generally be read on or close to the same day of the month each month. For example, if a site is read on the 13th of February, it will be read again on the 13th of March. This is different to Type 1 to 4 metered sites that are read remotely on a calendar month cycle, i.e. from the 1st to the 30th (or 31st) inclusively.

1.11 Metering to be at the Supply Voltage Side of a Transformer

The National Electricity Rules requires all new installations to be metered at the closest point of connection to the Distribution Network Service Provider's (DNSPs) distribution system. All new connection points must be metered in the customer's installation at the supply voltage. Load side metering is **not permitted** for new installations where customers own or lease the transformers.

Also, to comply with the National Electricity Rules, in the event of any electrical alterations, existing installations metered on the load side of the transformer, must be modified so they are metered at the connection point.

1.12 Connection Point Identification

Metering and connection point configurations are identified using a unique national electricity market NMI (National Metering Identifier). Generally, a NMI will be allocated to each individual connection to the electrical network, unless otherwise determined by Ausgrid Network.

Where an establishment has more than one connection point, the numbering and final arrangement of each supply will be determined by Ausgrid Network. Modification of existing connection point NMIs to align with the current AEMO NMI procedures (to increase or decrease their number) can be initiated by Ausgrid Network with the co-operation of a customer's retailer. Connection points may be allocated separate NMIs where any of the following conditions exist:

- (a) It is needed to conform to the latest version of the AEMO NMI Procedure document (available at www.aemo.com.au)
- (b) The connection points are at different voltage levels.
- (c) The connection points are from different distribution substations.
- (d) The connection points are metered at different voltage levels.
- (e) The connection points have different distribution loss factors.
- (f) The connection points have different metering points such as standby or alternative supply points.
- (g) As otherwise determined by Ausgrid Network.

1.13 Amalgamation of NUOS to a Single Network Account

Ausgrid Network will consider the amalgamation of multiple NUoS accounts based on the following rules:

- (a) The customer or their agent (usually their retailer) requests in writing for the NUoS charges to be amalgamated for a premise.
- (b) Meters associated with different NMIs (established in accordance with AEMO's requirements) are excluded from the amalgamation assessment.
- (c) All the meters must be associated with the same connection point.
- (d) The meters must be recording the same primary meter voltage.

- (e) All metering must be of the same meter type (as defined in Schedule 7.2 of the National Electricity Rules) and metering must comply with the NSW Service and Installation Rules. For example a request to amalgamate NMI's where the meter type is 5 and 6 will not be approved.
- (f) The same Rules compliant meter installation Type must be installed at all meter points involved in the amalgamation.
- (g) Where multiple Network Access Charges (NAC) are assigned to a National Metering Identifier (NMI), all the following criteria must be met:
 - each connection point voltage must be the same;
 - each connection point network price must be the same;
 - each connection point Transmission Node Identifier must be the same;
 - each connection point must be metered at the same voltage level;
 - each connection point must normally be supplied from the same zone substation transformer in the case of the HV network prices, or the same distribution substation cable service in the case of LV System network prices.
- (h) Ausgrid Network's billing system must be able to implement the amalgamated arrangements.
- (i) Network Charges will **not** be amalgamated across multiple NMIs.
- (k) All meters included in the amalgamation assessment must have their associated NMIs checked and they must comply with the current AEMO NMI Procedures document before the amalgamation will be considered.

The amalgamation of Network Use of System charges across different connection points will **not normally be permitted**.

Requests for amalgamation of accounts should be made using the *Request for Network Account Amalgamation at Customer Site* form (Appendix B).

1.14 Separation of Load

Electricity used for certain special purposes or under special conditions, such as controlled load, may be metered separately on dedicated circuits within the customer's installation and supplied at one or more specific prices in accordance with the terms outlined in Sections 1.4 and 7. Application for a network tariff must be in writing using the Network Tariff Application Form (Appendix A).

Equipment supplied with electricity at a controlled load price has no effect in determining the price applicable to the remainder of the installation.

Where part of the load at an installation is supplied at a controlled load price for restricted purposes, the customer must arrange for separation of supply to dedicated circuits to allow installation of electricity meters so the electricity used at the controlled load price can be recorded separately.

1.15 Connection Methods

Depending on their load requirements and location relative to our network assets, customers may be connected to the shared network mains or directly to a substation. The following sections explain the possible connection methods.

1.15.1 System Network Tariff

The System tariff is the default network tariff, which applies to all low voltage, high voltage and sub-transmission connection points as appropriate. For assessment of the applicability of any alternative network tariff, the customer or their agent (usually their Retailer) may make an application on the *Network Tariff Application Form* (Appendix A).

Customers will be automatically placed on the System network tariff applicable to their annual consumption and voltage level of their connection point.

The System tariff will be applied to supplies connected to street mains shared by other network customers or dedicated connection assets owned and operated by Ausgrid Network (see Figure 9).

Figure 9: Supply Arrangement for LV Network System Prices

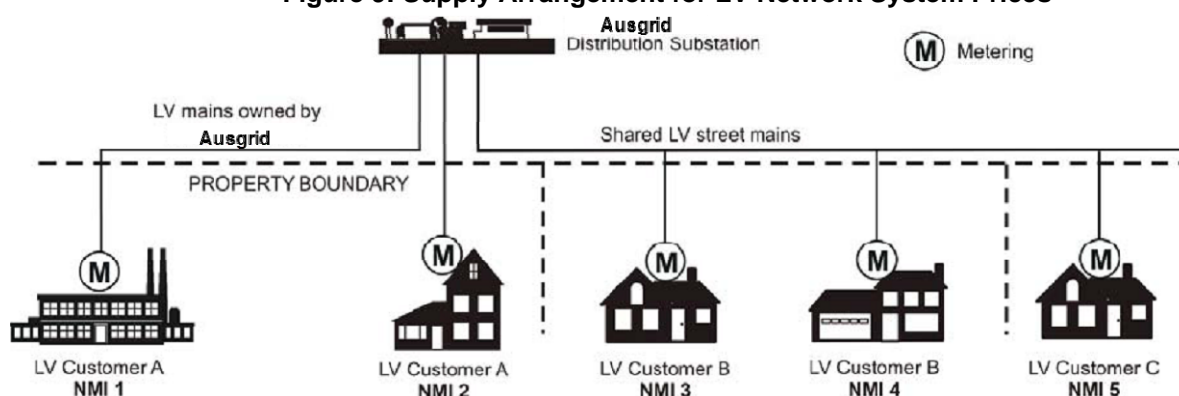
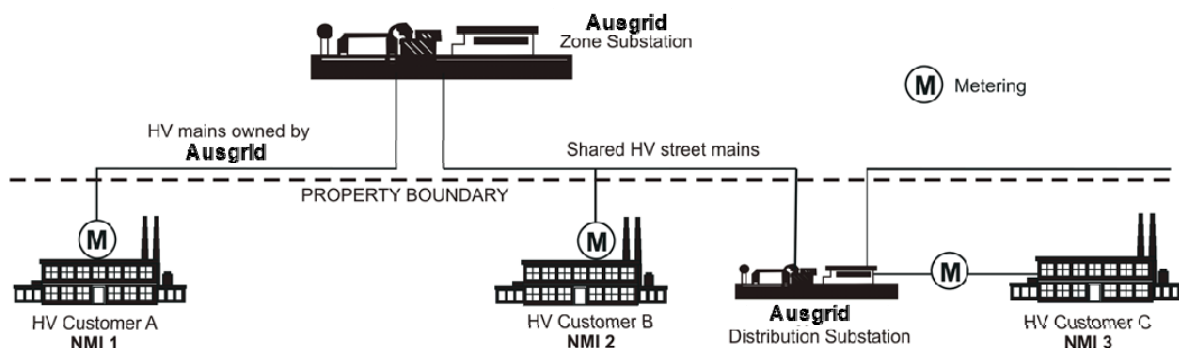


Figure 10: Supply Arrangement for HV Network System Prices



Note in Figure 10, that HV Customer C is not being fed from LV mains, but is connected from HV mains that simply loop in and out of the Ausgrid Distribution Substation 11kV busbar.

1.15.2 Substation Network Tariffs

To obtain supply under this tariff, the customer or their agent must make an application on the *Network Tariff Application Form* (Appendix A) with supporting documentation to Ausgrid. Ausgrid reserves the right to re-assess the network tariff applicable to a customer's connection arrangement as explained in section 1.7.

The Substation tariff will be applied to **high voltage** supplies, which satisfy the following criteria:

- (a) A single customer's mains are directly connected to the Ausgrid Network zone substation HV busbar; and
- (b) The customer owns, operates and maintains these mains.

- (c) The customer can demonstrate that they have capially contributed to the construction of the substation.

1.15.3 Substation Tariff Applied to Privately Owned Networks

The substation tariff may be applied to customers connected to privately owned networks which are supplied from an Ausgrid Network substation.

This tariff applies to high voltage and sub-transmission busbar supplies.

Note: Ausgrid does not apply network charges to customers who are embedded in privately owned networks where the network operator on sells to their customers. It is the responsibility of the private network service provider and their retailer to arrange the charging of an appropriate network price and an additional distribution loss factor in these situations.

1.15.4 Cost Reflective Network Price – Above 10MW

Customers with large electricity requirements (over 10MW) may either be assessed by Ausgrid Network or users may apply using the form in Appendix A to be considered for an individually calculated or cost reflective network price (CRNP).

The Cost Reflective Network Price is calculated and applied to a customer's specific connection point or multiple connection points if they qualify under the criteria (outlined in the subsequent section on CRNPs). Each connection point is serviced by assets of different values, dependent on distance, type of construction and voltage level. In addition, the CRNP price will vary in relation to the customer's utilisation of system assets at each connection point (more detail on the calculation of CRNP prices can be obtained from the latest *Network Pricing Proposal*). The CRNP may be greater than, or less than, an equivalent average price applied to smaller customers, depending on the assets utilised by a CRNP customer.

1.16 Supply Voltage

Throughout this document the following terms have these meanings:

- **low voltage** is nominally 240V or 415V
- **high voltage** is nominally 5, 6.6, 11 or 22kV
- **sub-transmission** is 33kV and above.

1.17 Payment of Accounts

Accounts for Network Use of System are normally sent to the customer's retailer, who will settle on behalf of the customer and then bill the customer in accordance with their supply contract. The framework for NUoS billing is outlined in the NSW Market Operations (Network Use of Systems) Rule No. 2.

1.17.1 Commencement Date

For new customers occupying new or existing installations, and supplied by the Local Retailer under either a negotiated or standard form contract, the commencement date for Network Use of System charges is the date when the customer's metering installation is energised. In relation to customers who have transferred to a retailer other than the Local Retailer, the commencement date for Network Use of System (NUoS) charges is the date of transfer to that retailer as specified in National Electricity Market Settlements and Transfers System (MSATS).

1.17.2 Termination Date

Where the customer or their Retailer gives Ausgrid Network at least two working days notice in writing of the date they want supply disconnected, that date will be the distribution termination date. The customer's retailer will

be responsible for the settlement of network charges applicable to a connection point until MSATS registers the site as de-energised, extinct or transfers the site to another retailer. Where less than two working days notice is given, the termination date will be determined by Ausgrid Network.

1.17.3 Charges on Termination of Supply

Unless otherwise approved by Ausgrid, if a customer ceases to take supply under a particular network tariff, the meters will be read and the period between that reading and the immediately preceding reading will be used to calculate the final network charges.

Unless specifically requested by the customer or their Retailer, the supply will not be physically disconnected at the time of termination. Physically disconnecting a supply on request by a customer will incur charges under the miscellaneous and monopoly fee schedules as approved by the AER. The procedure for requesting a permanent disconnection is outlined in Ausgrid document *ES5 Charges for Network Miscellaneous and Monopoly Services*.

1.17.4 Rebates or Concessions

Ausgrid Network is not responsible for applying any government or community service rebates to customers' accounts. Customers should make any such enquiries to their Retailer. If the customer has not signed a supply contract with a Retailer, then their default retailer (Local Retailer) within Ausgrid Network's supply area is currently Ausgrid Retail.

1.17.5 Changing the Customer at a site

When a new customer (with a new ABN company number) occupies a site with a significantly different energy consumption pattern, the new customer may make application to be assigned to a different network tariff or for a capacity demand reset. Should the new customer fail to provide adequate notification to the network of their specific supply requirements, then the new customer will have the same network tariff arrangements as the previous customer at the site. Please note that the application change approval will not be backdated

Ausgrid reserves the right to remove existing infrastructure and limit supply to the new customer consistent with the new negotiated supply.

2 EA025 LV RES <40 MWh (SYSTEM) TARIFF

2.1 General Conditions

The LV Res <40 MWh Tariff is applicable to consumers of low voltage electricity supplied to premises for any residential purpose where the consumption is below 40MWh per annum, which have a Type 5 metering installation which are capable of recording the energy consumed within specified time periods (see Figure 12).

The LV Res <40 MWh price corresponds to Ausgrid Retail's Powersmart Home regulated retail tariff.

2.2 Default Tariff

The default tariff applicable to all connection points is the System Tariff for the particular network price group. Ausgrid Network will initially apply a default tariff following the criteria outlined in Section 1.2 unless it believes a network price review is required or the customer or their retailer notifies Ausgrid Network of specific connection point details via a written request.

2.2.1 New Installations

New residential and small business customers connected to Ausgrid's network are required to have a Type 5 (or better) meter installed. By default, new residential customers will be placed on the EA025 LV Res <40 MWh Network Tariff. A customer wanting to be assigned to an alternative network tariff must apply on the Network Tariff Application Form (in Appendix A) with supporting documentation to Ausgrid

2.2.2 Existing Installations

Residential customers who have a Type 5 meter (or better) installed and are assessed to consume below 40 MWh p.a. will be placed on the EA025 LV Res <40 MWh Network Tariff.

All meter replacements on existing installations will be Type 5 meter (or better) meters. Such residential sites consuming below 40 MWh per annum will be placed on the LV Res <40 MWh (System) Network Tariff.

Where existing installations which currently have a type 6 meter installed and the meter is replaced by Ausgrid due to meter maintenance purposes, a type 5 compatible meter will be installed, however, the site will remain on its existing tariffs (eg. EA010 LV Res non-TOU and EA030 Controlled Load 1). The installation may be transferred after 12 months to another network tariff as described in section 1.7.

Residential customers receiving low voltage supply under a standard form customer supply contract and consuming between 40 and 160MWh per annum with a Type 5 meter (or better) meter will be placed on EA025 LV Res <40 MWh network Tariff.

2.3 Tariff Components

There are four components to the LV Res <40 MWh Tariff.

- Network Access Charge comprising a fixed charge per day.
- Network Time of Use Charges comprising Peak, Shoulder and Off-Peak energy rates.

There is a general explanation of the Price Components in Section 1.4. The following sections are specific to this Price.

2.3.1 Network Access Charge

A customer will pay a Network Access Charge (NAC) for each separate connection point made to the Ausgrid network. The NAC will be applied either by connection point or by meter point depending on the information available for the site. The NAC is applied on a daily basis.

2.3.2 Time Periods

The time periods applicable to LV Res <40 MWh tariffs are shown in Figure 12.

Figure 12: The Charging Periods for LV Res <40 MWh Prices

Charging Period	Time Period
Peak	From 2 pm – 8 pm on working weekdays.
Shoulder	From 7 am – 2 pm and 8 pm – 10 pm on working weekdays and 7 am – 10 pm on weekends and public holidays.
Off-Peak	All other times.

Note: 1. All times take into account daylight saving during the period gazetted by the NSW Government, generally from 3am on the first Sunday in October to 2am on the first Sunday in April.

3 EA225 LV BUS <40 MWH (SYSTEM) TARIFF

3.1 General Conditions

The LV Bus <40 MWh Tariff is applicable to consumers of low voltage electricity supplied to premises for any business purpose where the consumption is below 40MWh per annum, which have Type 5 metering installations which are capable of recording the energy consumed within specified time periods (see Figure 12).

The LV Bus <40 MWh tariff corresponds to Ausgrid Retail's Powersmart Business regulated retail tariff.

3.2 Default Price

The default tariff applicable to all connection points is the System Price for the particular network price group. Ausgrid Network will initially apply a default price following the criteria outlined in Section 1.2 unless it believes a network tariff review is required or the customer or their retailer notifies Ausgrid Network of specific connection point details via a written request.

3.2.1 New Installations

New residential and small business customers connected to Ausgrid's network are required to have a Type 5 (or better) meter installed. By default, new business customers will be placed on EA225 LV Bus <40 MWh. A customer wanting to be assigned to an alternative network tariff must apply on the Network Tariff Application Form (in Appendix A) with supporting documentation to Ausgrid .

3.2.2 Existing Installations

Business customers who have a Type 5 meter (or better) installed and are assessed to consume below 40 MWh p.a. will be placed on the EA225 LV Bus <40 MWh Network Tariff.

All meter replacements on existing installations will be Type 5 meter (or better) meters. Such business sites consuming below 40MWh per annum will be placed on the LV Bus <40 MWh (System) Network Tariff.

Where existing installations which currently have a type 6 meter installed and the meter is replaced by Ausgrid due to meter maintenance purposes, a type 5 compatible meter will be installed, however, the site will remain on its existing tariffs (eg. EA010 LV Res non-TOU and EA030 Controlled Load 1). The installation may be transferred after 12 months to another network tariff as described in section 1.7.

Business customers receiving low voltage supply under a standard form customer supply contract and consuming between 40 and 160MWh per annum with a Type 5 meter (or better) meter will be placed on EA225 LV Bus <40 MWh network tariff.

3.3 Tariff Components

There are four components to the LV Bus <40 MWh Tariff.

- Network Access Charge comprising a fixed charge per day.
- Network Time of Use Charges comprising Peak, Shoulder and Off-Peak energy rates.

There is a general explanation of the Price Components in Section 1.4. The following sections are specific to this Price.

3.3.1 Network Access Charge

A customer will pay a Network Access Charge (NAC) for each separate connection point made to the Ausgrid network. The NAC will be applied either by connection point or by meter point depending on the information available for the site. The NAC is applied on a daily basis.

3.3.2 Time Periods

The time periods applicable to LV Bus <40 MWh tariffs are shown in Figure 12.

Figure 12: The Charging Periods for LV Bus <40 MWh Prices

Charging Period	Time Period
Peak	From 2 pm – 8 pm on working weekdays.
Shoulder	From 7 am – 2 pm and 8 pm – 10 pm on working weekdays and 7 am – 10 pm on weekends and public holidays.
Off-Peak	All other times.

Note: 1. All times take into account daylight saving during the period gazetted by the NSW Government, generally from 3am on the first Sunday in October to 2am on the first Sunday in April.

4 EA302 LV 40-160 MWH (SYSTEM) TARIFF

4.1 General Conditions

The LV 40-160 MWh Tariff is applicable to connections where electricity is used for business purposes with an annual consumption between 40MWh p.a. and 160MWh p.a. and a Type 5 (or better) meter is installed.

The LV 40-160 MWh tariff corresponds to the LoadSmart (LV) regulated retail tariff for business customers.

4.2 Default Tariff

The default tariff applicable to all connection points is the System Tariff for the particular network price group. Ausgrid Network will initially apply a default tariff following the criteria outlined in Section 1.2 unless it believes a network tariff review is required or the customer or their retailer notifies Ausgrid Network of specific connection point details via a written request.

4.3 Tariff Components

This Tariff has five components:

- (a) Network Access Charge comprising a fixed charge per day.
- (b) Network Time of Use Charges comprising Peak, Shoulder and Off-Peak Energy rates.
- (c) Peak Capacity Charge (kW)

For the general conditions refer to Section 1.4. The following sections are specific to this tariff.

4.3.1 Network Access Charge

A customer will pay a Network Access Charge (NAC) for each separate connection point made to the Ausgrid network. The NAC will be applied either per connection point or per meter point depending on the information available for the site. The NAC is applied on a daily basis.

4.3.2 Time Periods

The time periods applicable to the LV 40-160 MWh tariff are shown in Figure 14.

Figure 14: The Charging Periods for ToU Prices

Charging Period	Time Period
Peak	From 2 pm – 8 pm on working weekdays.
Shoulder	From 7 am – 2 pm and 8 pm – 10pm on working weekdays.
Off-Peak	All other times.

Note: 1. All times take into account daylight saving during the period gazetted by the NSW Government, generally from 3am on the first Sunday in October to 2am on the first Sunday in April.

4.3.3 Peak Capacity Charge (kW)

The kW capacity value in each month is determined from the Type 5 (or better) meters installed at each connection point using the calculation

methodology outlined in the capacity component section of *Appendix D: Calculation of Network Price Components*.

A separate capacity charge is applied at each individual connection point with a unique NMI as per the AEMOs National Metering Identifier Procedure (NMI).

4.4 Capacity Charges

Capacity charges are applied to the maximum kW power reading that occurred at a customer's connection point over the 12 months prior to a bill being calculated within the timebands of 2pm to 8pm on working weekdays. The capacity charge is priced in cents per day per kW and is calculated on the price times the number of days in the billing period times the measured capacity in kW. Further information can be found in Appendix D, E and F of this document.

4.5 Adjustment of Capacity Charges

Ausgrid Network may vary the charges for capacity determined in accordance with Appendix D (section D4) if there are variations to the existing load. Such variations would be where plant or apparatus is being commissioned, maintained or is undergoing tests.

A customer must apply in writing with supporting documentation to Ausgrid Network to have any variation of charges considered.

5 EA305 LV 160-750 MWh (SYSTEM) TARIFF

5.1 General Conditions

The LV 160-750 MWh tariff is applicable to connections where electricity is used for any purpose with an annual consumption between 160MWh p.a. and 750MWh p.a. and a Type 4 (or better) meter is installed.

LV 160-750 MWh is also available upon written request to business and domestic customers below 160 MWh p.a. who have metering capable of supporting kVA charging. Customers below 160 MWh p.a. who voluntarily move on to this tariff may revert back to their default tariff at any time, but no backbilling will take place unless agreed to by Ausgrid Network.

5.2 Default Price

The default tariff applicable to all connection points is the System Price for the particular network price group. Ausgrid Network will initially apply a default tariff following the criteria outlined in Section 1.2 unless it believes a network tariff review is required or the customer or their retailer notifies Ausgrid Network of specific connection point details via a written request.

5.3 Tariff Components

This Tariff has five components:

- (a) Network Access Charge comprising a fixed charge per day.
- (b) Network Time of Use Charge comprising Peak, Shoulder and Off-Peak Energy rates.
- (c) Peak Capacity Charge (kVA)

For the general conditions refer to Section 1.4. The following sections are specific to this tariff.

5.3.1 Network Access Charge

A customer will pay a Network Access Charge (NAC) for each separate connection point made to the Ausgrid network. The NAC will be applied either per connection point or per meter point depending on the information available for the site. The NAC is applied on a daily basis.

5.3.2 Time Periods

The time periods applicable to the LV 160-750 MWh tariff are shown in Figure 15.

Figure 15: The Charging Periods for ToU Tariffs

Charging Period	Time Period
Peak	From 2 pm — 8 pm on working weekdays.
Shoulder	From 7 am – 2 pm and 8 pm – 10pm on working weekdays.
Off-Peak	All other times.

Note: 1. All times take into account daylight saving during the period gazetted by the NSW Government, generally from 3am on the first Sunday in October to 2am on the first Sunday in April.

5.4 Capacity Charges

Capacity charges are applied to the maximum kVA power reading that occurred at a customer's connection point over the 12 months prior to a bill being calculated within the timebands of 2pm to 8pm on working weekdays. The capacity charge is priced in cents per day per kVA and is calculated on the price times the number of days in the billing period times the measure capacity in kVA. Further information can be found in Appendix D, E and F of this document.

5.5 Adjustment of Capacity Charges

Ausgrid Network may vary the charges for capacity determined in accordance with Appendix D (section D4) if there are variations to the existing load. Such variations would be where plant or apparatus is being commissioned, maintained or is undergoing tests.

A customer must apply in writing using the form in Appendix A, with supporting documentation to Ausgrid Network to have any variation of charges considered.

6 EA310 LV >750 MWh (SYSTEM) TARIFF

6.1 General Conditions

The LV >750 MWh Tariff is applicable to connections at 240/415V where electricity is used for any purpose with an annual consumption equal to or greater than 750MWh per annum and having a Type 3 (or better) meter installed.

For HV and ST Connection prices at all annual consumption levels, installations must have a Type 3 (or better) meter and be placed on the applicable LV >750 MWh tariff. Both a HV system price (EA370) and a HV substation tariff (EA380) are available.

6.2 Default Tariff

The default tariff applicable to all connection points is the System Tariff for the particular network price group. Ausgrid Network will initially apply a default tariff following the criteria outlined in Section 1.2.1 unless it believes a network price review is required.

6.3 Price Components

This Tariff has five components:

- a) Network Access Charge comprising a fixed charge per day
- b) Network Time of Use Charge comprising Peak, Shoulder and Off-Peak Energy rates
- c) Daily Peak Capacity Charge (kVA)

For the general conditions refer to Section 1.4. The following sections are specific to this Price.

6.3.1 Network Access Charge

A customer will pay a Network Access Charge (NAC) for each separate connection point made to the Ausgrid Network. The NAC will be applied either per connection point or per meter point depending on the information available for the site. The NAC is applied on a daily basis.

6.3.2 Time Periods

The time periods applicable to the LV >750 MWh tariff are shown in Figure 16.

Figure 16: The Charging Periods for ToU Tariffs

Charging Period	Time Period
Peak	From 2 pm – 8 pm on working weekdays.
Shoulder	From 7 am – 2 pm and 8 pm – 10pm on working weekdays.
Off-Peak	All other times.

Note: 1. All times take into account daylight saving during the period gazetted by the NSW Government, generally from 3am on the first Sunday in October to 2am on the first Sunday in April.

6.4 Capacity Charges

Capacity charges are applied to the maximum KVA power reading that occurred at a customer's connection point over the 12 months prior to a bill being calculated within the timebands of 2pm to 8pm on working weekdays. The capacity charge is priced in cents per day per kVA and is calculated on the price times the number of days in the billing period times the measured capacity in kVA. Further information can be found in Appendix D, E and F of this document.

6.5 Adjustment of Capacity Charges

Ausgrid Network may vary the charges for capacity determined in accordance with Appendix D (section D4) if there are variations to the existing load. Such variations would be where plant or apparatus is being commissioned or is undergoing tests.

A customer must apply in writing, using the form in Appendix A, with supporting documentation to Ausgrid Network to have any variation of charges considered.

6.6 Metering Equipment

A Type 3 metering device must be installed before a LV >750 MWh network tariff can be applied. It must be installed by an accredited meter provider in compliance with Chapter 7 (Metering) of the *National Electricity Rules*, the *National Electricity Market Metrology Procedure*, *Market Operations Rule (NSW Rules for Electricity metering) No. 3 of 2001*, the *New South Wales Service and Installation Rules*, Ausgrid's *Local Service and Installation Rules* and any requirements imposed by Ausgrid Network.

A customer can minimise their capacity charge by improving the overall power factor of the installation and by shifting peak demand from peak to off-peak periods. Installing power factor correction equipment will improve the power factor and hence reduce the measured kVA demand of customers usage (by reducing the kVARs delivered to the site).

6.7 Network Price Advice

Customers who are considering installing power factor correction equipment, or who want to request a change in their Network Price, should contact the Ausgrid Business Centre on telephone number 13 13 67.

7 CONTROLLED LOAD TARIFFS

Controlled Load Tariffs are ‘secondary prices’ and can only be applied at installations with one of the following ‘principal tariffs’:

- EA010 LV Res non-TOU (Closed)
- EA050 LV Bus non-TOU (Closed)
- EA025 LV Res <40 MWh
- EA302 LV 40-160 MWh
- EA305 LV >160 MWh
- EA310 LV >750 MWh

Secondary tariffs apply to those separately metered loads which are controlled or interrupted by Ausgrid Network. Only one controlled load secondary tariff is permitted per NMI.

These secondary tariffs apply to electricity used for operating storage water heaters, thermal storage space heaters and other approved appliances, provided that they comply with the requirements specified. The periods of use of these appliances will be determined by Ausgrid and the load will be controlled by Ausgrid’s network equipment at times which may vary from day to day to meet network requirements.

The EA030 Controlled Load 1 tariff is available for supply that is usually connected for six hour duration between 10.00 pm and 7.00 am. Controlled Load 1 switching times may be varied at the discretion of Ausgrid.

EA040 Controlled Load 2 tariff is available for supply that is usually connected for sixteen hours including more than six hours between 8pm and 7am and more than four hours between 7am and 5pm. Controlled Load 2 switching times can be varied at the discretion of Ausgrid Network.

7.1 EA030 Controlled Load 1 Tariff for Storage Water Heaters

Unless otherwise approved by Ausgrid Network, supply at the Controlled Load 1 Tariff is only available for use with storage water heaters with rated hot water delivery and heating element combinations that comply with the following figure.

Figure 17: The Criteria for Eligibility of Controlled Load 1

Total Rated Hot Water Delivery Litres	Main Element Rating kW	Nominal Main Element Supply Hours/Day
250	4.8	4
315	4.8	6
400	4.8	6
630	2 by 4.8	6
Above 630	Required to heat in 9 hours	9

The main element(s) will be controlled by Ausgrid’s Network equipment so that supply is available only during hours determined by Ausgrid Network. Boosting and main heating elements need to be arranged so that both cannot be energised simultaneously.

7.2 EA040 Controlled Load 2 Tariff for Storage Water Heaters

The main heating element/s will be controlled by Ausgrid's Network equipment, so that supply is available only during hours determined by Ausgrid. Unless otherwise approved by Ausgrid, storage water heaters must comply with the following requirements.

- (a) The rated hot water delivery will be 100 litres or greater.
- (b) All heating elements will have a rating of 4.8kW and will be arranged as shown in the following figure.

Figure 18: Storage Water Heater Criteria

Rated hot water delivery of heater	Number of heating elements
From 100 litres up to and including 400 litres	Minimum of one
Above 400 litres but not exceeding 630 litres	Minimum of Two
Above 630 litres	Determined by Ausgrid

7.3 Other Heating Equipment

The following equipment may be operated on either Controlled Load 1 or 2 in accordance with the following criteria.

7.3.1 Requirements for the Appliances

Unless otherwise approved by Ausgrid, other heating equipment shall comply with the following requirements.

- (a) The hours of availability of supply must suit the intended use of the appliance.
- (b) The provision of a suitable sealable contactor will be required where the total off-peak load exceeds 25 Amp or 6kW, or if more than one phase of supply is switched, or motor starting current is involved.
- (c) Off-peak loads greater than 25 Amp may be connected either directly or in conjunction with the use of a sealable customer supplied contactor to the 'uncontrolled' terminal of the new standard electronic meter (E2). The total loading on the meter (principal and off-peak tariff elements) is a maximum of 100 Amp.

7.3.2 Battery Charging Equipment

Controlled load prices are available for permanently connected battery charging equipment. The charger will be controlled by Ausgrid Network's equipment so that supply is interrupted during peak periods as considered necessary by Ausgrid Network. The rating of the battery chargers will be not less than 3kW, either 15 Amp single phase or 5 Amp 3-phase.

7.3.3 Swimming Pool Heating

For swimming pool heating and associated equipment refer to Section 7.8.

7.3.4 Thermal Storage Space Heaters

The heating element will be controlled by Ausgrid Network's equipment so that supply is available during hours determined by Ausgrid Network.

The rating of thermal storage space heaters will be not less than 3kW except where a storage water heater is also installed and supplied at the Controlled Load 1 or Controlled Load 2 Price.

7.4 Other Appliances

Heat pumps, swimming pool pumps, dishwashers, clothes dryers, washing machines, air conditioners, ice thermal storage and other appliances approved by Ausgrid may be installed as part of a controlled load installation, provided that:

- (a) The appliances are permanently connected, (connection by means of socket outlets is not acceptable). There is no minimum rating requirement for the appliance.
- (b) The Principal Tariff applicable to the premise's use is one of the following.
 - i) Domestic Tariff (Obsolete)
 - ii) Business Non-Time of Use Tariff (Obsolete)
 - iii) Any Time of Use (ToU) Tariff¹
- (c) The whole of the Controlled Load installation is controlled by Ausgrid's Network equipment so that supply is only available during hours determined by Ausgrid Network.

Note: Costs may be involved in separation of wiring and switchboard alterations necessary to comply with the price conditions and that the service of an electrical contractor would be required.

Noise restrictions may prevent the use of pool pumps and heat pumps at the controlled load price due to the timing of the availability of this price. Customers should inquire with their local Council and the NSW Department of Environment and Climate Change on noise restrictions before making a commitment to connect this type of equipment at a controlled load price.

7.5 Big Blue Continuous Price (Obsolete)

The Big Blue Continuous Tariff is a product that is no longer offered by Ausgrid Network. For any existing hot water systems with boosting elements, customers will be charged at the controlled load rate for both the top and bottom heating elements. The bottom element will be available during controlled load times and the top element will be available at any time.

7.6 Combinations of Storage Water Heaters

Controlled Load Tariffs are available for combinations of storage water heaters dependent on the following conditions being met:

- (a) The combined rated hot water delivery must meet the minimum requirements for the particular price.
 - i) The rated hot water delivery of any heater must be 100 litres or greater.
 - ii) The combined total of the heating elements must be 4.8kW or greater.
 - iii) The combined rating of the heating element is to comply with the conditions of the price.

Where an additional water heater is being installed and conditions i, ii, and iii above are fulfilled, the usual number of heating hours available for the first heating element should be taken into account in selecting the rating of the additional heating element.

- (b) If the tanks are paralleled to a common hot water line, they will be considered as one. (For example, tank volume and element ratings are the sum of the individual ratings.)

¹ e.g. LV Res <40 MWh, LV 40-160 MWh, LV 160-750 MWh, LV >750 MWh.

7.7 Other Heating Sources

Controlled Load Tariffs are not available to electrically boosted water heaters where gas, kerosene or other types of fuel are used as the primary source of heating.

Electrically boosted solar storage water heaters will be supplied at the Controlled Load Tariff under similar conditions to other types of electric storage water heaters. The rated hot water delivery will include the electrically heated and solar sections of the unit.

Heat pump storage water heaters may be supplied at the Controlled Load 2 Tariff provided that the rating of the motor driving the compressor is greater than 500 watts. Unless otherwise approved by Ausgrid Network heat pump storage water heaters shall not be connected to the Controlled Load 1 Tariff. Ausgrid will allow the installation of heat pumps on a continuous primary tariff only if the design requirements of the manufacturer require the heat pump to be continuously energised.

7.8 Swimming Pools, Spas and Turbo Tubs

An electrically heated swimming pool, spa or turbo tub is a storage water heater and is eligible for the Controlled Load Tariff, dependant on the following conditions being met:

- (a) The nominal capacity of the pool or tub will be taken as the rated hot water delivery in determining eligibility for supply at the Controlled Load Tariff.
- (b) The compressor and fans associated with heat pump systems used solely to transfer atmospheric heat to the pool or tub may be supplied at the Controlled Load Tariff.
- (c) The device will be controlled by a customer's contactor so that Ausgrid Network's time control device does not switch motor starting current.

Note: Noise restrictions may prevent the use of pool pumps and other similar equipment at the controlled load price due to the timing of the availability of this price. Customers should enquire with their local Council and the NSW Department of Environment and Climate Change on noise restrictions before making a commitment to connect this type of equipment at a controlled load price.

7.8.1 Prohibition of Changeover Switching

The conditions of the Controlled Load Tariffs make it clear that load supplied at the Controlled Load Tariff may be given supply only within hours controlled by Ausgrid Network. Therefore, any arrangement, such as a change-over switch which would enable load normally supplied at the Controlled Load Price to be transferred by the customer to supply at another price is not allowed.

The above requirements do not prevent the arrangement of a domestic swimming pool heating unit (normally supplied at the Controlled Load price) from alternatively being used to heat a separate spa pool at the Domestic Price by means of a change-over switch, provided that the following conditions are met:

- (a) The capacity of the main pool will meet the requirements of the Controlled Load Tariffs in relation to the size of the heating elements.
- (b) The swimming pool and the spa pool must be separate. A spillway between the two pools is acceptable.
- (c) The water reticulation system associated with the swimming and spa pools will be controlled and suitably interlocked with the change-over switch and arranged so that when supply is available at the Controlled Load Tariff, the heating element only heats the main pool at that tariff.

When supply is not available at the Controlled Load Tariff, the heating element is then available to heat the spa pool at the relevant Domestic Tariff.

7.8.2 Protection of Pool or Spa Heaters

Refer to *Service and Installation Rules of NSW* and AS3142 for protection requirements of vented water heaters.

7.9 Special Conditions for Retirement Villages and Similar Accommodation

Figure 19 sets out the reduced minimum rated hot water delivery levels for self contained and separately metered accommodation:

Figure 19: Eligibility Conditions for Retirement Homes

Maximum Number of Occupants in Premises	Minimum Rated Hot Water Delivery		
	Controlled Load 1	Controlled Load 2	Minimum Rating
One	80 litres	80 litres	3.6kW
Two	125 litres	80 litres	3.6kW

The Domestic Tariff is not be available to new and upgraded (e.g. to multiphase) installations. LV Res <40 MWh will be the default price for this application.

7.10 Newcastle and Hunter Regions

New installations in these areas may use 3.6 kW elements or those previously specified in this document.

7.11 Existing Installations

Storage water heaters and thermal storage space heaters, in premises previously supplied at any previous obsolete Controlled Load Tariff, are eligible for supply at one of the current Controlled Load Tariffs, subject to the approval of the installation by Ausgrid and the following requirements.

7.11.1 Existing Water Heaters

Provided the heating elements comply with the requirements of Figure 17 and Figure 18, the following are permitted:

- (a) Existing water heaters formerly supplied at an obsolete price may be replaced by heaters of similar or increased capacity and supplied at the current appropriate Controlled Load Tariff.
- (b) Existing water heaters that were eligible for supply at, but not necessarily connected at one of the obsolete controlled load prices at the time of installation may be supplied at the current appropriate Controlled Load Tariff.

Existing units with 3.6kW elements are satisfactory. It is recommended that replacement water heaters utilise the same element rating as the previous unit provided that the volume of the unit remains the same.

Replacement with a 4.8kW unit may be done after a qualified person has inspected the existing wiring to ensure it has sufficient capacity and checked that the maximum demand of the premises does not exceed the current rating of the consumer's mains.

7.12

Contactors Installation

For multiple phase controlled load installations or where the load is greater than 25A, the customer is to comply with the requirements of the *Service and Installation Rules of NSW*, Section 4.11.3 'Load Control Equipment'.

8 EA010 LV RES NON-TOU (CLOSED)

8.1 General Conditions

The LV Res non-TOU Tariff is only available on a “grandfathered” basis for existing low voltage electricity supplied to private residential dwellings where there is a cumulative register energy only meter (Type 6).

Ausgrid may transfer a customer to another Network Tariff where the premise ceases to qualify for the EA010 LV Res non-TOU Tariff ie. when a type 5 meter or better is installed. All new and upgraded premises which have a Type 5 meter (or above) are not eligible for the LV Res non-TOU Tariff and will be placed on an appropriate Time of Use (ToU) Network tariff. Existing installations where type 6 metering is replaced by Ausgrid will remain on the EA010 tariff. The installation may be transferred after 12 months to another network tariff as described in Chapter 1.

8.2 Tariff Components

There are three components to the LV Res non-TOU Tariff:

- Network Access Charge comprising a fixed charge per day;
- Network Usage Charge comprising an all time energy rate up to 1750 kWh per standard quarterly billing cycle (being 91 days);
- Network Usage Charge comprising an all time energy rate for consumption in excess of 1750 kWh per standard quarterly billing cycle.

For the general explanation of the Price Components refer to Section 1.4.

8.3 Calculation of 1st and 2nd Block Network Charges

The determination of the energy volume to be charged at the 1st block rate and the energy to be charged at the 2nd block rate is as follows:

A customer’s quarterly consumption is converted to a per day value for that period. For example, a customer who consumed 2000 kWh over a 93 day cycle has used $2000/93 = 21.5054$ kWh per day.

This is then compared to the 1st block threshold also converted to a daily volume, being $(1750 \text{ kWh})/(91 \text{ days}) = 19.2308$ kWh for each day.

Therefore the customer has used 19.2308 kWh per day at the 1st block rate, and $21.5054 - 19.2308 = 2.2746$ kWh per day over the 93 day cycle.

The 1st block volume is converted back to a total for the 93 days, being $19.2308 \times 93 = 1788.46$ kWh in the 1st block. The 2nd block is then determined by whatever consumption is left over, being $2,000 - 1788.46 =$ and 211.54 kWh in the 2nd block.

Note that the 2nd block volume is determined by subtraction from the 1st block volume, rather than taking 2.2746×93 days to determine the 2nd block volume, to avoid complex rules to deal with rounding problems while ensuring the total still comes to 2,000 kWh.

9 EA050 LV BUS NON-TOU (CLOSED)

9.1 General Conditions

The LV Bus non-ToU Tariff is only available on a “grandfathered” basis for existing low voltage electricity supplied to premises for non-domestic purposes where the customer:

- Consumes less than 40MWh per annum
- Has a cumulative register energy only meter installed (a Type 6 metering installation)

9.2 Tariff Components

There are three components to the LV Bus non-ToU Tariff.

- Network Access Charge comprising a fixed charge per day.
- Network Usage Charge comprising an all time energy rate up to 2500 kWh per quarterly billing cycle.
- Network Usage Charge comprising an all time energy rate for consumption in excess of 2500 kWh per quarterly billing cycle.

For the general explanation of the Tariff Components refer to Section 1.4.

For an explanation of how the 1st and 2nd block volumes are calculated, refer to section 8.3 above.

10 COST REFLECTIVE NETWORK PRICES (CRNP)

Ausgrid Network calculates a Cost Reflective Network Price (CRNP) specific to an individual large customer's connection to the Ausgrid Network. Each connection is serviced by network assets of different values dependent on voltage level, capacity and construction type. The CRNP price takes into account the customer's annual utilisation of the network assets.

10.1 CRNP Assessment Criteria

To be eligible to receive a CRNP price at a given connection point a customer must:

- (a) Be situated in Ausgrid's Network area,
- (b) Have a monthly demand measured at the nominated connection point of 10 MW or more,
- (c) Have a recorded demand history of 10 MW or more in at least three months over the 12 month period prior to assessment.

On achieving eligibility, Ausgrid will take steps to re-assign the customer to the CRNP tariff class and place the customer on the CRNP price whether the CRNP price is higher or lower than the standard published Network Use of System Prices.

As the CRNP price relates to the specific assets used to supply a single customer, it may be lower or higher than the averaged prices applied to smaller customers – but in either situation the price will be as close as possible to what it costs to supply the customer.

Once a connection point has met the eligibility requirements, the tariff re-assignment and CRNP price will not apply until a new Network Price List is applied (at the end of the financial year).

10.2 Annual Review

CRNP prices are assessed in March each year to allow time for submission to Ausgrid's Board and the regulator prior to applying new prices, generally on 1 July.

10.3 Multiple Connection Points

CRNP customers' electrical supplies must be individually metered, so as to identify the specific supply or supplies at or over 10 MW. Where a customer has more than one connection point, the published Network Use of System Prices will apply to those connection points with a demand below 10 MW unless Ausgrid Network determines Section 10.4 applies. Therefore, it is possible for one customer to have combinations of CRNP and published prices applying to different connection points at the one site.

10.4 Amalgamation of Connection Points

Where two or more connection points supplying the one customer utilise common network assets, Ausgrid Network may combine the loads at each connection point in accordance with the amalgamation rules outlined in Section 1.13 and treat them as the equivalent of a single point of connection for the CRNP analysis, but applying the CRNP price to each separate connection point.

10.5 Capacity Charges

Capacity charges for CRNP customers (if applicable) are applied to the maximum kVA power reading that occurred at a customer's connection point over the 12 months prior to a bill being calculated within the timebands of 2pm to 8pm on working weekdays. Capacity charges are priced in cents per day per kVA and are calculated on the price times the number of days in the billing period times the measured capacity in kVA. Further information can be found in Appendix D, E and F of this document.

10.6 Transferring Off CRNP

On written application to Ausgrid or as assessed by Ausgrid Network, a CRNP supply point may be re-assigned to a more appropriate tariff class and to the network tariff appropriate to the supply point voltage under the following circumstances:

- The maximum demand (MW) on the CRNP connection point falls below 10MW for 6 consecutive months, and
- The customer or their Retailer provides information outlining the reason for the permanent reduction of load on the connection point.

In any event, if Ausgrid Network determines or forecasts that the customer's load may increase in the foreseeable future it may choose to reject the application for tariff re-assignment.

10.7 New Connections

New connections will normally be charged at published prices until the CRNP eligibility criteria have been achieved. CRNP transfers occur at the date of the next price change (usually 1 July).

10.8 Time Periods

The time periods applicable to CRNP tariffs are shown in the next figure.

Figure 20: The Charging Periods for ToU Tariffs

Charging Period	Time Period
Peak	From 2 pm – 8 pm on working weekdays.
Shoulder	From 7 am – 2 pm and 8 pm – 10pm on working weekdays.
Off-Peak	All other times.

Note: 1. All times take into account daylight saving during the period gazetted by the NSW Government, generally from 3am on the first Sunday in October to 2am on the first Sunday in April.

11 EA325 AND EA350 STANDBY SUPPLY TARIFF

11.1 Availability

Ausgrid offers a low voltage and a high voltage standby supply network tariff;

1. EA325 LV Connection (Standby Tariff)
2. EA350 HV Connection (Standby Tariff)

The LV and HV standby tariffs are available for customers who have a stand-by connection at their premises. Applications for the Standby Supply Price will need to include the form in Appendix A (*Network Tariff Application Form*). Each application will be assessed on the individual circumstances of the customer's network connection.

Standby supplies are loads not normally connected to the electrical supply system but increase the capacity requirements on the upstream system which must be capable of supplying the standby load in addition to normally supplied loads. In accordance with the current AEMO *National Metering Identifier Procedure (NMI)* document, the standby connection point must be assigned a separate NMI to the normal supply point.

The standby supply prices have four charging components; these consist of a fixed charge, and peak, shoulder and off-peak energy charges. The fixed charge is designed to recover the cost of the feeder, even while no capacity is being used. Whether or not the customer uses the supply, the customer will be charged a fixed daily charge for the provision of the supply.

The terms and conditions of a standby supply may vary according to the circumstances and such customers may be required to enter into a connection agreement. Ausgrid Network reserves the right to reassess existing standby supplies at any time for their impact on the electricity system and apply revised or new standby prices according to current metering and pricing methodologies. In general standby supplies should not be used as the standard supply for a customer.

A Capital Contribution usually applies to any connection as set out in Ausgrid's publication *ES8 Capital Contributions and Recoverable Work Guidelines*.

11.2 Use of Supply

Electricity supplied under this price may be used by the customer for all agreed purposes for which electricity may be required to be used during outages of the normal means of supply at the customer's premises.

11.3 Existing Standby Supplies

For customers requiring standby supply from Ausgrid Network where agreements have already been entered into which do not comply with these requirements, the existing services are retained unless a change is specifically requested by the customer.

12 EA402 UNMETERED SUPPLY

Unmetered supplies are metering installations that do not have a physical meter attached to the installation. These connections are also known as Type 7 metering installations.

Under Chapter 7 of the National Electricity Rules, a Type 7 metering installation classification applies where a metering installation does not require a meter to measure the flow of electricity in a power conductor and accordingly there is a requirement to determine by other means the energy data that is deemed to flow in the power conductor.

Type 7 installations will only be allowed for connection points where AEMO in consultation with Ausgrid determines:

- (1) the load pattern is predictable;
- (2) for the purposes of settlements, the load pattern can be reasonably calculated by a relevant method set out in the metrology procedure;
- (3) it would not be cost effective to meter the connection point taking into account:
 - the small magnitude of the load;
 - the connection arrangements; and
 - the geographical and physical location.

It is Ausgrid policy to connect unmetered supplies under these conditions if requested to the LV mains. The charges applicable are listed on the Network Price List, available on the Ausgrid website at www.ausgrid.com.au/network_prices.

A connection point that meets the condition for classification as an unmetered supply does not limit that connection point from being metered in the future. Where a customer wants to transfer unmetered supplies into the contestable market according to the National Electricity Market Metrology Procedure, the 'Responsible Person' must prepare an inventory table of all the unmetered loads that are proposed for inclusion under a single NMI. To enable the inventory list to be produced the customer will be required to provide a list of all unmetered loads, their installation location, and their estimated consumption to their retailer.

For further Type 7 connection information consult ES1 - Customer Connection Information which is available on the Ausgrid website.

13 TEMPORARY SUPPLY TARIFFS

13.1 Application of Tariff

Temporary Supply applies to installations that are not permanently installed or do not provide a permanent supply to the areas in which they are required. The temporary supply tariff is effectively the appropriate existing tariff allocated to a customer as per the details in Figure 22. A *Network Tariff Application Form* (Appendix A) will have to be submitted for the supply to be considered at a substation price.

13.2 Customer Pays for the Cost of Supply

The customer is responsible for the costs of installing and dismantling mains, meters and fittings and for the inspection, connection and disconnection of the customer's installation as set out in Ausgrid's publication ES5 Charges for Network Miscellaneous & Monopoly Services and ES8 *Capital Contribution Guidelines*.

13.3 Temporary Supply will be separately metered

Temporary supply must be separately metered with Rules compliant meters and will have its own NMI, separate to any permanent supply and will not affect the permanent supply arrangement and its associated NMI.

Coincident demand is not permitted between permanent and temporary connection points.

Figure 22: Meters at Temporary Supplies must comply with the following table:

Service Type	Capacity *	Meter **	Network Price
One Phase (only)	Less than 100 Amps	Type 5	LV Res <40 MWh (System)
Two or 3-phases	Less than 100 Amps	Type 5	LV 40-160 MWh (System) or LV 160-750 MWh (System)
3-phases	Greater than 100 Amps	Type 3	LV >750 MWh (System)

* The capacity of the service is the maximum rating of the cable or busbar service as determined by Ausgrid Network.

** There is an explanation of meter types in Section 1.9.

13.4 Temporary Experiments in Lighting and Industrial Processes

Where application for temporary supply for the purposes of carrying out experiments in lighting or industrial processes is made in writing and is approved by Ausgrid, supply will be made available at the network LV >750 MWh (System) Tariff.

When determining the applicable network charges to be made for , the temporary increase in the maximum power reading (as assessed by Ausgrid Network) caused by the connection and use of experimental apparatus will be waived, provided that:

- (a) Supply will be made available under these conditions only if no alterations to Ausgrid Network's service or system are involved.

- (b) The customer will pay the cost of Ausgrid making only such modifications or additions to its metering equipment as may be necessary for its purposes. However the customer may arrange for additional metering instruments to be installed, the cost of installing and removing these additional instruments to be paid by the customer.
- (c) The connection of apparatus under these conditions will be limited to a period of one month unless application for the extension of this period is made in writing and is approved by Ausgrid Network.

13.5 Temporary Connection of Permanent Installations

The reconnection of a permanent installation, even for a short period, does not qualify as a temporary supply.

14 GLOSSARY

Amalgamation	Usually refers to combining electricity accounts on to one bill. Amalgamated accounts just combine the dollar figures but the individual accounts are still calculated independently of each other.
Billable Maximum Capacity	The apparent power (kVA) or real power (kW) reading on which a customer's capacity charges are based. It is the highest recorded power reading for a connection point for the 12 months prior to a bill being calculated.
Billing Period	The time span that a network bill covers. The current network charges billing period is dependent on the meter type installed. Typically Type 4 or better meters will be read and billed monthly. Type 5 and 6 meters will be read and billed quarterly for non demand/capacity prices and monthly for demand/capacity prices. Each customer's Network bill is routinely sent to the customer's retailer.
Boosting Element	A heating element, intended for use when supply is not available to the main heating element. Such heating elements are located near the top of the water heater in compliance with <i>AS 1056.1 Storage Water Heaters, Part 1 General Requirements</i> .
Connection Point	Physical point of connection to the electrical distribution system. Each separate overhead or underground service is a separate connection point. Each separate busbar or direct cable supply from a single substation is a separate connection point, e.g. two busbar supplies equals two connection points.
Consolidation	Refers to physically re-arranging the electrical installation or meters at a customer's installation. Removing two meters and replacing them with one meter is termed Meter Consolidation. Removing two services to a property and replacing them with one larger service is termed Supply Consolidation or Service Consolidation.
Distribution Loss Factor (DLF)	This factor accounts for losses in the distribution network. It is used by retailers in the energy market settlements process and to calculate the customer's energy consumption. The energy consumed by the customer is increased by an average energy loss factor (DLF) for that type of customer, which is usually expressed as a factor (e.g. 1.0516). The DLF does not include the Transmission Loss Factor, which is used in the market settlements to adjust the pool price at each connection point to the transmission network.
Financially Responsible Market Participant (FRMP) (For customers, it is the Retailer of Choice)	A registered participant in the National Electricity Market who is financially responsible for the settlement of energy related to a connection point. It is the retailer selected by a contestable customer (also known as the 'customer's retailer' or 'retailer of choice').
National Electricity Market (NEM)	A wholesale market for the supply and purchase of electricity combined with an open access regime for use of the transmission and distribution networks. The participating jurisdictions are the Australian Capital Territory, New South Wales, Queensland, South Australia, Victoria and Tasmania. The NEM arrangements are defined in the National Electricity Rules.
National Metering Identifier (NMI)	A unique identifier assigned to a connection point or meter configuration referenced in the National Electricity Market for all the operations of customer registration, customer transfer and related data transfer.
Network Access Charge (NAC)	Most Network Prices have a network access charge. It is a fixed charge applied to each connection point.

Public Holidays	All days normally gazetted by the NSW Government as public holidays that apply statewide including: New Year's Day, Australia Day, Good Friday, Easter Monday, Anzac Day, Queen's Birthday, Labour Day, Christmas Day and Boxing Day. Does not include non-regular or special event public holidays that apply to local areas, for example Newcastle Show Day.
Retailer of Choice	See Financially Responsible Market Participant.
Responsible Person	The responsible person is the person responsible for the provision, installation and maintenance of a metering installation in accordance with Chapter 7 of the National Electricity Rules and the AEMO Metrology Procedure.
Storage Water Heater	A device in which water is heated and stored and drawn off later as required. The water cannot be used within the container or within a closed circuit.
Substation Tariff	Applies to a customer's supply point where the consumer mains directly connected to the Ausgrid Network substation busbar are owned, operated, and maintained by the customer. Section 1.15.2 provides examples.
Supply Point	This term is not the same as a connection point. A supply point can be a collection of multiple connection points or meter points depending on the assessment of the number of NMI's or the Network Price (e.g. CRNP allows combining multiple connection points in formulation of the site specific price)
Supporting Documentation	<p>Information provided by the customer or their retailer to assist in the evaluation of a request for:</p> <p>Price change from a System price to a Substation or price.</p> <p>Capacity value reset.</p> <p>Standby charges.</p> <p>Controlled loads.</p> <p>The supporting information may consist of:</p> <ul style="list-style-type: none"> • a site sketch • recorded load profiles • detailed price analysis • network diagrams • network maps • details of load changes • conditions and arrangements letter associated with the installation of a substation.
System Tariff	Applicable to the method of connection of a customer's installation to Ausgrid's owned and operated distribution network. Section 1.15.1 provides illustrative examples.
Thermal Storage Space Heater	A device in which energy in the form of heat may be stored and later released to heat an airspace or building component (e.g. floor). The device may be in the form of an independent unit or it may be incorporated in the building structure, for example heating elements embedded in a concrete floor.
Transition Tariff	A price that may be available for a defined period following changes in Network pricing structures. Refer to the Network Price List for any current Transition Prices.
Transmission Node Identifier (TNI)	The point in the transmission network assigned as the source of supply to a given connection point.

Type 'N' or better	Meters are categorised 1 to 7 according to functionality. 'or better' means one with a lower number e.g. Type 5 or better means 'a Type 1, 2, 3, 4 or 5'. (see Section 1.9)
Working Weekday	All days of a billing period other than those which are Saturdays, Sundays and public holidays.

15 REFERENCE

The following documents are referenced in ES7. Ausgrid publications can be downloaded from the Ausgrid website or from any Ausgrid customer service office.

Network Pricing Proposal	Ausgrid Network publication describing the pricing and services proposals and strategies. This proposal must be prepared annually for the AER approval and comply with the requirements as stipulated by the National Electricity Rules.
Network Price List	Ausgrid Network publication listing the current network access prices which apply to Ausgrid's tariffs.
Standard Form Customer Connection Contract	Ausgrid 's customer connection contract between Ausgrid Network and customers who have applied for customer connection services.
National Electricity Rules ('Rules')	Rules made under the National Electricity Law and regulate the terms of participation in the national electricity market for generators, transmission and distribution network owners and service providers, retailers and customers.
National Electricity Metrology Procedure	Procedures made by AEMO for ensuring compliance with the metering requirements of the 'Rules'.
Service and Installation Rules of New South Wales	NSW rules is based on an industry code recognized by the NSW Industry and Investment intended to provide requirements that an electricity distributor should apply in connecting a customer to its distribution system. The requirements are essentially of a technical and safety nature.
ES1 Customer Connection Information	Ausgrid Network publication setting out rules and procedures for connecting to Ausgrid's network.
ES4 Service Provider Authorisation	Ausgrid Network publication describing the conditions for becoming authorized as an Accredited Services Provider working on Ausgrid's network.
ES 5 Charges for Network Miscellaneous and Monoploy Services	Ausgrid Network publication describing work and charges associated with the connection of a customer's installation to the Ausgrid network.
ES8 Capital Contributions and Asset Relocation Works Guidelines	Ausgrid Network publication setting out when a customer is required to contribute to the cost of connecting to the network or of changing an existing connection to the network.
Protection of the Environment Operations Act 1997	NSW Act which may constrain the times or conditions when certain electrical equipment is used.
AEMO NMI Procedure document	AEMO document setting out NMI allocation rules.



Appendices

Appendices

- Appendix A Network Tariff Application Form**
Customers or their Retailer should submit this form to Ausgrid Network when the customer wants to change to a different tariff or have a tariff application investigated.
- Appendix B Request for Network Account Amalgamation at Customer Site**
Customers or their Retailer should submit this form to Ausgrid Network when the customer wants to combine two or more accounts.
- Appendix C DLF Code Legend for MSATS**
Distribution Loss Factors (DLFs) are applied based on the customer connection type. This section provides an explanation of how DLF codes are constructed.
- Appendix D Calculation of Network Price Components**
- Appendix E Calculation of Power**
- Appendix F Capacity Charge Example**
- Appendix G Daylight Saving Time**
- Appendix H Procedure for Assignment and Reassignment of Tariffs**

Appendix A Network Tariff Application Form

CUSTOMER SITE DETAILS

Ausgrid Account Identification No.: NMI

Customer Business Name:

Customer Name for Location of Supply Point:

Street Number Street Name

City/Town Postcode

1. **NMI Load:** Tick the box of the applicable load
 Below 40MWh p.a. Between 40 and 160 MWh p.a. Between 40 and 160 MWh p.a. Over 750MWh p.a.

Tick the box of the requested tariff

2. **LV >750 MWh Network Tariff** The Customer confirms this NMI has annual energy consumption of more than 750 MWh and requests the LV >750 MWh Network Price
3. **LV 160-750 MWh Tariff** The Customer confirms this NMI has annual energy consumption of between 160 MWh and 750 MWh and requests the LV 160-750 MWh network price.
4. **LV 40-160 MWh Tariff** The Customer confirms this NMI has annual energy consumption of between 40 MWh and 160 MWh and requests the LV 40-160 MWh network price.
5. **LV Res <40 MWh Tariff** The customer confirms this NMI has annual energy consumption below 160 MWh for residential use and requests the LV Res < 40 MWh network price.
6. **LV Bus <40 MWh Tariff** The customer confirms this NMI has annual energy consumption below 40 MWh for business use and requests the LV Bus < 40 MWh network price.
7. **Substation Network Tariff** The Customer requests this site receive the Substation Network Price. Fed from Substation No. NOTE: The Applicant may be required to supply price. Please attach proof to this application for expedient processing. supporting documentation as proof of eligibility for the nominated substation
8. **Co-incident Demand across multiple meters at a single connection point** The Customer request this connection point be examined to receive Co-incident Demand and to be configured to meet the Code NMI Procedure requirements. If the request is not approved by Ausgrid Network the connection point will receive Arithmetic Demand
9. **Capacity Reset** The customer requests that the Billable Maximum Capacity value be reset to a level other than the prior 12 month peak.
Reason for the capacity reset:
10. **Standby Supply Tariff** The customer requests a LV or HV Standby Supply Tariff for the nominated NMI.
11. **Cost Reflective Network Price** The customer requests a site specific network price. NB. The connection point demand must have exceeded 10 MW on more than three occasions over a 12 month period.

The above declaration is endorsed by the customer's **Retailer of Choice.**

Signed Retailer Name

Name (please print): Title:

Date:/...../..... Telephone: Fax:

Postal Address:

City / Town

Post Code

NOTE: The above requested price, if approved, will not be backdated and will apply from the start of the next billing period.

Appendix C DLF Code Legend for MSATS

C1 Distribution Loss Factor

According to the AEMO Distribution Loss Factor (DLF) Codes document, the DLF codes will comprise 4 alpha-numeric characters, e.g. JHBL.

The DLF codes for Ausgrid network tariffs are shown below.

Note: All CRNP customer supplies have a specific DLF Code identified via the remaining three characters on an individual basis.

Tariff code	Network Tariff	Location	DLF CODE	Description
EA010	LV Res non-TOU (Closed)	LV system	JLDL	Ausgrid - LV Domestic DLF
EA025	LV Res <40 MWh (System)	LV system	JL40	Ausgrid - LV Domestic DLF
EA030	Controlled Load 1	LV system	JL1L	Ausgrid - LV Controlled Load 1
EA040	Controlled Load 2	LV system	JL2L	Ausgrid - LV Controlled Load 2
EA050	LV Bus non-TOU (Closed)	LV system	JLSL	Ausgrid - LV System DLF
EA225	LV Bus <40 MWh (System)	LV system	JLSL	Ausgrid - LV System DLF
EA302	LV 40-160 MWh (System)	LV system	JLSL	Ausgrid - LV System DLF
EA305	LV 160-750 MWh (System)	LV system	JLSL	Ausgrid - LV System DLF
EA310	LV >750 MWh (System)	LV system	JLSL	Ausgrid - LV System DLF
EA325	LV Connection (Standby Tariff)	LV system	JLSL	Ausgrid - LV System DLF
EA350	HV Connection (Standby Tariff)	HV system	JHSH	Ausgrid - HV System DLF
EA370	HV Connection (System)	HV system	JHSH	Ausgrid - HV System DLF
EA380	HV Connection (Substation)	HV substation	JHBH	Ausgrid - HV Zone Substation DLF
EA390	ST Connection	ST System	JSSS	Ausgrid - ST System DLF
EA401	Public Lighting	LV system	JLSP	Ausgrid - Public Lighting DLF
EA402	Constant Unmetered	LV system	JLSU	Ausgrid - Constant Unmetered DLF
EA403	EnergyLight	LV system	JLSP	Ausgrid - Public Lighting DLF

Appendix D Calculation of Network Price Components

D1 Network Access Charge

This is applied in the form of a fixed daily charge for each connection point to Ausgrid's network. Application of Network Access Charge (NAC) is based on the number of connection points to a site (ie. not on an NMI basis). For any non-standard connection or special connection arrangements, Ausgrid Network will assess the number of NACs applicable on a case by case basis.

D2 Energy Usage Component

The energy rates are applied to the energy usage in the predefined time periods to arrive the energy usage charges. The energy usage is the product of the demand in kW and the time in hours for which the demand applied.

The energy usage component of the Domestic and LV Business Non-ToU Network Prices are charged using a two-block structure as shown below. A pricing differential will apply between the two blocks, with the second block set higher than the first. This two-block structure is also known as an Inclining Block Tariff.

Tariff Number	Tariff Name	Base Block Rate	Inclining Block Rate
EA010	Domestic	First 1750 kWh per Quarter	Consumption in excess of base block
EA050	LV Business non-ToU	First 2500 kWh per Quarter	Consumption in excess of base block

A Quarter is defined as 91 Days, and bills covering periods greater or less than this amount will be pro-rated.

D3 Calculation of Capacity Charges

Capacity charges are applied to the maximum kW or KVA power reading that occurred at a customer's connection point over the 12 months prior to a bill being calculated. This is known as the Billable Maximum Capacity. The capacity charge will be levied on the real power (kW) reading only where the metering installation type prevents it from being levied on an apparent power reading (kVA).

D3.1 Peak Times

The Billable Maximum Capacity can only occur in peak times which are from 2pm to 8pm on working weekdays.

D3.2 Charge in cents per day

The capacity charge is in cents per day and is calculated on the number of days in the billing period. Prior to 1 July 2008, the capacity charge was presented in dollars per month (although it was effectively charged in cents per day).

D3.3 Arithmetic Demand

It is Ausgrid Network's policy to apply arithmetic demand for capacity charging purposes. A separate power reading will be measured and applied at each connection point and its associated metering point. The maximum power in kVA or kW in the 12 month prior period shall be determined from the maximum reading of a demand meter or from the arithmetic sum of the maximum readings of all demand meters installed at each connection point. Therefore, coincident or summated demand is not permitted unless approved by Ausgrid Network.

The one exception to this rule is in the case of two or three phase supply at a connection point: co-incident demand is applied across the phases to determine the maximum demand for the connection.

One capacity charge is applied at each connection point. Coincident or summated capacity charges from multiple connection points are not permitted without the written approval of the Executive Manager - Network Regulation & Pricing.

D4 Reset of Capacity Charge

In some instances the capacity charge may be reset, either by Ausgrid or at the request of a customer. Customers are responsible for advising Ausgrid of their changed capacity requirements.

Where a customer plans to permanently decrease their network capacity, the customer should give the network written notice before the changes are due to occur. Permanent decreases are a result of the movement in demand due to either planned work to decrease the demand, such as decommissioning the plant, changing plant operations, or when load management equipment is installed. The customer will be required to provide relevant documentation that justifies the fall in the level of Billable Maximum Capacity. For example, in the case of a factory being converted to a warehouse, a Notice of Electrical Works (NOEW) will be required as evidence of the decrease in Billable Maximum Capacity.

The customer will be advised by Ausgrid Network of the Billable Maximum Capacity level that will apply.

Ausgrid Network will also consider resetting the Billable Maximum Capacity in the following circumstances:

- where a customer has implemented a demand management initiative which will permanently reduce the peak demand at the installation, such as power factor correction; or
- where an increase in the Billable Maximum Capacity has been caused by a change to the network configuration initiated by Ausgrid Network;

Customers that exceed their new Billable Maximum Capacity will see a ratchet up as usual. Customers may only request one reset per year.

A customer wishing to apply for a reset of the Billable Maximum Capacity may make an application to Ausgrid's National Electricity Market Support group, by completing the application form in Appendix A and emailing it to: nems.transfers@energy.com.au.

D5 Retail Transfers

When a customer transfers, the following historical information will be required by the new retailer to replicate the capacity calculations:

- a full 12 months history of Peak Capacity values.
- A list of NMIs which have multiple connection points

This information can be sourced from the National Electricity Market Support group of Ausgrid contactable by email: nems.transfers@energy.com.au or nmi@energy.com.au

D6 Price Category Changes

Where a customer changes to or from price category EA302, the Billable Maximum Capacity will have no historical values. This is because EA302 has Billable Maximum Capacity measured in kW, not kVA.

All other transfers across price categories with capacity charges will have the Billable Maximum Capacity values retained.

Table A2: Tariff Group

Price Category	Tariff Code
----------------	-------------

LV 40-160 MWh (System)	EA302
LV 160-750 MWh (System)	EA305
LV >750 MWh (System)	EA310
HV Connection (System)	EA370
HV Connection (Substation)	EA380

D7 Daylight Saving Time

The time periods defined in Section 1.5 relate to local time. Local time is Eastern Standard Time except when Daylight Saving Time is gazetted by NSW Government for use as local time.

Where customers have Rules compliant meters installed, half-hourly data is forwarded to Ausgrid's Meter Data Agent (MDA). The MDA stores all data in Eastern Standard Time (EST). During the period that daylight saving operates, Ausgrid's MDA converts the customer's energy consumption to local time for the purpose of calculating consumption quantities in each period. This involves shifting the data forward by 1 hour. When daylight saving ends, the data is shifted back by 1 hour so that it aligns with EST.

Reference: New South Wales Government Website:

http://www.lawlink.nsw.gov.au/lawlink/cru/ll_cru.nsf/pages/cru_daylightsaving

Example of the data shifting process during Daylight Saving Time and the effect on customers:

Eastern Standard Time	Local Time during Daylight Saving	Billing Implications
6:00 – 6:30am	7:00 – 7:30am	This half hour now falls into the Shoulder Period rather than Off-Peak Period

For more information see Appendix G.

D8 Public Holidays

Ausgrid Network has defined all consumption in gazetted state-wide NSW public holidays as Off-Peak periods with the exception of LV Res <40 MWh and LV Bus <40 MWh. On public holidays, LV Res <40 MWh and LV Bus <40 MWh prices will have a shoulder period of 7:00 am – 10:00 pm.

Any public holidays that do not apply to the whole state of NSW are not considered as public holidays for the purpose of defining tariff time bands.

For the list of public holidays please refer the NSW Department of Industrial Relations website:

<http://www.industrialrelations.nsw.gov.au/holidays/default.html>

D9 Application of Distribution Loss Factor

Each Network price category is allocated a Distribution Loss Factor (DLF). Network prices are charged on the metered quantities and are not subject to DLF. However, it is the responsibility of Network businesses to determine and publish DLFs.

The DLFs are used by retailers in the energy trading and market settlement process to account for electrical losses in the distribution network. The DLF varies depending upon the point and voltage of customer's connection.

Similarly, Transmission Loss Factors are also used in the market settlement of energy to take account of electrical losses in the transmission network.

Appendix E Calculation of Power

This appendix describes the standard method of power calculations that applies to the capacity component of Capacity Time of Use prices contained in Ausgrid's Network Price List. This method of power calculation has been in use since February 1994. It applies to all customers using more than 40 MWh of electricity per year.

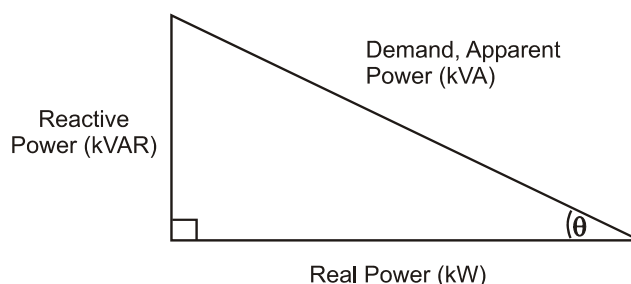
E1 Definitions

The capacity charge is based on the Apparent Power (ie kVA), where metering allows it (otherwise it is based on real power in kW). The relationship between all three types of power is best explained by the power triangle.

Component	Measurement Units
Real Power	kW
Reactive Power	kVAR
Apparent Power	kVA

E2 Power Triangle – Power Factor

This diagram shows the power triangle. It is a graphical representation of the relationship between Apparent Power, Real Power and Reactive Power. The power factor is given by the real power to apparent power 'cosine' ratio.



$$\text{Power factor} = \cos \theta = \text{Real Power} / \text{Apparent Power}$$

The real power is proportional to the work done. A low power factor means high apparent power if the real power to remain same.

E3 Power Principle

A customer's maximum power is a measure of the capacity that must be provided by the network. Power has two components, termed real and reactive. The real power is that which performs useful work, such as providing heating and motion. The reactive component is necessary for the flow of real power, and is part of the total demand upon the supply system. Reactive power results from the coils in industrial AC inductive motors and transformers. It is the inductance of the coils that causes the difference between the real power and the apparent power.

Energy (kWh) is a measure of electricity consumption, or 'throughput' in terms of actual work done - Real Energy. Energy does not take into account the customer's power factor.

The capacity charge applies to the maximum power in the Peak period since the marginal costs in providing supply are only incurred when the network is at, or close to full capacity. A Billable Maximum Capacity value measured in kVA takes into account a customer's power factor and therefore poor power factors will see a higher billable amount for this component.

E4 Power Calculations Used for Capacity Charges

An apparent power reading (used in capacity charging) is the square root of the addition of *the square of the real power* and the *square of the reactive power*, as measured over a fixed half-hour period. The reactive energy is the addition of the absolute value of lagging VARhs and the absolute value of leading VARhs.

For each half hour calculate the real (kW) and reactive (kVAR) power as follows.

$$\text{Real Power kW} = (\text{Real Energy kWh}) * 2$$

Real Energy is measured by the meter and generally known as electricity consumption.

$$\text{Reactive Power kVAR} = (\text{Reactive Energy kVARh}) * 2$$

Reactive Energy is either measured by the meter or calculated as follows:

$$\text{Reactive Energy kVARh} = |\text{Lagging kVARh}| - |\text{Leading kVARh}|$$

Most meters will automatically perform this calculation. Where they do not, leading and lagging kVARh are stored separately, and Ausgrid's MDA performs the calculation.

For capacity charge calculations, the capacity value will be the highest apparent power reading over the previous 12 months that occurred between 2pm and 8pm on working weekdays.

$$\text{Apparent Power kVA} = \sqrt{\text{Real Power kW}^2 + \text{Reactive Power kVAR}^2}$$

Appendix F Capacity Charge Example

The diagram below is an example of a customer's Billable Maximum Capacity value, each month over five years. In this example the two features of the capacity charge are shown:

- Monthly review of capacity charge (ratcheting)
- A reset of capacity where the demand has been reduced for 12 months.

The bold line shows the capacity value to be charged to the customer to which the capacity charge would apply. During each financial year, when a monthly maximum power (in peak times) exceeds the capacity value, the line ratchets up (these are the months labeled 'ratchet up').

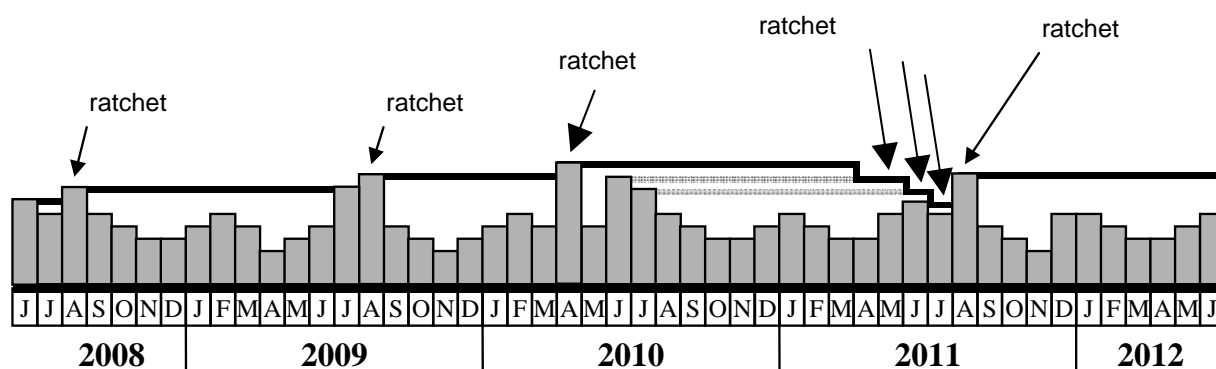
Where a peak power reduction is sustained over a twelve (12) month period, the capacity value to be charged to the customer is reset to the maximum power over that 12 month period (this is shown by the 'ratchet down' line).

In the example below in August 2008, the capacity value ratchets up because there is a new peak. The capacity value also ratchets up in August 2009 and April 2010 due to a new peak.

In April 2011 the capacity value ratchets down to the peak power reading of June 2010 since the previous value registered in April 2009 is now outside the rolling 12 month period and has not been exceeded over the previous 12 month period to April 2010. Similar reduction in the capacity value occur in June and July 2011 as the power values registered in June and July 2010 are now outside the rolling 12 month period and have not been exceeded over the previous 12 month period to June and July 2011.

In August 2011 however, the capacity value ratchets up again because there is a new peak.

The determination of what demand values fall within the 12 month rolling



window is straightforward for calendar read sites with Type 1 to 4 metering. However Type 5 manually read interval metered sites can have slight variations in their read cycle, which require a definition to determine exactly what is meant by a 12 month window.

The following definition is applied in determining what monthly demand values are included in the rolling 12 month window.

1. Take the end date of the latest meter reading. Decrement the year of that date by one.
2. If this produces an invalid date (for example decrementing 29th Feb 2008 to 29th Feb 2007), then decrement the original end date by one day, then decrement the year.
3. Add one day.
4. If the resulting day is a leap day, then add another day.

This will result in a 12 month window with a defined start date and end date. The logic is designed to account for leap years, where the same date does not exist either side of the leap year.

Any meter readings that have either a start or end date that falls within the 12 month window defined as above will be included in the rolling window calculation for determining the capacity value to be charged to that site.

Please note that where a demand meter reading period spans across the start of the one year window, the demand value is assumed to have occurred within the one year window.

Table F1: Examples of capacity charge window for Type 5 metered customers

Date of Last Meter Read	Start Date of 12 month window	End Date of 12 month window
12 th September 2008	13 th September 2007	12 th September 2008
28 th February 2008	1 st March 2007	28 th February 2008
29 th February 2008	1 st March 2007	29 th February 2008
28 th February 2009	1 st March 2008	28 th February 2009

Appendix G Daylight Saving Time

The time periods defined in Ausgrid's Network Price list and ES7 apply to local time in New South Wales. Local time is the same as Daylight Saving Time while it is in operation, and for the rest of the year, local time is the same as Eastern Standard Time.

Ausgrid's network prices are structured to follow the local time, whether that is Australian Eastern Standard or Daylight Savings time.

Customers on non-Time of Use network prices are not affected by Daylight Saving Time (DST). Customers on Time of Use network prices, but without Rules compliant meters installed, have their meters programmed to adjust automatically to DST.

Where customers have joined the contestable market and have National Electricity Rules compliant metering, half hourly energy consumption data is forwarded to Ausgrid's Meter Data Agent (MDA). For the period that DST operates MDA converts the customer's energy consumption to local time for the purpose of calculating consumption in each time period. MDA stores all data in Eastern Standard Time (EST).

G1 Start and End of Daylight Saving Time

The following convention is used in NSW:

Start: Daylight Saving Time (DST) begins at 2am Eastern Standard Time (EST) on the first Sunday in October. Therefore at 2am EST the clocks are put forward by one hour. The time then becomes 3am DST.

During Daylight Saving, Local time in New South Wales is one hour in advance of Eastern Standard Time.

Finish: Daylight Saving Time ends at 3am DST on the first Sunday in April. Therefore at 3am DST the clocks are put back by one hour. The local time then goes in line with 2am EST.

Example 1: The day Daylight Saving Time commences

The month of October will have 1 less hour in Local Time calculations. Where the hour is shown, for example, '1am', this is to be read as the hour ending at 1am.

EST	kW	Local Time	kW
1 am	125	1 am	125
2 am	130	3 am	130
3 am	135	4 am	135
4 am	140	5 am	140
5 am	145	6 am	145
6 am	150	7 am	150
7 am	150	8 am	150
8 am	165	9 am	165
9 am	170	10 am	170
10 am	185	11 am	185
11 am	190	12 pm	190
12 pm	195	1 pm	195
1 pm	200	2 pm	200
2 pm	210	3 pm	210
3 pm	200	4 pm	200
4 pm	190	5 pm	190
5 pm	185	6 pm	185
6 pm	180	7 pm	180
7 pm	175	8 pm	175
8 pm	160	9 pm	160
9 pm	150	10 pm	150
10 pm	145	11 pm	145
11 pm	130	12 am	130
12 pm	125	1am	125

Assuming Daylight Saving Time commences. 1 hour lost (2-3am) on the day the change occurred. Only 23 hours in the day in Local Time are recorded and an hour shifted backwards until adjusted at the end of the summer.

The last hour of the day in EST becomes the first hour of the following day in Local Time (DST)

Example 2: The day Daylight Saving Time ends

The month of April will have one extra hour in Local Time calculations.

EST	kW	Local Time	kW
12 am	120	1 am	120
1 am	125	2 am	125
2 am	130	3 am	130
3 am	135	3 am	135
4 am	140	4 am	140
5 am	145	5 am	145
6 am	150	6 am	150
7 am	150	7 am	150
8 am	165	8 am	165
9 am	170	9 am	170
10 am	185	10 am	185
11 am	190	11 am	190
12 pm	195	12 pm	195
1 pm	200	1 pm	200
2 pm	210	2 pm	210
3 pm	200	3 pm	200
4 pm	190	4 pm	190
5 pm	185	5 pm	185
6 pm	180	6 pm	180
7 pm	175	7 pm	175
8 pm	160	8 pm	160
9 pm	150	9 pm	150
10 pm	145	10 pm	145
11 pm	130	11 pm	130
12 am	125	12 am	125

Assuming Daylight Saving Time finishes. One hour is gained.
25 hours in Local Time on the day time charged.

Appendix H Procedure for Assignment and Re-assignment of Tariffs

This appendix is reproduced from Ausgrid's Network Pricing Proposal and demonstrates the approach for assigning a new network connection to a tariff and re-assigning an existing network connection from one tariff to another. Where an assignment or re-assignment is between tariff classes, this will occur in accordance with the AER network determination.

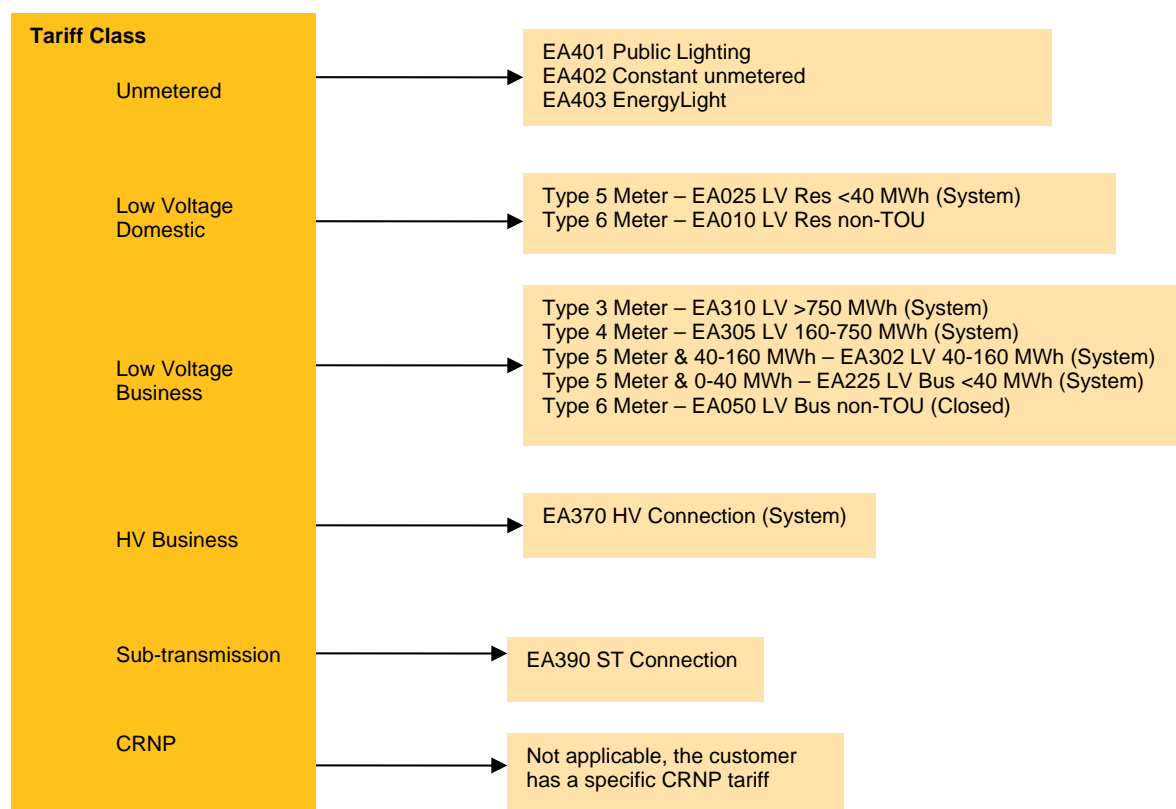
H1 Default Tariffs and Tariff Transfers

A default tariff is the network tariff to which Ausgrid assigns a customer based on its tariff assignment and re-assignment policies. A customer may move away from its assigned default tariff after 12 months of load history has been accumulated. The customer, or their retailer, can then apply to transfer to an alternative network price using the Network Tariff Application Form available in Appendix A of this document. Applications for tariff transfers are usually the result of annual consumption changes, or requests for a substation tariff (discussed below). Backdating of new network prices is not permitted and customers may only have their prices changed once in a 12 month period.

H2 Tariff Assignment and Re-assignment for Existing Customers

Ausgrid's default tariff allocation procedure for existing customers is shown in Figure 1.

Figure 1 Decision Tree of Assigning Existing Customers to Default Tariffs



Cost Reflective Network Price (CRNP) customers are defined as customers with a demand in excess of 10 MW on at least three half hour periods within a 12 month period. Site specific prices are calculated each year for these customers. If a customer falls below this threshold, then a default network is applied, consistent with the decision tree above.

It can be seen from Figure 1 that the tariffs applicable to Type 6 metering installations are no longer available. It is Ausgrid's policy that all new and upgraded connections (eg single phase to multiple phase connections) must install a Type 5 or better (Types 1 to 4) meter.

H3 Tariff Assignments for New Customers

New connections (where there is no previous load history) are assigned to a default tariff which is based on tariff class (as defined in section 1.2.1), metering installation type and metering phase. Table 1 shows the way in which new customers are allocated to default tariffs. Please note that this should be read in conjunction with Ausgrid's procedure for assigning customers to tariff classes, as explained in section 1.2.1.

Table 1: The assignment of New Customers to Default Tariffs

Tariff Class		Metering Installation Type (if applicable)	Connection phase (if applicable)	Default Principal Network Price Code	Default Principal Network Price Name
Low Voltage	Residential			EA025	LV Res < 40 MWh (System)
LV Business	Non-Residential	3		EA310	LV >750 MWh (System)
		4		EA305	LV 160-750 MWh (System)
		5	Three phase	EA302	LV 40-160 MWh (System)
			Single phase	EA225*	LV Bus <40 MWh (System)*
HV Business				EA370	HV Connection (System)
Sub-transmission				EA390	ST Connection
Unmetered		7		EA401	Public Lighting
				EA402	Constant Unmetered

H4 System of Assessment and Review

A review of a customer's network tariff is carried out annually to assess if the tariff is still correct given potential changes in annual usage and meter type. A change in voltage is treated as a new connection. Ausgrid's network tariff policy is generally aligned to consumption bands. For example, network tariff EA225 LV <40 MWh (System) applies to 0 to 40 MWh pa business customers. Above this tariff EA302 LV 40-160 MWh (System) applies to customers using 40 to 160 MWh pa.

Ausgrid applies a tolerance of ± 20 percent around tariff thresholds. If a customer on EA225 LV <40 MWh (System) were to consume 49 MWh pa, they would be reassigned immediately to the new tariff, being more than 20 percent above the 40 MWh threshold. However, if they are using 43 MWh pa, the customer falls within the band tolerance of 40 MWh ± 8 MWh so their tariff re-assignment is deferred. If the same customer is then found to still consume more than 40 MWh after two years, the threshold bands do not apply, and the customer will be reassigned from network tariff EA225 to EA302. The relevant retailer is notified of the impending change, and the customer is re-assigned to the new network tariff.

The assessment of the customer's usage is based on the most recent 12 months of history. However if a customer's consumption has fallen because of vacancy of one month or more during the previous 12 months, the customer is excluded from a potential tariff re-assignment. This is to avoid

making tariff transfers based on load data that is not fairly represent a customer's annual usage.

H5 Substation Tariffs

Ausgrid has decided to make redundant the substation network tariffs applying to low voltage supplies from 1 July 2010. The substation tariff applying high voltage supplies will continue to be offered in FY11.

A substation price will be applied to high voltage supplies, which satisfy the following criteria:

- (a) A single customer's mains are directly connected to the Ausgrid zone substation HV busbar;
- (b) The customer owns, operates and maintains these mains;
- (c) The customer can demonstrate that they have capitally contributed to the construction of the substation.

If approved, the price change will apply from the start of the next billing period (typically monthly) following the date of receipt of the price change application.

H6 Standby rates

The LV and HV standby tariffs (with codes EA325 and EA350 respectively) are applied to customers who have a stand-by connection at their premises. The two standby tariffs consist of a large fixed charge and standard energy rates. The fixed charge is designed to recover the cost of the feeder, even while no capacity is being used. Whether or not the customer uses the supply, the customer will be charged a fixed daily charge for the provision of the supply. This will simplify billing for these supplies. It will also act as a clear signal of the cost to Ausgrid of providing the standby supply capacity. This is consistent with our strategy to keep tariffs simple and cost reflective where possible, and to send appropriate pricing signals to our customers.

H7 No DUOS charges for the export of energy

Where a customer with distributed generation facilities is able to supply their own load and also generate energy into the network, no charges are applied to the energy exported. If the customer is purely a generating source (with no local load) then no network tariff applies. Network tariffs are only applied where load is present.

H8 Public lighting

Ausgrid's public lighting network use of system tariff (EA401) consists of an energy rate, but does not have a fixed charge. This tariff is available for metered and unmetered connections for a public lighting service.