



UNITED ENERGY
Distribution

United Energy Distribution Tariff Report 2010

January 2010

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Appendix 1 - 2010 DUoS, TUoS and PFIT pass through Tariff Rates

Appendix 2 – Glossary of Terms

1 Background

United Energy Distribution Pty Ltd (UED) is one of five electricity distribution businesses operating under licence within the State of Victoria, with assets totalling approximately \$3.0 billion. UED's network provides services to some 620,000 end-use customers in Melbourne's southern and eastern suburbs, with its area of operation confined to geographically defined boundaries set out in the Distribution Licence.

Distribution Use of System (DUoS) (new terminology is Standard Control Services) tariffs are designed to cover the cost of distribution of electricity to customers. Distribution Network Service Providers (DNSPs) bill retailers the Network Use of System (NUoS) charges.

NUoS tariff charges are comprised of two constituent parts, namely; Transmission Use of System (TUoS) tariffs and DUoS tariffs. The structures of the TUoS and DUoS tariffs are identical and the NUoS rates are the simple addition of DUoS tariffs and TUoS tariffs.

NUoS tariffs vary in structure depending on the voltage and size of the connection.

For practical reasons, UED's TUoS tariff structure does not reflect the structure of the grid fees paid by UED to Victorian Energy Networks Corporation (VENcorp) and SP Ausnet. The TUoS tariff structure has instead been aligned with the DUoS tariff.

In allocating transmission costs, UED has restricted the application of TUoS rates to those components of the NUoS rates which best reflect the underlying Grid Fees (i.e. Peak Energy, Summer Demand Incentive Charge, and Rolling Demand). Therefore, recovery of transmission related charges is mainly through peak energy, Summer Demand Incentive Charge (SDIC), and rolling demand charges, with off-peak energy and fixed charges not attracting TUoS.

Transmission costs to UED have been the subject of significant variability, with UED being limited in its ability to recover these costs, due to constraints on TUoS increases imposed by the Essential Services Commission (these functions have now been transferred to the Australian Energy Regulator (AER)). Continued treatment of transmission costs in this manner exposes UED to significant risk in terms of cash flow, and distorts TUoS pass-through pricing signals to the market.

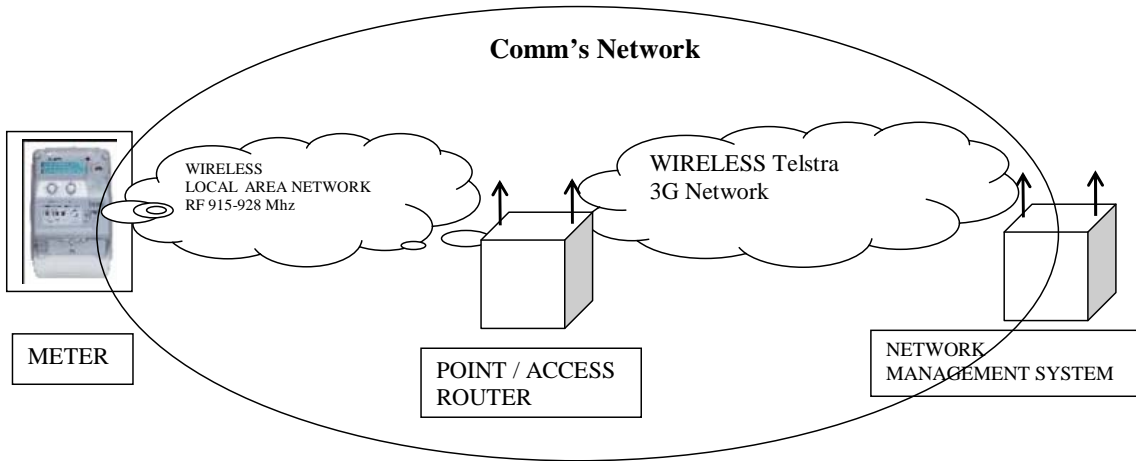
1.1 Advanced Meter Infrastructure (AMI)

UED is applying to introduce two new Time-Of-Use Tariffs (TOU) to customers with AMI enabled meters to impart price signals to reduce energy consumption.

AMI meters must be able to be remotely read to capture interval data to provide to market participants and a Communications network (see section 1.1.1 below) needs to be installed to enable AMI meters to be remotely read. However, as the Communications network is being rolled out progressively across UED territory from 2009 to 2014, this means there will be pockets where new connections cannot be remotely read, thus new TOU tariffs cannot be assigned. In these cases, new connections will be assigned to older style accumulation tariffs (detailed later in this report).

Once Communications have been installed and interval data can be collected, UED can reassign customers to the new TOU tariffs.

1.1.1 Communications Network



1.1.2 Application for new TOD and TOU Network Tariffs

In accordance with clause 2.2.5 of Volume 2 EDPR 2006-10, UED is applying to introduce two new TOU tariffs – the “Time of Day” (TOD) and the Time of Use (TOU). Details of these two new tariffs are detailed within this document.

2 Purpose

This report is intended to give guidance to stakeholders, setting out the issues, principles and rationale used by UED in setting its NUoS tariffs for 2010. In so doing this report will meet the requirements set down in the Electricity Distribution Price review (EDPR) 2006-10 and incremental requirements and interpretations as laid out in the Comparative Report on the Distributors' Reporting Requirements (September 2006).

UED welcomes comments from interested parties for consideration in the continual evolution of UED's tariff and price setting.

3 Tariff Setting Principles (Basis for Tariff Policies)

The design of the tariffs sought to incorporate the following policy principles:

- Regulatory compliance. Compliance with the regulatory requirements of the Essential Services Commission EDPR 2006-10. A key requirement by the Commission is that the network prices faced by a group of customers must lie between the avoidable cost of servicing that group (lower bound) and the stand-alone costs of servicing that class (upper bound). These regulatory requirements limit the extent to which tariffs can change, particularly any average price increases.
- Customer choice. To provide customers with meaningful choices of tariff options based upon behavioural response and shared benefits.
- Market equity. Having regard to previous price levels and hence relative changes. Further, pricing should apply to all retailers in a neutral manner and not impede the viability of full retail contestability.
- Cost reflectivity. Seek appropriate mechanisms for achieving inter-customer group equity in the allocation of distribution cost-recovery requirements. Pricing is to recognise cost-reflectivity within the constraints imposed by regulatory requirements (i.e. that tariffs fall within economic upper and lower bounds) and ensuring efficient investment signalling and network usage.

The new 2010 TOU tariffs intent is to send pricing signals to customers (especially with air conditioning load) so that peak demand on the network is reduced, hence less capital expenditure required. It also provides customers opportunities to shift their loads to off peak periods reducing demand in peak times.

- Behavioural elasticity. Seek to utilise rational consumer behavioural elasticity, both in terms of usage responses to pricing signals and tariff switching.
- Practicality. Seek to simplify mechanisms balancing against economic functionality, while having regard to minimising transaction and pricing administration cost.
- Environmental. Within the limitations of the scope and context of electricity distribution pricing, have regard to opportunities to improve utilisation efficiency and accommodate emerging energy technologies, particularly in respect of greenhouse gas emission reduction.

Understandably, not all the principles can be satisfied to their full extent, while fully complying with the AER's requirements, particularly as some pull in opposing directions. UED has

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sought to satisfy these principles to the greatest extent possible whilst maintaining the given regulatory constraints.

Annual tariff and price changes are governed by the requirements laid out in the 2006-10 EDPR, Codes, etc. The Annual Tariff Report details the new 2010 TOU tariffs, how the allowed increase in tariff basket prices have been applied, and also how the rebalancing constraints have been used. UED intends to gain the full revenue allowable by the tariff basket price controls to recover the efficient costs of operating the network business, including a commercial return on invested capital for “business as usual” service levels. UED also intends to use inter-tariff rebalancing where necessary to redress imbalances and cross subsidies. Tariff rebalancing has been used in the 2010 prices to lend greater emphasis to price signals as required by the tariff setting principles.

4 Changes in Tariffs, Tariff Structure and New Tariffs

4.1 Network Use of System Tariffs open and closed to New Connections from 2010:

The 2010 NUoS tariffs reflect the underlying structure of both the TUoS and DUoS charges. That is, the structures of the TUoS and DUoS tariffs are identical and the NUoS rates are the simple addition of DUoS and TUoS.

Table 4.1 – Closed and Open Network Tariffs

Closed Network Tariffs*
Low voltage kW time of use (LVkWTOU)
Low voltage large 1 rate (LVL1R)
Low voltage large 2 rate (LVL2R)
Low voltage medium 2 rate 5 day (LVM25D)
Low voltage medium 2 rate 7 day (LVM27D)
Low voltage small 2 rate (LVS2R)
Subtransmission KVA time of use (ST22kVTOU)
Low Voltage kW time of use HOT (LVkWTOUHOT)
Low Voltage large KVA time of use HOT (LVkVTOUHOT)
High voltage KVA time of use HOT (HVkVTOUHOT)
Winter Energy Tariff (WET2Step)
Reverse cycle air-conditioning time of use (RCACKWTOU)
Open network Tariffs
Time of Day (TOD) ¹
Time of Use (TOU) ¹
High voltage KVA time of use (HVkVTOU) ¹
Low voltage large KVA time of use (LVkVTOU) ¹
Unmetered supplies (UnMet)
Low voltage small 1 rate (LVS1R) ^N
Low voltage medium 1 rate (LVM1R) ^N
Dedicated circuit (LVDed) ^N

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From 2010, in almost all cases new connections will receive an AMI capable meter. However, in some circumstances the AMI meter cannot be remotely read and interval data cannot be remotely collected therefore these meters will be treated as accumulation meters until they are “AMI enabled”.

^N The following tariffs are only available to new connections where the AMI meter **cannot** be remotely read and interval data is not remotely collected (ie. AMI meter is not yet AMI enabled):

1. **Low voltage small 1 rate (LVS1R)**
2. **Low voltage medium 1 rate (LVM1R)**

Once the meter can be remotely read and interval data is collected, UED will immediately transfer these customers to the new TOD/TOU tariffs (refer section 4.2) depending on their annual usage.

In cases where the above customer wants to receive the Premium Feed in Tariff (PFIT - section 4.5.3), a net interval meter will be installed (which doesn't require remote reading and remote data collection) therefore the LVS1R/LVM1R tariffs will be unavailable as the customer will be assigned to a new TOU/TOD tariff (refer section 4.2).

In cases where solar panels/co generation are installed and where the customer does not choose (or is ineligible) to receive the PFIT, the site still requires a net or gross interval meter (which doesn't require remote reading and remote data collection), therefore the LVS1R/LVM1R tariffs will be unavailable as the customer will be assigned to a new TOU/TOD tariff (refer section 4.2).

3. **Dedicated circuit (LVDed)**

This tariff is only available to domestic new connections in conjunction with the LVS1R tariff that require off peak hot water/storage space heating. In these cases (multiphase) a second basic meter will be installed at the site to cater for the dedicated circuit or for single phase connections a two element basic meter will be installed to measure dedicated and LVS1R. This option supports UED's commitment to provide off peak rates.

Once the AMI meter (attached to the LVS1R) can be remotely read and interval data is remotely collected, UED will transition these customers to the new TOD/TOU tariffs depending on their annual usage (therefore these customers will lose their dedicated circuit, but maintain an off peak rate).

In cases where the above customer wants to receive the PFIT (section 4.5.3), a net interval meter will be installed (which doesn't require remote reading and remote data collection) therefore the Dedicated tariff will be unavailable as the

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customer will be assigned to a new TOU tariff (refer section 4.2).

In cases where solar panels/co generation are installed and where the customer does not choose (or is ineligible) to receive the PFIT, the site still requires a net or gross interval meter (which doesn't require remote reading and remote data collection), therefore the Dedicated tariff will be unavailable as the customer will be assigned to a new TOU tariff (refer section 4.2).

¹ The tariffs that are open to new connections who have an interval meter installed are:

1. Time of Day (TOD) (refer section 4.2)
2. Time of Use (TOU) (refer section 4.2)
3. High voltage KVA time of use (HVkVTOU)
4. Low voltage large KVA time of use (LVkVTOU)

As per previous years, unmetered supplies will continue to receive an unmetered tariff:

1. Unmetered supplies (UnMet)

Further information on each of the above tariffs and tariff eligibility can be seen in section 4.3.2.

4.2 New Network Tariffs from 2010

Presently, the majority of smaller customers (less than 400 MWh) have basic meters. These meters have kWh usage totals measured and summated over a period of up to 30-90 days. This type of metering enables only the simplest of pricing signals to be imparted, and necessitates assuming that all customers of a like usage have the same average profile. By contrast, interval metering logs usage data every half-hour which enables much improved price signalling, and customer reward for beneficial changes in usage patterns.

To coincide with the AMI rollout, from 2010, UED proposes to further develop its pricing initiatives with particular emphasis on signals for encouraging the efficient and equitable use of the electricity distribution network. Where technology (AMI enabled interval meters) prevails, UED will close the older accumulation style tariffs to new connections, and smaller customers (less than 400MWh) will receive much more effective and cost reflective price signalling with the introduction of 2 new Time-Of-Use Tariffs. These tariffs will provide incentive for customers to defer some of their consumption away from times where costly peak demands occur. The new tariffs are:

4.2.1 Time of Day (TOD)

This will be a 3-part time of day tariff for customers who consume less than 20 MWh per annum (therefore, this tariff is predominantly for residential customers). This tariff will comprise the following:

Table 4.2 – TOD Components

Component	Day of Week	Time of Day	Time of Year
Fixed Charge	All	N/A	All
Summer Peak Energy Charge	Workdays	3pm to 11pm local time	November to March inclusive
Non Summer Peak Energy Charge	Workdays	3pm to 11pm local time	April to October inclusive
Summer Shoulder Energy Charge	Workdays	7am to 3pm local time	November to March inclusive
Non Summer Shoulder Energy Charge	Workdays	7am to 3pm local time	April to October inclusive
Off Peak Energy Charge	Workdays, all day on Week Ends and Victorian Gazetted Public Holidays	11pm to 7am local time	All

UED have revised peak times as system load analysis has shown the peak load has widened to later in the day (previously finished at 7pm, and now finishes at 11pm). Furthermore, to encourage usage away from peak times, UED have devised a shoulder period (7am to 3pm) as well as an off peak period (11pm to 7am) which empowers customers to shift their load away from the main system peak period.

4.2.2 Time of Use (TOU)

This will be a Time of Use tariff for customers who consume more than 20 MWh and less than 400 MWh per annum (therefore this tariff is predominantly for commercial customers). This tariff comprises the following:

Table 4.3 – TOU Components

Component	Day of Week	Time of Day	Time of Year
Summer Peak Energy Charge	Workdays	7am to 11pm local time	November to March inclusive
Non Summer Peak Energy Charge	Workdays	7am to 11pm local time	April to October inclusive
Off Peak Energy Charge	Workdays, all day on Week Ends and Victorian Gazetted Public Holidays	11pm to 7am local time	All
Summer Demand Incentive Charge (SDIC) measured at maximum kW per billing period	Workdays	2pm to 7pm local time	November to March

The TOU tariff has been devised to accentuate the emphasis on peak time of day by encouraging customers to reduce their load during system peak times and stimulate a demand side management response. The peak period end time has changed from 7pm to 11pm to reflect the widening system peak period time. The SDIC period has also been widened (previously 3pm to 6pm local time, and is now 2pm to 7pm local time) to reflect the current system peak time.

4.3 New Connections

4.3.1 Tariff Assignment for New Connections

UED assigns new customers coming into UED's territory for the first time the appropriate network tariff. Determination of the appropriate network tariff is based on the customer's type of metering, expected annual energy consumption and/or maximum demand.

Table 4.5 outlines the categories based upon voltage, energy usage, and demand.

Table 4.5 – Network Tariff Categories

Category	Maximum Demand (kVA)	Annual Energy Consumption (MWh)
Small		< 20
Medium		20 to 400
Large	> 150 or	> 400

Section 4.3.2 lists the 2010 default network tariffs to new connections and the applicable business rules. Please note that special conditions exist for tariff assignment to LVS1R, LVM1R and LV Dedicated (these tariffs are not available to new connections where an interval meter is installed which can be remotely read, or where an interval meter is installed where the site has co generation).

Note that interval meters (non AMI) cannot be requested for new connections unless the site requires a net/gross interval meter for cogeneration. AMI meters can only be read as interval meters once the meter can be remotely read and interval data remotely collected (AMI enabled).

The new TOD/TOU tariffs can only be assigned to new customers with an AMI enabled interval meter. The exception to this is any new embedded generation will have an interval meter and will have a TOD/TOU tariff before they receive an AMI enabled interval meter.

4.3.2 2010 Default Network Tariffs for New Connections

LVS1R:

- This tariff is available to new connections where the AMI meter cannot be remotely read and interval data is not remotely collected (AMI interval meter is not yet enabled).
- This tariff is not available to new connections where an interval meter is installed where the site has co generation.
- Once the meter can be remotely read and interval data is remotely collected (AMI meter becomes enabled), UED will immediately transfer these customers to new TOD/TOU tariffs depending on their annual usage.
- Customers must be residential.
- Requires as a minimum type 6 meter.
- Includes a summer and non summer peak energy charge.
- Customers can make savings by reducing their energy consumption during summer months. Usage during non summer is cheaper.
- Summer is defined as 1 November to 31 March.
-

LVM1R:

- This tariff is available to new connections where the AMI meter cannot be remotely read and interval data is not remotely collected (AMI interval meter is not yet enabled).
- This tariff is not available to new connections where an interval meter is installed where the site has co generation.
- Once the meter can be remotely read and interval data is remotely collected (AMI meter becomes enabled), UED will immediately transfer these customers to new TOD/TOU tariffs depending on their annual usage.
- Customers cannot be residential.
- Requires as a minimum type 6 meter.
- Includes a summer and non summer peak energy charge.
- Customers can make savings by reducing their energy consumption during summer months. Usage during non summer is cheaper.
- Summer is defined as 1 November to 31 March.

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LVDED:

- This tariff is only available in conjunction with the LVS1R tariff
- Customer must have a dedicated circuit connected to a controlled electric hot water service and/or storage space heating.
- Requires a separately metered dedicated circuit controlled by UED by means of time switch or other means. Meter will be a type 6 basic.
- Is a dedicated off peak charge.
- The Off Peak period is 11pm to 7am EST for new connections from 2010.
- This tariff is not available to New Customers with embedded generation or Existing Customers that install embedded generation.

TIME OF DAY (TOD – new from 1/1/2010):

- Customers to consume <20MWh/annum
- Requires an AMI enabled interval meter installed (new connections) or an existing interval meter.
- All customers <20MWh/annum with an interval meter installed will be changed/mandated to this tariff once the meter can be remotely read and interval data remotely collected.
- Includes a seasonal peak energy charge. Customers can make savings by reducing their energy consumption during the peak periods (3pm-11pm Local Time workdays).
- Non-Summer Peak energy charge is lower than Summer Peak energy charge to encourage heating usage.
- Includes a seasonal shoulder energy charge. Customers can make savings by reducing their energy consumption during the shoulder periods (7am-3pm Local Time workdays).
- Non-Summer shoulder energy charge is lower than Summer Shoulder energy charge to encourage heating usage.
- Off-peak energy is all day weekends and public holidays and 11pm to 7am Local Time workdays. Usage during off peak times is cheaper than peak times.
- Includes a Fixed Charge
- All controlled load is controlled by the meter. Note, if there are any controlled load boosts during peak periods, these will be charged the peak tariff rate.
- Once transferred to this tariff, customers cannot move onto another tariff for a minimum period of 12 months.
- Summer is defined as 1 November to 31 March.

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Time of Use (TOU - new from 1/1/2010):

- Customers must consume >20 and <400MWh/annum.
- Requires an AMI enabled interval meter installed (new connections) or an existing interval meter.
- All customers >20MWh and <400MWh/annum with an interval meter installed will be changed/mandated to this tariff once the meter can be remotely read and interval data remotely collected.
- Includes a seasonal peak energy charge. Customers can make savings by reducing their energy consumption during the peak periods (7am-11pm Local Time workdays).
- Off-peak energy is all day weekends and public holidays and 11pm to 7am Local Time workdays. Usage during off peak times is cheaper than peak times.
- Includes a Summer Demand Incentive Charge measured at maximum kW per billing period between 2pm and 7pm local time workdays in Summer. This empowers customers to make savings by altering the time of use of their consumption away from 2pm to 7pm Local Time workdays in Summer.
- Once transferred to this tariff, customers cannot move onto another tariff for a minimum period of 12 months.
- Summer is defined as 1 November to 31 March.

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LVKVATOU:

- Customers must be in "large" category (>400MWh or >150KVA).
- Must have an Interval meter measuring kW and kVar.
- Includes a seasonal peak energy charge. Customers can make savings by reducing their energy consumption during the peak periods (7am-7pm Local Time workdays).
- Includes a Summer Demand Incentive Charge (measured as kVA at maximum kW per billing period). This empowers customers to make savings by altering the time of use of their consumption away from 3pm to 6pm Local Time workdays in Summer.
- Off-peak energy is all day weekends and public holidays and 7pm to 7am Local Time workdays. Usage during off peak times is cheaper than peak times.
- The peak rolling demand is 7am - 7pm Local Time workdays and is measured as kVA at maximum kW. The minimum rolling demand applicable is 150 kVA.
- Once transferred to this tariff, customers cannot move onto another tariff for a minimum period of 12 months.
- Summer is defined as 1 November to 31 March.

HVKVATOU:

- Customers must be in "large" category (>400MWh or >150KVA).
- Must have an Interval meter measuring kW and kVar Includes a seasonal peak energy charge. Customers can make savings by reducing their energy consumption during the peak periods (7am-7pm Local Time workdays).
- Includes a Summer Demand Incentive Charge (measured as kVA at maximum kW per billing period). This empowers customers to make savings by altering the time of use of their consumption away from 3pm to 6pm Local Time workdays in Summer.
- Off-peak energy is all day weekends and public holidays and 7pm to 7am Local Time workdays. Usage during off peak times is cheaper than peak times.
- The peak rolling demand is 7am - 7pm Local Time workdays and is measured as kVA at maximum kW. The minimum rolling demand applicable is 1150 kVA.
- Once transferred to this tariff, customers cannot move onto another tariff for a minimum period of 12 months.
- Summer is defined as 1 November to 31 March.

4.3.3 Premium Feed in Tariff (PFIT)

This tariff is available to residential and commercial customers consuming less than 100 MWh/annum who install up to 5 kW of solar panels and have net interval metering.

60 cents per kWh credit will be issued to the NET exported energy ie. solar generation less home/business usage = net energy exported from the customers premise to the UED distribution network.

To define an existing distribution tariff which also has the PFIT, a "F" will be added to the front of the tariff prefix e.g. TOD becomes FTOD.

Your retailer may request this rebate if you are a qualifying customer. The solar rebate may be requested until the declared scheme capacity date.

As mandated by the Victorian Government and approved by the AER, United Energy has a charge of \$0.0083/supply point/day pass through charge to recover the costs of the PFIT. These charges are included in the approved Network Use of System charges and are recovered from all customers.

4.4 Existing Connections

4.4.1 Tariff Reassignments

UED will reassign existing customers who have an AMI interval meter installed which can be remotely read (AMI enabled). Customers consuming less than 20 MWh per annum will be reassigned to the new Time of Day (TOD) tariff, and those customers consuming between 20 and 400 MWh per annum will be reassigned to the new Time of Use (TOU) tariff. This is expected to start occurring from May 2010 (the time the new UED billing system is online).

Existing customers are only eligible to upgrade to a TOU/TOD tariff if they **already** have an interval meter installed. If the existing customer does not have an existing interval meter, then the tariffs available for customers consuming <400MWh will be the LVS1R or LVM1R.

If an existing customer installs solar, then an interval meter will be installed and the tariff will be changed to either a FTOD or FTOU (depending on consumption).

4.4.2 Existing HOT Tariffs (kWTOU HOT, LVKVA HOT and HVKVA HOT)

Existing customers currently on a HOT tariff will be transferred to a non HOT equivalent tariff (tariff choice will depend on annual usage) once a new AMI enabled meter is installed.

4.4.3 Slab Heating Customers

Customers with existing slab heating are the only customers who will remain on their existing pre 2010 tariff configurations post AMI rollout. However, if any of these customers choose to

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install solar they will require a net or gross interval meter therefore will lose their existing network tariff configuration to a new TOD or TOU tariff.

4.4.4 Parent Tariffs for new TOU Tariffs

The AIMRO rollout commences in 2009/2010. By December 2010, 15% of all existing customers (therefore 15% of each and every existing parent tariff) will have migrated to one of the new TOD/TOU tariffs. Of this 15%, table 4.6 documents the percentage by parent tariff customer migrating to either the TOD or TOU tariff (these parent tariffs will be closed to new connections where an interval meter is installed which can be remotely read):

Table 4.6 – Customer Percentage by Parent Tariff migrating to new TOD and TOU tariffs

Tariff Migration Splits		
	TOD	TOU
S1	99%	1%
S2	97%	3%
DED	100%	
M1	80%	20%
M25	47%	53%
M27	66%	34%
L2	5%	95%
L1	0%	100%
KW-TOU	6%	94%

Until the AMI rollout program is complete (2013), the following tariffs will remain for **existing** customers who have not had an interval meter installed which can be remotely read:

Table 4.7 – Tariffs open to existing customers without interval meter remotely read

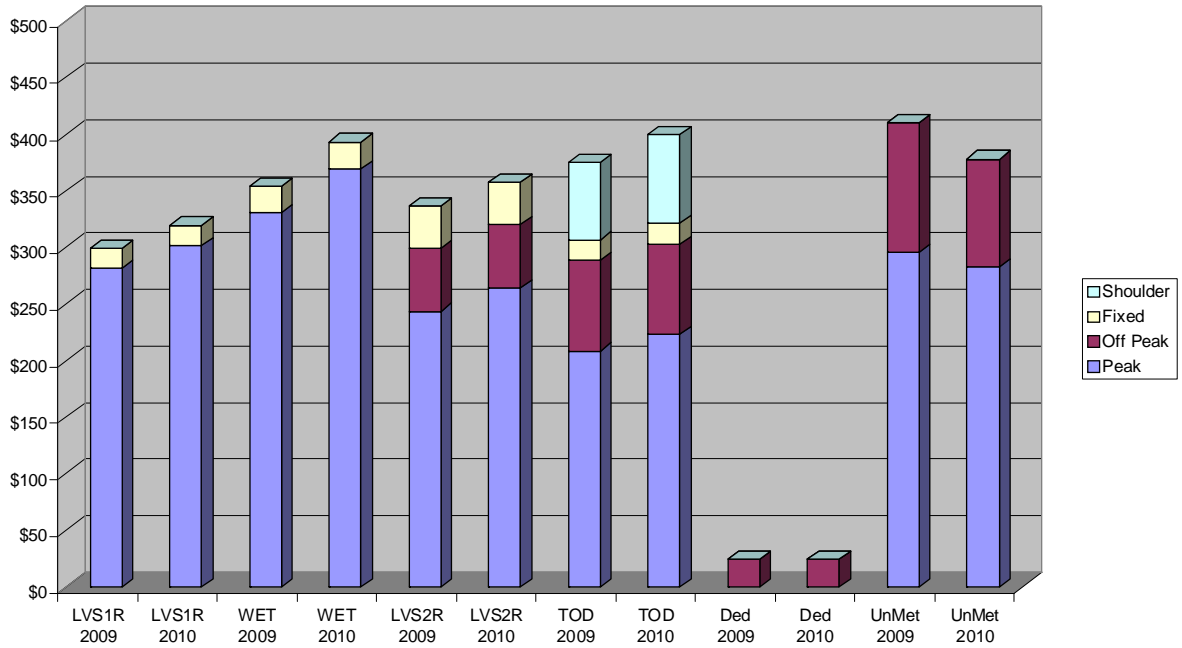
Tariff
LVS1R
WET2Step
Ded
LVS2R
LVM1R
LVM25D
LVM27D
LVkWTOU
LVkWTOUHOT
LVL1R
LVL2R
LVkVATOUHOT
HVkvATOUHOT

UED proposes that existing large customers (>400MWh/annum) on the LVKVATOU and HVKVATOU tariffs remain on these tariffs after they have had an AMI meter installed ie. These customers will see no change to their existing distribution tariff after an AMI meter has been installed.

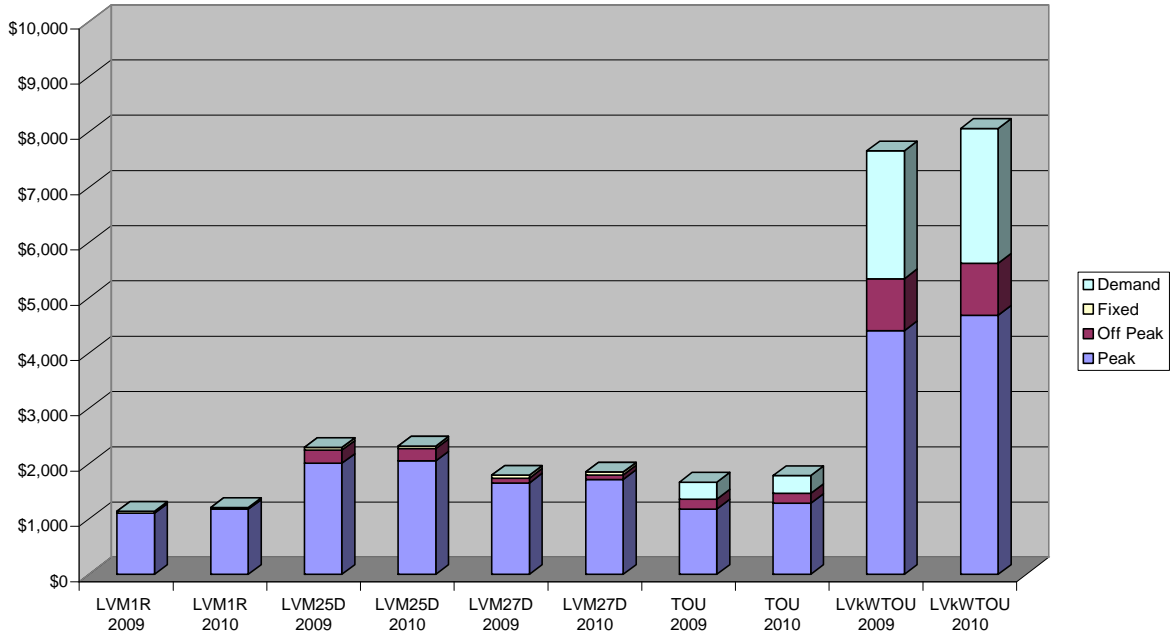
4.5 Average Charge per customer

This section presents the average yearly charge that UED's customers would have received in 2009 (if the new tariffs had been present then) and are estimated to receive in 2010. The following graphs are set out in the four main customer categories; small, medium, large and HV.

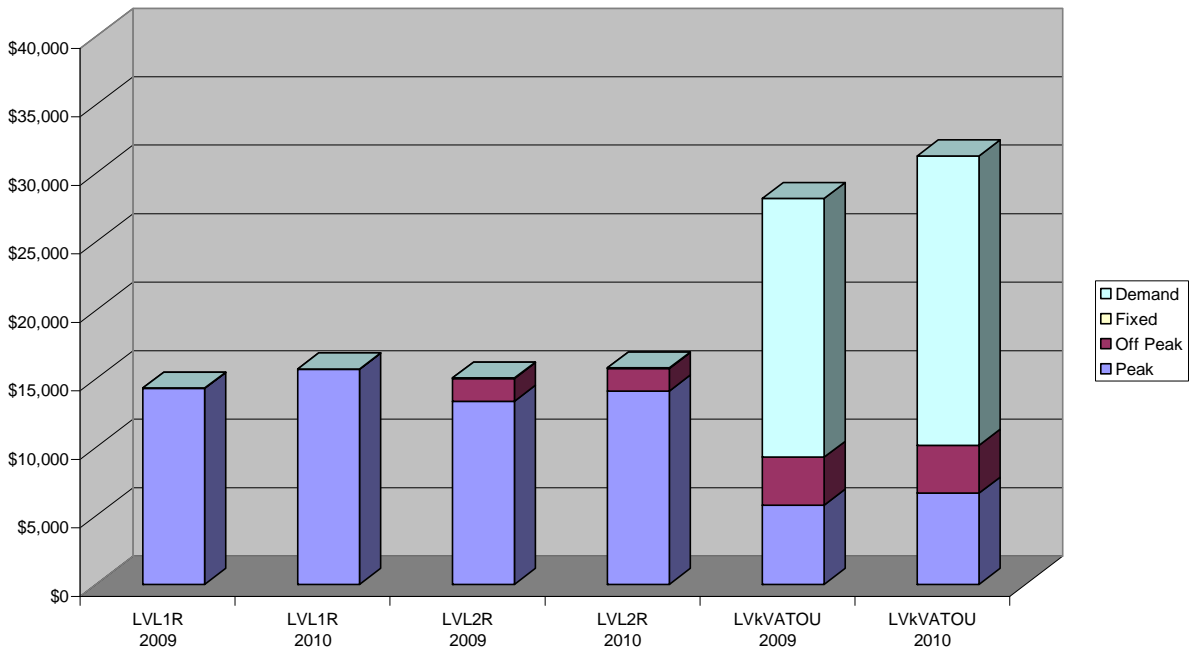
Average Distribution and Transmission charge per customer - Small



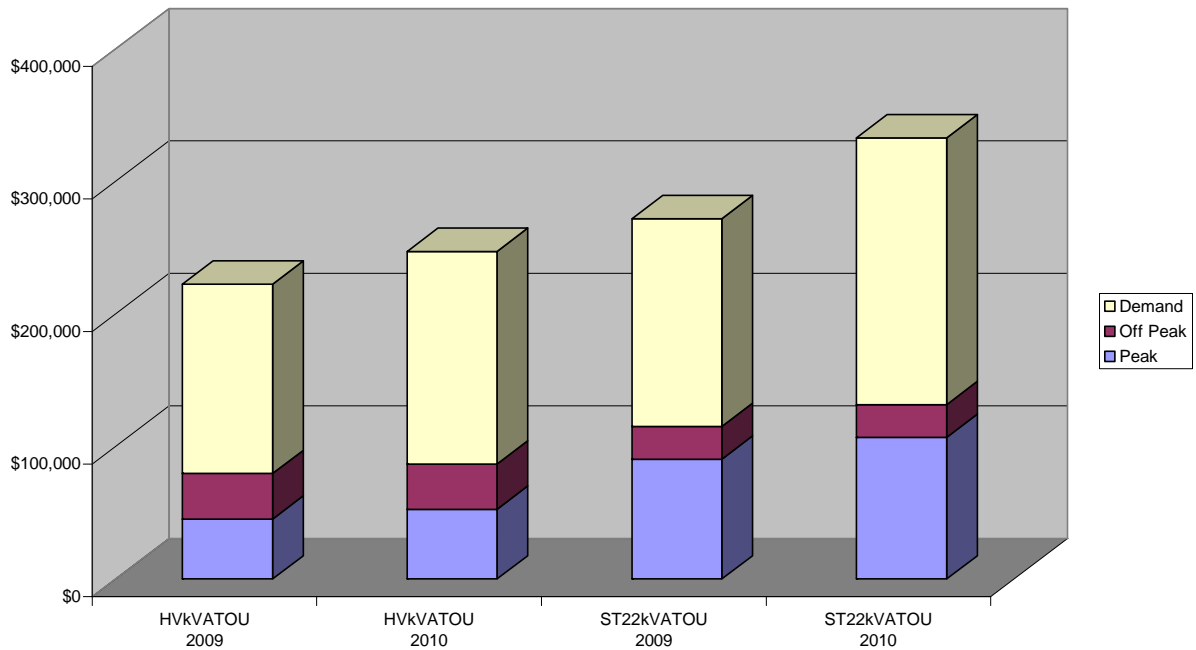
Average Distribution and Transmission charge per customer - Medium



Average Distribution and Transmission charge per customer - Large



Average Distribution and Transmission charge per customer - HV



4.6 Excluded Services

No changes to excluded services are proposed at this stage (except public lighting which is addressed in the following section). A list of these services and charges can be found on the UED web site: www.ue.com.au.

4.7 Public Lighting Excluded Service Charges

In accordance with the 2004 Review of Public Lighting Excluded Service Charges Final Decision of August 2004, UED has added revised Public Lighting Excluded Service Charges in the 2010 tariff approvals for application on 1 January 2010.

New Public Lighting charges are applicable to the following light types:

Table 4.8 - 2010 Public Lighting Charges (GST Exclusive)

Light Type	Excluded Service Charge \$ p.a. (Exclude G.S.T)
Fluorescent 2x20 watt	\$ 48.34
Fluorescent 3x20 watt	\$ 48.34
Mercury Vapour 50 watt	\$ 55.46
Mercury Vapour 80 watt	\$ 37.47
Mercury Vapour 125 watt	\$ 55.46
Mercury Vapour 250 watt	\$ 55.86
Mercury Vapour 400 watt	\$ 77.34
Mercury Vapour 700 watt	\$ 77.34
Sodium High Pressure 70 watt	\$ 82.06
Sodium High Pressure 100 watt	\$ 67.03
Sodium High Pressure 150 watt	\$ 60.94
Sodium High Pressure 250 watt	\$ 61.38
Sodium High Pressure 400 watt	\$ 77.34
Metal Halide 70 watt	\$ 82.27
Metal Halide 100 watt	\$ 82.27
Metal Halide 150 watt	\$ 82.27
Metal Halide 250 watt	\$ 82.86
Metal Halide 400 watt	\$ 82.86
T5 2*14W	\$ 26.56

The adjustments to the 2010 Public Lighting service charges reflect an increase in the Public Lighting (PL) asset base ie. 2008 Public Lighting capital spend has been added to the PL asset base and is recovered from 2010, which is reflective of the 2010 average tariff increase.

4.7.1 Public Lighting DUOS Charges

DUOS charges for public lighting have been, and continue to be set in the “Unmetered supplies” tariff. This is consistent with the 2004 public lighting review and the EDPR 2006-10.

The 2010 Unmetered Supply tariff has significantly decreased to accommodate a decreasing public lighting asset base pre 2001.

4.8 Future Expenditure

Prices within the tariff structure are set in accordance with the Commission’s 2006-10 EDPR which, from a regulatory perspective, accounts for the trade-off between future investment requirements and price/service levels. Also, UED’s future expenditure as a result of network constraints can be found in UED’s Transmission Connection Planning and Distribution System Planning reports on the UED website: www.ue.com.au.

Planning reports:

One of the aims of the Planning Report is to provide information to would-be providers of non-network solutions (such as embedded generation or demand management) on emerging network constraints. UED’s aim is to deliver ‘*least cost technically acceptable*’ solutions to meeting demand, to the ultimate economic benefit of electricity consumers. To this end,

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proponents of non-network solutions to the emerging network constraints identified are invited to contact UED and lodge expressions of interest.

Embedded generation:

Sometimes a non-network solution to a constraint may take the form of embedded generation. UED hosts embedded generation as outlined in the Commission's *Electricity Industry guideline No.15 titled "Connection of Embedded Generation" dated August 2004*. That document also provides guidelines for the payment of network support fees to the generator where network savings result. The objective of the guideline is to provide clarity and transparency about arrangements for connecting embedded generating units to the distribution system, in particular in respect of:

- the way in which Distribution Network Service Providers (DNSPs) negotiate connection agreements with embedded generators;
- the charges under, and other terms and conditions of, connection agreements including principles DNSPs must observe in setting those charges and other terms and conditions;
- the payment to embedded generators of a share of a DNSPs avoided distribution system costs; and
- the payment to embedded generators of DNSPs avoided customer TUoS usage charges.

Demand management:

Another way of managing a network's ability to meet peak demand is to encourage customers to reduce load at times of the day and year when the demand is nearing the network's capacity to supply. Demand management initiatives come in a variety of forms including:

- 'behavioural' - Customers switching off discretionary loads when they know the network is approaching peak;
- 'controlled' - Customer making parts of their load available for the network Distribution operator to control remotely; and
- 'automated' - Installation of equipment that automatically limits peak demand.

Tariff pricing can be used to influence a customer's decision about whether or not to reduce load. If a short-term price signal is available then the customer may choose to reduce load during that price time zone. Alternatively, if some investment is required for additional equipment, then a customer could take into account the longer-term price signals.

Unfortunately technology often limits the possibilities. This may happen because:

- the customer does not know the network is congested (communications);
- it can be difficult to be sure that the peak demand has been reliably reduced every time it is needed and therefore a benefit has been produced (interval metering may assist); and
- few automatic devices are currently available.

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In order for a real benefit to be produced, the reduction in peak must be reliable, so the network can count on the reduction and therefore perhaps deferring expenditure on additional capacity. If load is not curtailed, the constraint will still exist and UED can suffer further penalties in form of the Service Reliability Factor ("S" Factor).

UED has over the years created some innovative tariffs aimed at encouraging a demand-side response. Experience has shown however that a meaningful and material response is difficult to obtain. Essentially, most customers appear to value using their electricity more than the rewards available from curtailing or delaying consumption. It is also clear that (using simple metering) it is difficult to accurately measure and therefore reward peak reductions. Simple meters measure energy (kWh), but network peak costs are due to demand at a peak time (kW or kVA). Therefore, as the AMI program is now in place and set for maximum saturation from 2014, UED will respond by providing Time of Use Tariffs to AMI enabled customers to achieve more effective price signalling to encourage a demand side response.

4.9 Contract demand charge resets

A customer can request a reduction in the maximum demand they get charged for if they are not currently signed onto a Supply Contract with a fixed Rolling Peak Minimum Demand charge.

For UED the base demand charge is calculated over a rolling 12-month period for Peak times only. From one month to the next, demand is re-calculated on the previous 12-month Peak period to the end of each bill. Therefore, an abnormal peak will be discarded out of the calculation after a 12-month period.

However, if a particular customer has changed their electricity usage over a shorter term (e.g. 3 - 6 months), then they are eligible (on their request) to accelerate their reduction in demand before the 12 month period is up.

If a customer wants to reduce their chargeable demand, they must complete a "Demand Reset Form" off the UED website (www.ue.com.au). This form should be faxed to: UED Billing - 03 9256 5590.

4.10 Apportionment to account for CPI estimates

In the Final Determination the ESC has allowed distributors to use actual CPI for the tariff setting process and therefore there is no requirement to account for the difference between actual and estimated CPI.

4.11 Comparisons with Tariff Strategy Report

The rebalancing of tariffs and new or redundant tariffs has been discussed within this report.

The UED 2010 distribution tariffs are consistent with pricing strategies contained within the current Tariff Strategy Report 2006 – 2010.

As per the Tariff Strategy report, UED has continued to review the effectiveness of its existing tariffs in line with Interval Meter Reassignment requirements as per the AMI program. As per the core objective of the AMI program, UED is introducing two new TOU tariffs which maintain UED's operating revenue whilst encouraging customers to change their consumption so that there is an overall improvement in asset utilisation and system load factor.

4.12 Consultation and Stakeholder Management

UED conducted several communication sessions during 2009 to inform stakeholders of the new tariffs/structures from 2010. These sessions were well attended with positive feedback regarding the new Time of Use Tariffs.

Stakeholders are identified by UED, and are assigned to stakeholder groupings including customers, associations, retailers, affiliates, community, etc.

Over and above stakeholders identified by UED, stakeholders who wish to be included in community consultation are able to identify themselves to UED through the UED Service Desk on 1300 131 689, or emailing via talk-to@ue.com.au. The ability to communicate with UED via these channels is identified to potential participants on the UED website.

4.13 Details of Quantities and Customer Numbers Associated with Tariffs (Historical and Forecast).

**Table 4.9 – 2008 Actual, 2009 Estimate and 2010 Forecast
Forecast Customer Numbers and Quantities**

	2008 Actual		2009 Estimate		2010 Forecast	
	Customers/Supply Points	kWh	Customers/Supply Points	kWh	Customers/Supply Points	kWh
Low voltage small 1 rate	550,478	2,703,543,613	555,350	2,714,334,855	464,679	2,200,431,171
Winter economy tariff	168	1,547,870	166	1,547,870	166	1,420,850
Reverse cycle airconditioning	-	-	-	-	-	-
Low voltage small 2 rate	5,116	39,197,892	5,040	38,268,643	4,216	30,434,983
Dedicated circuit	110,695	235,189,797	110,999	223,239,845	90,436	181,320,694
Low voltage medium 1 rate	31,334	451,999,727	31,872	449,288,615	27,029	376,738,756
Low voltage medium 2 rate 5 day	16,127	739,853,434	15,690	726,581,348	13,124	604,113,783
Low voltage medium 2 rate 7 day	6,718	214,605,642	6,574	207,636,927	5,474	160,607,340
Unmetered supplies	8,156	108,298,932	8,178	106,242,285	7,699	107,200,000
Low voltage large 1 rate	11	3,299,465	11	3,255,470	9	2,462,824
Low voltage large 2 rate	88	26,294,018	85	25,819,057	73	23,586,972
Low voltage KW time of use	832	125,179,742	814	123,921,956	674	99,820,160
Low voltage KW time of use - HOT	7	969,263	19	1,146,755	21	463,841
Low voltage large KVA time of use	2,619	2,296,862,036	2,794	2,317,372,066	2,782	2,334,467,117
Low voltage large KVA time of use - HOT	2	3,012,206	3	3,237,875	3	3,032,883
High voltage KVA time of use	75	899,688,931	73	940,770,171	72	848,171,626
High voltage KVA time of use - HOT	1	70,589,730	1	79,305,998	1	64,618,374
Subtransmission KVA time of use	1	26,949,974	1	29,053,528	1	27,584,000
TOD					102,905	615,389,790
TOU					3,951	106,297,035
Total	732,429	7,947,082,272	737,669	7,991,023,265	723,315	7,788,162,200

5 Distribution Use of System (DUoS) Tariffs

Table 5.1 – 2010 Regulated Price Control Formulae

Component	% Increase/Decrease
CPI	1.26%
L	-0.17%
X	2.50%
S	-1.3521%
DUOS	-0.1031%

The Price control formula is:

$$\text{DUOS \% price movement} = (1+\text{CPI}) \times (1-\text{X factor}) \times (1+\text{S factor}) \times (1+\text{L factor})$$

The L-factor relates to Licence Fees paid by UED in the past financial year. The X-factor is the underlying price path for distribution tariffs over the regulatory period (2006-10). The S-factor relates to network reliability and reflects the network reliability statistics achieved by UED's management of its network assets.

Within the average tariff movement, the price control formulae allow individual tariffs to increase by a maximum of 4.51%.

The Commission has stated that distribution tariffs should lie between the following upper and lower bounds:

- tariffs for each customer should generate revenue in excess of the avoidable cost to service the customer; and
- tariffs for each customer should generate revenue less than the cost of providing the service on a stand-alone basis to the customer.

To demonstrate that distribution tariffs fall between the avoidable cost "floor" and standalone cost "ceiling", UED must first apply a "cost of supply" methodology to assist in setting tariff rates. Broadly speaking, tariff rates are set to recover the allocated distribution revenue from that customer group. It is noted, however, that UED has regard to all the pricing principles outlined in Section 3, in setting tariff rates.

The critical issue from a cost of supply modelling perspective is the method by which distribution revenue is allocated across the tariff groups. As network businesses are characterised by relatively high fixed costs and significant asset-sharing between customer groups, there is no unambiguously "correct" method for allocating costs. UED's method of allocation is based on each tariff's relative usage of UED's network assets.

In the model, customers are assigned into tariff groups based on voltage and demand characteristics. The consumption and demand characteristics for each tariff group are calculated.

- For asset based costs, the quantity of assets and supporting infrastructure are assigned to the tariff groups according to the combined consumption and demand characteristics of all customers using the asset, e.g. HV assets are assigned to LV and HV customers, but not to sub-transmission customers. The cost of providing the assigned assets is then calculated for each customer class.

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- For operational and maintenance costs, costs are broken down into those that can be attributed to a particular asset class and the remainder are assigned to overheads
 - Attributable costs use a weighted averaging to apply to the customers in each class
 - Overheads are averaged over all customers

Combining the overhead, maintenance and infrastructure costs, the overall cost of supply for each customer is calculated.

UED has extended its “cost of supply” methodology to assess the avoidable and standalone costs. The avoidable cost model recognises that only a proportion of total costs are avoidable. In particular, the majority of asset-related costs cannot be avoided even if a particular customer group is no longer served. Inevitably, the assessment of which costs are avoidable is a matter of judgement. It should be noted, however, that as the avoidable costs are less than the total costs, UED’s cost of supply methodology will always set tariffs at a level that exceeds avoidable costs.

UED’s modelling of standalone costs is similarly based on the cost of supply model. The principal differences between the “basic” cost of supply estimates and standalone costs are:

- Standalone networks to serve a particular tariff class will not enjoy the benefit of diversity in peak demand between tariff classes;
- Economies of scale may be lost in supplying a subset of existing customers or tariffs;
- Greater urban congestion may result in the optimised replacement cost exceeding UED’s regulated asset value; and
- It is likely that a notional “standalone” competitor to UED may seek a rate of return that exceeds the regulated cost of capital.

These factors indicate that the standalone costs will exceed the cost of supply estimates on which UED bases its tariff design. It is important to recognise that it is difficult to determine the standalone costs with precision – inevitably a judgement must be made. The results of UED’s modelling is summarised in Table 5.2 below:

Table 5.2 - Comparison of 2010 Tariff Rates with Existing Estimated "Cost Window"

Tariff Group		Lower Bound "Avoidable Cost" (c/kWh)	2010 Avg DUOS (Exc GST) (c/kWh)	Upper Bound "Standalone Cost" (c/kWh)
LV Unmetered		0.15	2.31	7.34
TOD	Small	0.30	5.10	8.63
LVS1R**			5.05	
LVS2R*			3.83	
LVDed**			1.21	
WET*			2.82	
LVkWTOU*			4.37	
TOU	Med	0.33	4.83	13.11
LVM1R**			6.72	
LVM2R5D*			4.09	
LVM2R7D*			4.75	
LVL2R*	Large	0.33	3.98	13.11
LVL1R*			3.75	
LVKVATOU	Large - KVA	0.13	2.65	4.84
HV-KVA	HV	0.07	1.26	2.36
ST22.KVA*	HV	0.07	0.37	2.36

* Tariff closed to new connections and customers not already taking supply under this tariff

** Only available to new connections as per section 4.1 this report

5.1 Description of price changes

In accord with the EDPR 2006-10 Price Determination, rebalancing has been undertaken of tariffs at the tariff component level.

This rebalancing takes into consideration and is consistent with the Price Determination and tariff policies, balancing the need to:

- recover maximum allowable revenue to recover the efficient costs of operating the network business;
- reduce risk in recovering revenue;
- give pricing signals to customers to provide an incentive for efficient utilisation of the network;
- be consistent with Pricing Principles and Cost of Supply Model where each tariff is;
- above the avoidable cost of serving distribution customers;
- below the cost of providing the service on a stand alone basis;
- signal the impact of additional usage on future investment costs;
- recover NUoS from customers in proportion to the services provided - classified by voltage, demand, and consumption patterns;
- be consistent with UED's tariff strategies;

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- be consistent with the UED tariff policy framework.

Given the above considerations, it has been decided not to implement the Consumer Price Index Price Path (CPI-X) changes through a general across the board decrease in tariff rates as this would be inconsistent with the pricing principles which require signalling of the impact of additional usage on future investment costs. Accordingly some rebalancing has been undertaken at the tariff and tariff component level. A revised cost of supply model and other optimisation tools have been used to derive the final prices. Over and above the considerations listed above, the following provides details on how various types of tariffs have been affected by the rebalancing exercise and provide some general guidance by which to interpret the price changes. While most tariffs are generally consistent with these comments, individual tariffs may vary slightly due to the overall optimisation process.

Inter-tariff rebalancing looks at the overall difference between tariffs and how they have been affected by the 2010 price proposals:

- The Unmetered Supply tariff has significantly decreased to accommodate a decreasing public lighting asset base pre 2001.

Intra-tariff rebalancing looks at the tariff components (such as fixed charges, and peak energy charges) and how they have been affected by the 2010 price proposals:

- Demand Charges have increased slightly as this is the most targeted pricing signal for network optimisation.

Table 5.3 – 2010 Estimated Percentage change in DUoS Tariffs

Tariff	Movement
Low voltage small 1 rate	-0.1%
Winter economy tariff	-0.1%
Reverse cycle airconditioning time of use	-0.1%
Low voltage small 2 rate	-0.1%
Dedicated circuit	-0.1%
Low voltage medium 1 rate	-0.1%
Low voltage medium 2 rate 5 day	-5.0%
Low voltage medium 2 rate 7 day	-4.9%
Unmetered supplies	-16.7%
Low voltage large 1 rate	-0.1%
Low voltage large 2 rate	-0.1%
Low voltage KW time of use	-0.1%
Low voltage KW time of use - HOT	-0.1%
Low voltage large KVA time of use	3.0%
Low voltage large KVA time of use - HOT	-0.1%
High voltage KVA time of use	-0.1%
High voltage KVA time of use - HOT	-0.1%
Subtransmission KVA time of use	0.0%
Time of Day	0.5%
Time of Use	4.5%

6 TUoS tariffs

For practical reasons, the TUoS tariff structure does not reflect the structure of the grid fees paid. The TUoS tariff commenced with a structure compatible with the DUoS tariff. The structure has been maintained in order to allow the NUoS tariff to be determined by simply adding the DUoS and TUoS rates. However, UED has restricted the application of TUoS rates to those components of the NUoS which best reflect the underlying Grid Fees (i.e. Peak Energy, Summer Demand Incentive Charge and Rolling Demand). Therefore, off peak energy and fixed charges do not attract TUoS.

TUoS revenue receivable is governed by a Maximum Transmission Revenue equation as detailed in the EDPR. For 2010 this equation yields a TUoS increase of 43.9%, which has been applied evenly across all Tariffs (see table 6.1 below).

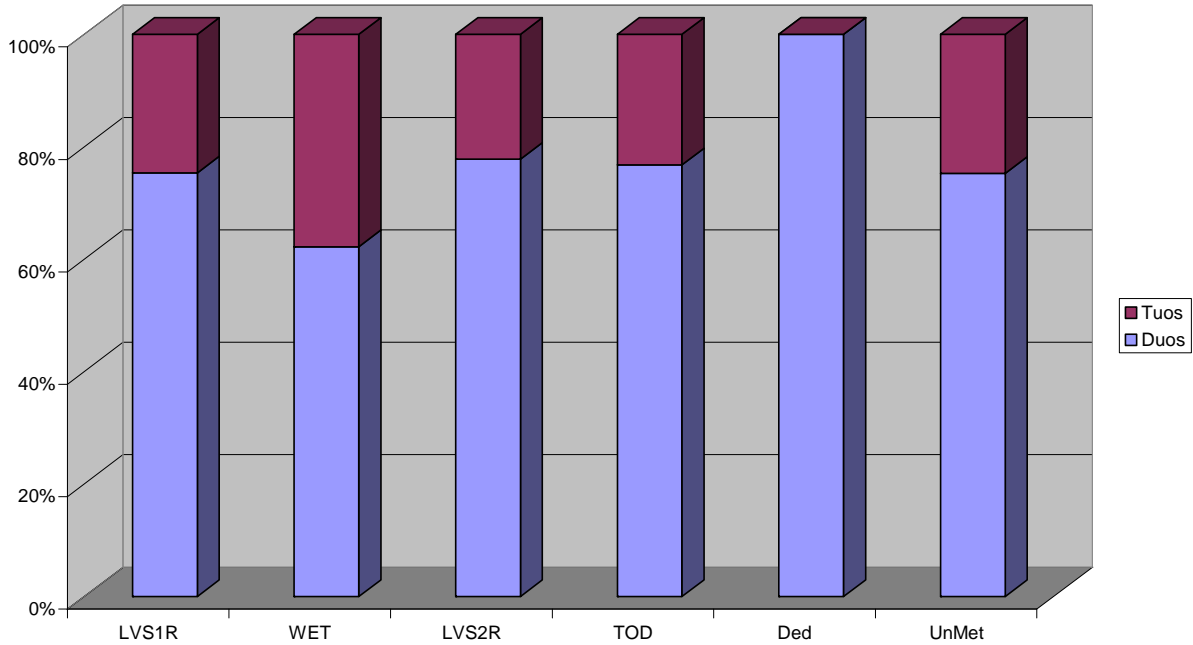
Table 6.1 – 2010 Estimated Percentage change in TUoS Tariffs

Tariff	Movement
Low voltage small 1 rate	43.9%
Winter economy tariff	43.9%
Reverse cycle air-conditioning time of use	43.9%
Low voltage small 2 rate	43.9%
Dedicated circuit	43.9%
Low voltage medium 1 rate	43.9%
Low voltage medium 2 rate 5 day	43.9%
Low voltage medium 2 rate 7 day	43.9%
Unmetered supplies	43.9%
Low voltage large 1 rate	43.9%
Low voltage large 2 rate	43.9%
Low voltage KW time of use	43.9%
Low voltage KW time of use - HOT	43.9%
Low voltage large KVA time of use	43.9%
Low voltage large KVA time of use - HOT	43.9%
High voltage KVA time of use	43.9%
High voltage KVA time of use - HOT	43.9%
Subtransmission KVA time of use	43.9%
Time of Day	43.9%
Time of Use	43.9%

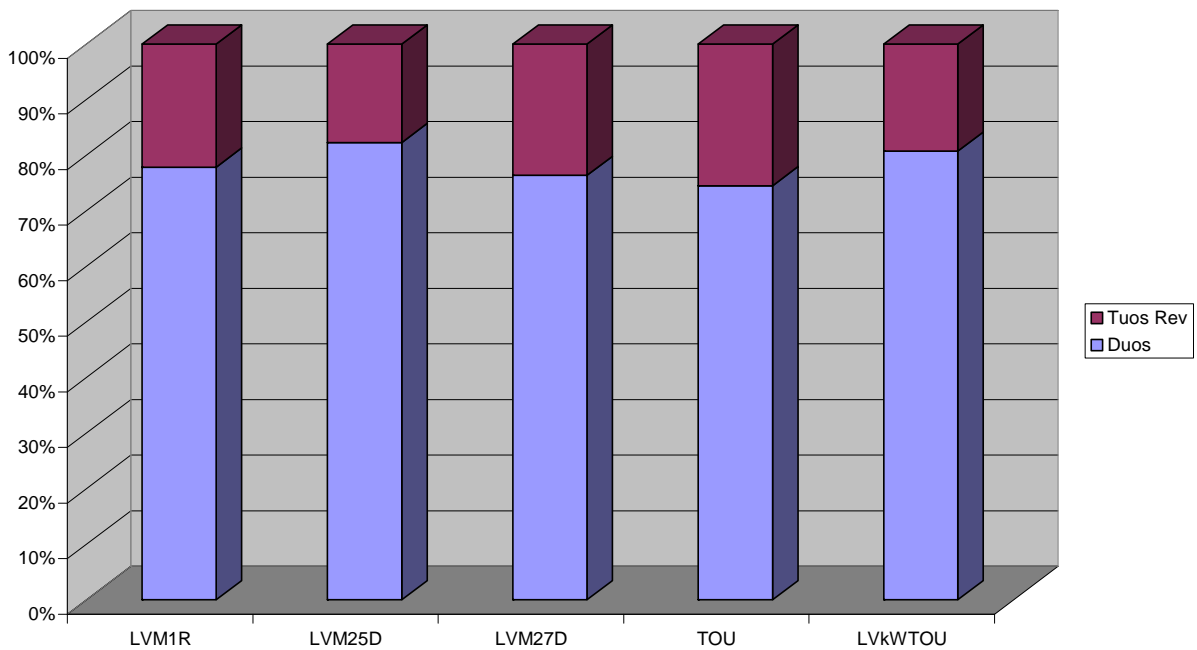
6.1 Average percentage split between TUoS and DUoS

This section presents the average percentage split between TUoS and DUoS that UED's customers will receive in 2010. The following graphs are set out in the four main customer categories; small, medium, large and HV.

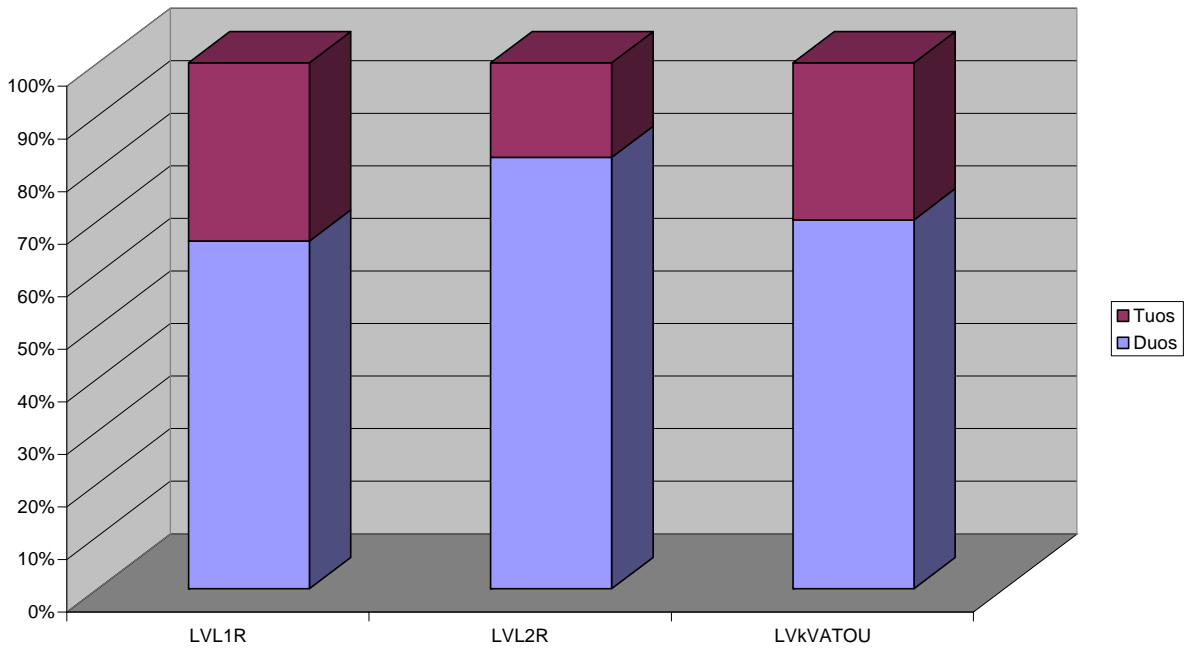
2010 DUOS / TUOS Estimated Revenue percentage of NUOS - Small



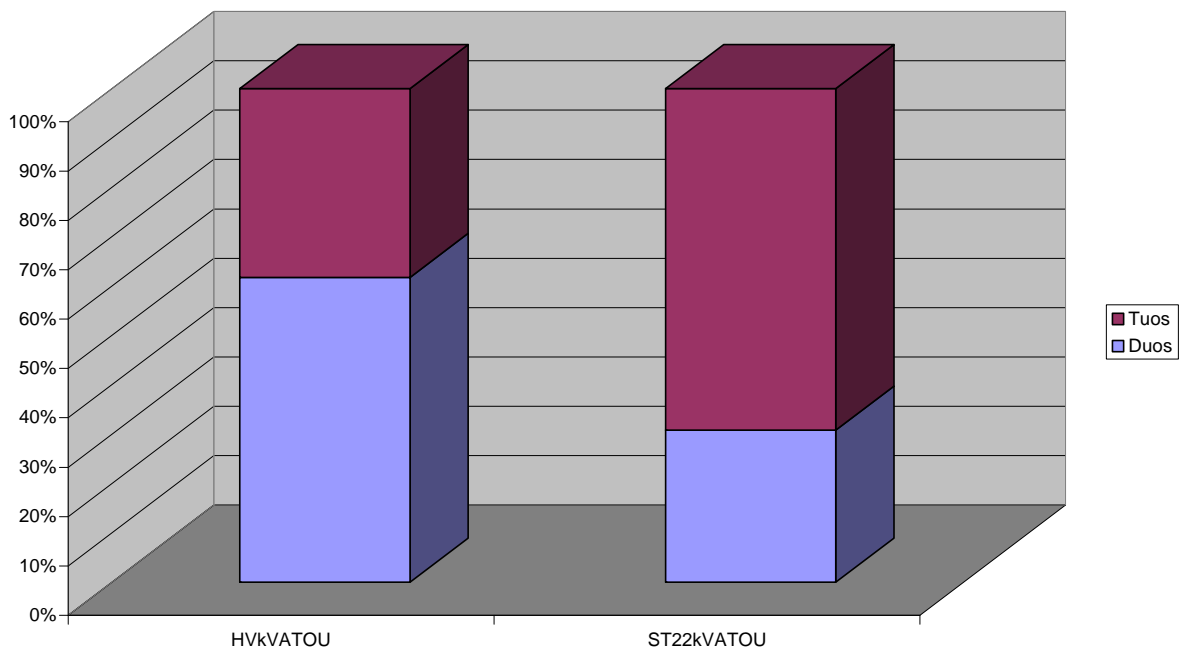
2010 DUOS / TUOS Estimated Revenue percentage of NUOS - Medium



2010 DUOS / TUOS Estimated Revenue percentage of NUOS - Large



2010 DUOS / TUOS Estimated Revenue percentage of NUOS - HV



6.2 Annual Adjustment

TUoS inter tariff rebalancing is allowed under the EDPR, with a Y factor setting the maximum rebalancing over and above a CPI increase over the previous years prices, but in totality remaining below the Maximum Transmission Revenue. However, due to Vencorp/AEMO prices increasing significantly between 2008/09 and 2009/10, this has caused UED TUoS

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prices to increase by 43.92% which is above the rebalancing control cap with a Y factor of 2%. Given these circumstances, UED have applied to the AER to pass through these increases by escalating the Y factor to 20.45%. For 2010, UED has applied an overall increase of 43.92% which applies across the board to all tariffs and all tariff components.

7 Network Use of System (NUoS) Tariffs

NUoS charges are those seen on user invoices and reflect the underlying structure of Transmission and Distribution charges. Residential and small business customers do not see distribution prices explicitly, as they are usually bundled by retailers with energy and other costs. NUoS rates are the simple addition of DUoS and TUoS rates. As a result of the movements discussed above, the NUoS rates are as follows:

Table 7.1 – Schedule of Network Use of System (NUoS) Tariffs: 1 January 2010 (GST Exclusive)

Schedule of Network Use of System (NUoS) Tariffs: 1 January 2010 (GST Exclusive)														
Description	Tariff Code	Network Tariff Component								Eligibility (consumption/category)		Minimum Chargeable Rolling Demand		
		Standing Charge (c/day)	Summer Peak Energy (c/kWh)	Non Summer Peak Energy Block 1 (c/kWh)	Non Summer Peak Energy Block 2 (c/kWh)	Summer Shoulder Energy (c/kWh)	Non Summer Shoulder Energy (c/kWh)	Off Peak Energy (c/kWh)	Rolling Peak Demand c/kVA/day	Summer Demand Incentive Charge c/kWh/day or c/kVA/day	kVA	MWh pa	kVA	
Low voltage small 1 rate**	LVS1R**	4.887	7.922	5.472									Residential Customer	
PFIT Low voltage small 1 rate*	FLVS1R*	4.887	7.922	5.472									Residential Customer	
Low voltage small 2 rate*	LVS2R*	10.318	10.671	8.231				1.284						
Dedicated circuit**	LVDed**							1.213					Residential Customer	
Unmetered supplies	UnMet		9.202	6.940				1.108						
Winter Energy Tariff*	WET2Step*	6.506	7.029	5.336	3.088								<20	<70
Reverse cycle airconditioning time of use*	RCACKWTOU*		18.966	4.344				1.041		62.329			<20	<70
Low voltage medium 1 rate**	LVM1R**	9.528	10.684	7.070									Business Customer	
PFIT Low voltage medium 1 rate*	FLVM1R*	9.528	10.684	7.070									Business Customer	
Low voltage medium 2 rate 5 day*	LVM2R5D*	13.680	8.364	6.355				1.240						
Low voltage medium 2 rate 7 day*	LVM2R7D*	14.692	8.666	6.771				1.164						
Low voltage KW time of use*	LvkWTOU*		7.526	4.747				1.381		35.839			<150	<400
Low voltage KW time of use - HOT	LvkWTOUH*		6.314	4.885				1.201		55.731			<150	<400
PFIT Low voltage KW time of use - HOT*	FLvkWTOUH*		6.314	4.885				1.201		55.731			<150	<400
Low voltage large 1 rate*	LVL1R*	9.189	6.486	5.141										
Low voltage large 2 rate*	LVL2R*	13.253	8.338	6.640				1.253						
Low voltage large KVA time of use	LvkVATOU		1.927	1.588				0.780	13.454	19.559			>150	>400
Low voltage large KVA time of use - HOT*	LvkVATOUH*		1.457	1.190				0.678	12.087	29.209			>150	>400
High voltage KVA time of use	HvkVATOU		1.261	1.056				0.485	10.372	12.735			>150	>400
High voltage KVA time of use - HOT*	HvkVATOUH*		0.992	0.810				0.483	9.385	21.649			>150	>400
Subtransmission KVA time of use*	SubTkVATOU*		0.799	0.634				0.220	3.924	4.907			>150	>400
Time of Day	TOD	5.000	15.487	9.647			5.500	4.300	2.600					<20
PFIT Time of Day	FTOD	5.000	15.487	9.647			5.500	4.300	2.600					<20
Time of Use	TOU		8.404	4.804					1.869	32.992				>20 & <400
PFIT Time of Use	FTOU		8.404	4.804					1.869	32.992				>20 & <400

*Tariff closed to premises not already taking supply under this tariff and new connections.
**Tariffs only available to new connections where the AMI meter cannot be remotely read and interval data is not remotely collected. Otherwise, tariff closed to premises not already taking supply under this tariff.
Non-summer peak energy rates apply for period 1st April to 31st October
F: To define an existing distribution tariff which also has the PFIT, a "F" will be added to the front of the tariff prefix

8 Future Direction of UED's Tariffs

UED continues to review the effectiveness of its existing tariffs. UED has assessed its tariff design and has made significant changes for 2010 in the development of TOU tariffs for smaller end use customers as more accurate half hourly load data becomes available with the AMI rollout.

UED will continue to maintain a watching brief on the need for future tariff changes taking into account the following:

- Encouraging an increased uptake of interval-metering based tariffs such as the current TOU series;
- The SDIC concept will remain, but the time window may be updated from time to time (as it has in 2010) in order that it remain aligned with the key network peak demands;
- Cost-of-supply modelling updated to reflect changes in relative contributions from segments;
- Further accentuating the emphasis on peak season (summer), day of week and time of day in order to stimulate Demand Side Management (DSM) response;
- Properly integrate the contribution that distribution-connected generator customers should be making to the costs of providing network services that all users share and derive value from;
- Further closure of tariffs based on obsolete metering;
- Premium service tariffs whereby customers get a choice of above code-level supply reliability and services, for a premium on top of the standard tariff. This must be seen in the overall context of customer service as well as relationship strategies;
- An increased number of time-of-day bands (as per the TOD tariff for 2010), with greater peak / off peak differential, and energy and distribution tariff components peaking at different times; and
- Demand management (DM) programs aimed at different customer classes may be investigated, for example:
 - interruptible tariffs for business customers whereby customers agree to reduce their power consumption for agreed periods at the request of the distributor (likely to be at a time like a hot summer afternoon when the time when the system is heavily stressed), and in return get some compensation payments from the distributor; and
 - DM aggregation program, which involves working with a range of customers and bidding their combined interruptible load in either the wholesale energy or ancillary services market.
- Investigate positive pricing incentives such as rewards and rebates as motivational mechanisms for DM.

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Appendix 1 - 2010 DUoS, TUoS and PFIT pass through Tariff Rates

Table A.1 – Schedule of Distribution Use of System (DUoS) Tariffs:

1 January 2010 (GST Exclusive)

Schedule of Distribution Use of System (DUOS) Tariffs: 1 January 2010 (GST Exclusive)														
Description	Tariff Code	Network Tariff Component									Eligibility (consumption/ category)		Minimum Chargeable Rolling Demand	
		Standing Charge (c/day)	Summer Peak Energy (c/kWh)	Non Summer Peak Energy Block 1 (c/kWh)	Non Summer Peak Energy Block 2 (c/kWh)	Summer Shoulder Energy (c/kWh)	Non Summer Shoulder Energy (c/kWh)	Off Peak Energy (c/kWh)	Rolling Peak Demand c/kVA/day	Summer Demand Incentive Charge c/kW/day or c/kVA/day	kVA	MWh pa	kVA	
Low voltage small 1 rate**	LVS1R**	4.887	5.977	3.847									Residential Customer	
PFIT Low voltage small 1 rate*	FLVS1R*	4.887	5.977	3.847									Residential Customer	
Low voltage small 2 rate*	LVS2R*	10.318	7.405	5.616				1.284						
Dedicated circuit**	LVDed**							1.213					Residential Customer	
Unmetered supplies	UnMet		6.141	4.493				1.108						
Winter Energy Tariff*	WET2Step*	6.506	4.852	3.595	1.347								<20	<70
Reverse cycle airconditioning time of use*	RCACKWTOU*		4.216	1.060				1.041		52.977			<20	<70
Low voltage medium 1 rate**	LVM1R**	9.528	8.376	5.226									Business Customer	
PFIT Low voltage medium 1 rate*	FLVM1R*	9.528	8.376	5.226									Business Customer	
Low voltage medium 2 rate 5 day*	LVM2R5D*	13.680	6.644	4.978				1.240						
Low voltage medium 2 rate 7 day*	LVM2R7D*	14.692	6.379	4.940				1.164						
Low voltage KW time of use*	LVkWTOU*		5.932	3.471				1.381		28.403			<150	<400
Low voltage KW time of use - HOT	LVkWTOUH*		5.311	4.084				1.201		46.743			<150	<400
PFIT Low voltage KW time of use - HOT*	FLVkWTOUH*		5.311	4.084				1.201		46.743			<150	<400
Low voltage large 1 rate*	LVL1R*	9.189	4.207	3.320										
Low voltage large 2 rate*	LVL2R*	13.253	6.586	5.236				1.253						
Low voltage large KVA time of use	LVkVATOU		0.929	0.787				0.780	9.375	13.985			>150	>400
Low voltage large KVA time of use - HOT*	LVkVATOUH*		0.827	0.684				0.678	9.514	22.443			>150	>400
High voltage KVA time of use	HVkVATOU		0.559	0.494				0.485	5.702	7.832			>150	>400
High voltage KVA time of use - HOT*	HVkVATOUH*		0.589	0.488				0.483	6.708	16.244			>150	>400
Subtransmission KVA time of use*	SubTkVATOU*		0.326	0.253				0.220	0.568	0.834			>150	>400
Time of Day	TOD	5.000	13.487	7.947		3.800	2.800	2.600						<20
PFIT Time of Day	FTOD	5.000	13.487	7.947		3.800	2.800	2.600						<20
Time of Use	TOU		6.369	3.869				1.869		27.657				>20 & <400
PFIT Time of Use	FTOU		6.369	3.869				1.869		27.657				>20 & <400

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**Tariffs only available to new connections where the AMI meter cannot be remotely read and interval data is not remotely collected. Otherwise, tariff closed to premises not already taking supply under this tariff.
Non-summer peak energy rates apply for period 1st April to 31st October
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**Table A.2 – Schedule of Transmission Use of Systems (TUoS) Tariffs:
1 January 2010 (GST Exclusive)**

Schedule of Transmission Use of System (TUOS) Tariffs: 1 January 2010 (GST Exclusive)														
Description	Tariff Code	Network Tariff Component									Eligibility (consumption/ category)		Minimum Chargeable Rolling Demand	
		Standing Charge (c/day)	Summer Peak Energy (c/kWh)	Non Summer Peak Energy Block 1 (c/kWh)	Non Summer Peak Energy Block 2 (c/kWh)	Summer Shoulder Energy (c/kWh)	Non Summer Shoulder Energy (c/kWh)	Off Peak Energy (c/kWh)	Rolling Peak Demand c/kVA/day	Summer Demand Incentive Charge c/kWh/day or c/kVA/day	kVA	MWh pa	kVA	
Low voltage small 1 rate**	LVS1R**		1.945	1.625									Residential Customer	
PFIT Low voltage small 1 rate*	FLVS1R*		1.945	1.625									Residential Customer	
Low voltage small 2 rate*	LVS2R*		3.266	2.615										
Dedicated circuit**	LVDed**												Residential Customer	
Unmetered supplies	UnMet		3.061	2.447										
Winter Energy Tariff* Reverse cycle	WET2Step*		2.177	1.741	1.741								<20	<70
airconditioning time of use*	RCACKWTOU*		14.750	3.284						9.352			<20	<70
Low voltage medium 1 rate**	LVM1R**		2.308	1.844									Business Customer	
PFIT Low voltage medium 1 rate*	FLVM1R*		2.308	1.844									Business Customer	
Low voltage medium 2 rate 5 day*	LVM2R5D*		1.720	1.377										
Low voltage medium 2 rate 7 day*	LVM2R7D*		2.287	1.831										
Low voltage KW time of use*	LvkWTOU*		1.594	1.276						7.436			<150	<400
Low voltage KW time of use - HOT	LvkWTOUH*		1.003	0.801						8.988			<150	<400
PFIT Low voltage KW time of use - HOT*	FLvkWTOUH*		1.003	0.801						8.988			<150	<400
Low voltage large 1 rate*	LVL1R*		2.279	1.821										
Low voltage large 2 rate*	LVL2R*		1.752	1.404										
Low voltage large KVA time of use	LvkVATOU		0.998	0.801					4.079	5.574			>150	>400
Low voltage large KVA time of use - HOT*	LvkVATOUH*		0.630	0.506					2.573	6.766			>150	>400
High voltage KVA time of use	HvkVATOU		0.702	0.562					4.670	4.903			>150	>400
High voltage KVA time of use - HOT*	HvkVATOUH*		0.403	0.322					2.677	5.405			>150	>400
Subtransmission KVA time of use*	SubTkVATOU*		0.473	0.381					3.356	4.073			>150	>400
Time of Day	TOD		2.000	1.700			1.700	1.500						<20
PFIT Time of Day	FTOD		2.000	1.700			1.700	1.500						<20
Time of Use	TOU		2.035	0.935						5.335				>20 & <400
PFIT Time of Use	FTOU		2.035	0.935						5.335				>20 & <400

*Tariff closed to premises not already taking supply under this tariff and new connections.
**Tariffs only available to new connections where the AMI meter cannot be remotely read and interval data is not remotely collected. Otherwise, tariff closed to premises not already taking supply under this tariff.
Non-summer peak energy rates apply for period 1st April to 31st October
F: To define an existing distribution tariff which also has the PFIT, a "F" will be added to the front of the tariff prefix
Non-summer peak energy rates apply for period 1st April to 31st October

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**Table A.3 – Schedule of Premium Feed in Tariffs (PFIT) Pass through Charges:
1 January 2010 (GST Exclusive)**

UED PFIT pass through charge: 1 January 2010 (GST Exclusive)

UED Network Tariff Description	UED Tariff Code	PFIT Pass Through Charge (\$/cust/day)
Low voltage small 1 rate**	LVS1R**	0.008
PFIT Low voltage small 1 rate*	FLVS1R*	0.008
Low voltage small 2 rate*	LVS2R*	0.008
Dedicated circuit**	LVDed**	
Unmetered supplies	UnMet	
Winter Energy Tariff*	WET2Step*	0.008
Reverse cycle airconditioning time of use*	RCACKWTOU*	0.008
Low voltage medium 1 rate**	LVM1R**	0.008
PFIT Low voltage medium 1 rate*	FLVM1R*	0.008
Low voltage medium 2 rate 5 day*	LVM2R5D*	0.008
Low voltage medium 2 rate 7 day*	LVM2R7D*	0.008
Low voltage KW time of use*	LVkWTOU*	0.008
Low voltage KW time of use - HOT	LVkWTOUH*	0.008
PFIT Low voltage KW time of use - HOT*	FLVkWTOUH*	0.008
Low voltage large 1 rate*	LVL1R*	0.008
Low voltage large 2 rate*	LVL2R*	0.008
Low voltage large KVA time of use	LVkVATOU	0.008
Low voltage large KVA time of use - HOT*	LVkVATOUH*	0.008
High voltage KVA time of use	HVkVATOU	0.008
High voltage KVA time of use - HOT*	HVkVATOUH*	0.008
Subtransmission KVA time of use*	SubTkVATOU*	0.008
Time of Day	TOD	0.008
PFIT Time of Day	FTOD	0.008
Time of Use	TOU	0.008
PFIT Time of Use	FTOU	0.008

*Tariff closed to premises not already taking supply under this tariff and new connections.

**Tariffs only available to new connections where the AMI meter cannot be remotely read and interval data is not remotely collected. Otherwise, tariff closed to premises not already taking supply under this tariff.

Non-summer peak energy rates apply for period 1st April to 31st October

F: To define an existing distribution tariff which also has the PFIT, a "F" will be added to the front of the tariff prefix

Appendix 2 - Glossary of Terms

DSM	Demand-side management. Refers to the ability of customers that consume a product to change behaviours that alter the overall balance between supply and demand. Examples may include the installation of energy management systems, or deferring consumption at time of peak demand.
ESC	Essential Service Commission.
LVS1R etc	Abbreviated Tariff names. <ul style="list-style-type: none">– The 1st two letters refer to the voltage level at which the customer is supplied, LV = low voltage 240V (single phase) or 415V (three phase), HV = high voltage 6.6, 11 or 22kV, ST = sub-transmission 22 and 66kV. HOT = tariff variant based on high ambient temperature threshold.– The 2nd section refers to the type of customer, S = small, M = medium, L = large, no letters generally indicates 'generic' interval metered customer.– 3rd section indicates type of rate structure, 1R = single energy rate, 2R = peak/off-peak rate, kW = interval metered in kW, kVA = interval metered in kVA.
kW	Kilowatts, (1,000 Watts) the ISO unit of power measurement.
kWh	An I.S.O. unit used for the measurement of energy. It is the product of kW times time (in hours).
kVA	kilo-Volt-Ampere, the vector product of voltage times current. It is a measure of the proportion of useful (kW) power delivered vs. the current (Amps) drawn by the load, this is known as 'power factor'. The size of assets required is generally a function of the current. Therefore the closer the power factor is to 1.00, the smaller the asset required to supply the load.
Residue settlement	A means by which over-recoveries of costs on the part of the energy and transmission markets are rebated back to customers.
SDIC	Summer Demand Incentive Charge.
DPI	Department of Primary Industry
IMRO	Interval Meter Rollout
AIMRO	Advanced Interval Meter Rollout
OIC	Order in Council
AMI	Advanced Metering Infrastructure
Local Time	EST in non day light savings period and summer time during daylight savings period
DNISP	Distribution Network Service Provider

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AER	Australian Energy Regulator
PFIT	Premium Feed in Tariff