



Tariff Strategy Report – 2006 to 2010

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1. INTRODUCTION

CitiPower is a privately owned, Victorian-based electricity distribution company.

CitiPower owns and manages the electricity distribution network that delivers electricity to customers in Melbourne's CBD and inner suburbs.

CitiPower's network is the most concentrated of the five Victorian distribution networks. CitiPower serves more than 276,000 customers in Melbourne's CBD and inner suburbs - an area of just 157 square kilometres. This area accounts for 25 percent of Victoria's employment and 22 percent of its Gross State Product. It is also home to virtually all of the major offices of government and the private sector. It is also home to world-class cultural and sporting facilities such as Federation Square, the Melbourne Cricket Ground, the Victorian Arts Centre and the home of the Australian Open Tennis, Melbourne Park. The composition of CitiPower customers, with the emphasis on business and important social infrastructure, places a particular importance on the security of electricity supply.

CitiPower's network is bordered by Port Phillip Bay, Balaclava Road and Toorak Road to the south, Warrigal Road to the east, the Yarra River, Dundas Street and Moreland Road to the north, and the Yarra River, Maribyrnong River and Moonee Ponds Creek to the west.

In addition to the City of Melbourne, some of the inner suburbs covered by CitiPower's distribution network are Armadale, Balwyn, Brunswick, Camberwell, Carlton, Caulfield, Collingwood, Fitzroy, Hawthorn, Kew, Middle Park, North Balwyn, Northcote, North Melbourne, Port Melbourne, Prahran, Richmond, St Kilda, South Melbourne, South Yarra and Toorak.

CitiPower's distribution business was purchased by Cheung Kong Infrastructure Holdings Limited (CKI) and Hongkong Electric Holdings Limited (HEH) in September 2002. CKI and HEH are both publicly listed companies on the Hong Kong Stock Exchange, and form part of the Cheung Kong Group. CKI is the largest diversified infrastructure company listed in Hong Kong with investments in energy, transport and infrastructure materials businesses around the world. HEH is the listed vehicle of the Hongkong Electric group of companies which comprises the Hongkong Electric Company, one of the world's oldest power companies.

1.1 CitiPower's Operating Environment

CitiPower's network is the most concentrated in Victoria in terms of the geographic area it covers and customer density. CitiPower is unique in Victoria as the distribution business responsible for inner Melbourne and the CBD.

The CitiPower Network has the following key statistics:

- 157 square kilometres;
- Over 1,800 km of underground HV line;
- More than 60,000 poles;
- 39 zone substations;
- Over 2,300 km of overhead line;
- More than 4,200 distribution transformers;
- Over 5,500 GWh electricity distributed per year;
- More than 276,000 customers; and
- 1,760 customers per sq km.

A comparison of the key network characteristics for Victorian Distribution Businesses is shown in the figure below.

Figure 1: Comparison of Distribution Business Characteristics (2004)

Network Assets by Distribution Business								
Company	Poles ('000)	Line (Km)			Zone Sub-Stations	Distribution Sub-Stations	Coverage (Sq km)	Customers ('000)
		Total	Over-head	Under-ground				
CitiPower	61	4,114	2,310	1,804	39	3,144	157	276
Other Distributors	1,102	140,611	126,794	13,817	169	128,250	232,400	1,937
Total	1,163	144,725	129,104	15,621	208	131,394	232,557	2,213
CitiPower % of total	5%	3%	2%	12%	19%	2%	0.07%	12%

CitiPower's cost drivers depend on a number of inter-related factors as follows:

- The capacity of CitiPower's existing assets to meet the new requirements that will be placed on it over the regulatory period;
- The likely growth in demand across the network driven by new customers and increased electricity demand, particularly due to the growth in the penetration of air-conditioners;
- The need to maintain network utilization at sustainable levels to ensure reliability and operational flexibility; and
- The need to progressively replace CitiPower's ageing network assets. The ageing assets increase the expenditure required on renewals and replacement programs.

1.2 The Distribution Network

CitiPower's supply areas are depicted in Figure 2. The distribution network is summarised in Figure 3.

2. TARIFF STRATEGY

This section outlines CitiPower's overarching tariff strategy for the 2006-10 regulatory period.

2.1 Regulatory Arrangements

The Essential Services Commission (ESC) regulates charges for connection to a distribution system, use of the system and for certain other charges called "Excluded Services".

2.1.1 Distribution Tariffs

Distributors' tariff structures must conform to price controls and rebalancing constraints set out in the *Electricity Distribution Price Review 2006-10 Final Decision Volume 2 Price Determination* ("Determination"). Further information on the operation of these price controls is provided in Section 2.2.1.2.

2.1.2 Transmission Tariffs

Transmission use of system charges are levied on CitiPower by Vencorp and SP AusNet. CitiPower recovers those costs through transmission tariffs regulated by the ESC as set out in the *Determination*. The transmission charges that Vencorp and SP AusNet levy upon CitiPower are regulated by the Australian Energy Regulator and subject to review every five years.

2.1.3 Prescribed Metering

As of 1 January 2006, CitiPower will be the distributor responsible for providing metering services to customers who have annual consumption less than 160 MWh/pa and do not have a remotely read interval meter. CitiPower will be responsible for all meter provision and for meter data services to all customers within its supply area.

For 2006, CitiPower is required to set tariffs to constrain revenue to within \$6.0M (\$2004). Prescribed metering charges may fall within one of two categories; meter provision or meter data services charges. For the years 2007-10, prescribed metering charges may vary in accordance with the following three factors:

- *X-factor*: the X-factor accounts for the assumption that distributors will experience year-on-year cost increases and that these gains will be passed on to consumers. In 2006 there are no prescribed metering service tariffs to which an X-factor is applied. For the calendar years 2007-2010 CitiPower's X-factor increases prescribed metering service tariffs by 20 percent in real terms.
- *M-factor*: the M-factor is an incentive mechanism that rewards distributors for accelerating the rollout of interval meters over the price review period.
- *CPI*: prescribed metering charges may be indexed to account for inflation.

Rebalancing constraints are also in place to limit price changes within prescribed metering tariff categories.

2.2 General Information

2.2.1 CitiPower's Network Tariff Categories

Network tariffs are a charge for the services associated with using the network to transport electricity from the generator gate to the end-use customer. Network tariffs consist of two components, a transmission tariff and a distribution tariff. Both transmission and distribution tariffs have fixed and variable components. A variable component may vary according to time of use (for example, the time of day or day of the week) or it may vary depending on the level of consumption.

2.2.1.1 Tariff Categories for Network Tariffs

Tariff category segmentation is based on connection requirements of the end-use customer. CitiPower has the following network tariff categories:

CUSTOMER	DEMAND (kW)	VOLTAGE	SEGMENT
Residential	Less than 120 kW	< 1 kV	Residential
Non-Residential	Less than 120 kW	< 1 kV	Commercial / Small Industrial
Large low voltage	Greater than 120 kW	< 1 kV	Small to Medium Industrial/ Large Commercial
High voltage	Greater than 1 MW	6.6 ≤ kV < 22	Industrial
Subtransmission	Greater than 10 MW	≥ 22 kV	Industrial

Distribution tariffs are set to allow CitiPower to recover costs and earn a regulated profit on its assets. Transmission tariffs are set to recover CitiPower's costs for the use of transmission services. The allocation of distribution and transmission charges across tariff categories is designed to be cost reflective. Each network tariff rate comprises a distribution tariff component and a transmission tariff component.

2.2.1.2 Distribution Tariffs

CitiPower has designed its distribution tariffs to be reflective of the average costs imposed upon the distribution system by each class of customers. The principle cost drivers in the distribution system are the supply voltage and the connection characteristics of the customer.

The *Determination* provides an overarching price control formula that specifies a maximum limit on annual tariff changes. The maximum limit is based on four control levers:

- *X-factor*: the X-factor accounts for the assumption that distributors will achieve year-on-year efficiency gains and that these gains will be passed on to consumers. Figure 4 sets out the average real decreases in distribution tariffs required for the calendar years 2006-2010.

Figure 4: X-factors

Year	2006	2007	2008	2009	2010
X	8.7%	2.5%	2.5%	2.5%	2.5%

- *S-factor*: the S-factor provides an incentive for distributors to meet service obligations. It allows tariff augmentation where service targets are exceeded and compensates customers by reducing tariffs where service levels do not meet the required standards.
- *L-factor*: distributors must pay a licence fee, which is factored into distribution tariffs. The L-factor allows licence fee costs to be passed through to end users.
- *CPI*: tariffs are indexed to account for inflation.

The price control formula ensures that aggregate tariff revenue increases do not exceed the limit allowed by these four factors. In addition, the *Determination* specifies a rebalancing control that prohibits individual tariff increases by more than CPI + 2 percent (adjusted for S-Factor and L-Factor).

2.2.1.3 Transmission Tariffs

CitiPower's transmission tariffs are regulated by the ESC and designed to recover charges levied by Vencorp and SP AusNet for use of their transmission systems. The ESC sets price controls and rebalancing constraints on CitiPower's transmission tariffs. Individual transmission tariffs are constrained to increase by no more than 2 percent more than the average increase in transmission costs per annum. The average increase in transmission costs may not exceed 18 percent in any one year. Transmission tariffs are designed to be cost reflective within the limitations of price controls and rebalancing constraints.

CitiPower’s transmission costs are subject to a mechanism known as the Grid Equalisation Scheme. The Grid Equalisation Scheme transfers transmission charges from rural and remote customers to urban customers, thus reducing the differential between urban and rural transmission tariffs. Figure 5 shows historic and forecast annual transmission cost subsidies paid by CitiPower.

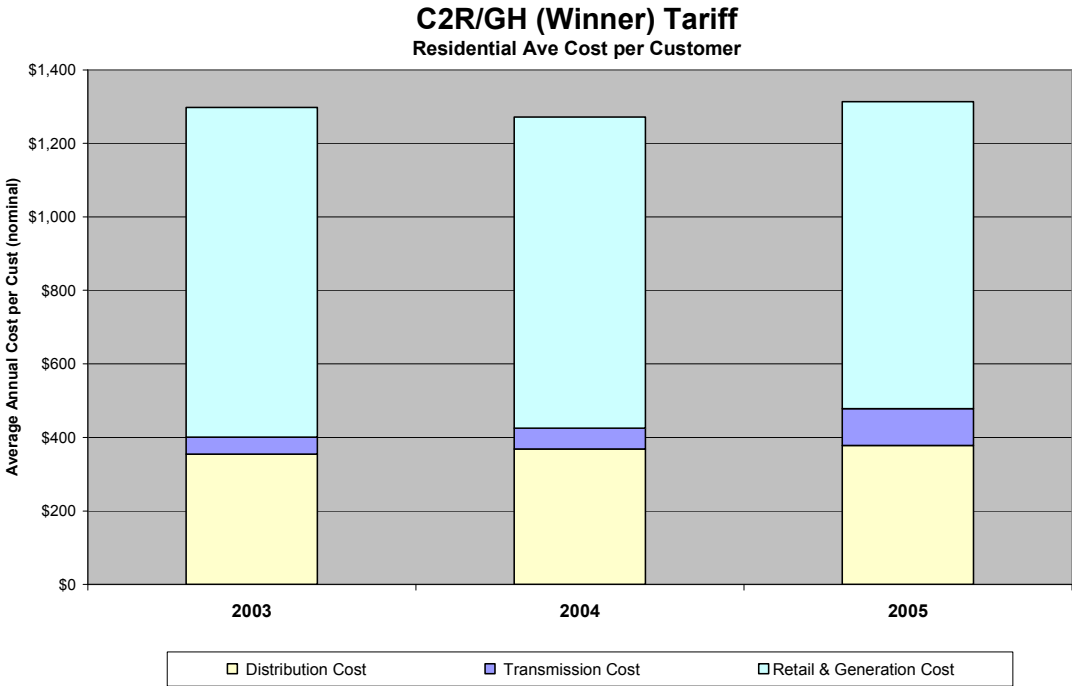
Figure 5: Annual Grid Equalisation Adjustments

Period	Adjustment
1 July 2001 – 30 June 2005	\$4,736,000
1 July 2005 – 30 June 2010	\$3,552,000
1 July 2010 – 30 June 2015	\$2,368,000
1 July 2015 – 30 June 2020	\$1,184,000
Thereafter	Nil

2.2.1.4 Retail Tariffs

This Tariff Strategy Report focuses primarily on tariffs associated with electricity distribution and transmission. Stakeholders should note, however, that these tariffs are only one component of the final electricity bill that end-users will receive. Other charges include wholesale energy costs and charges levied by retailers. Figure 6 shows that on average, transmission and distribution costs for a residential two rate (C2R) customer are less than 40% of the final retailer bill. CitiPower’s tariff strategy is limited in its influence over retail electricity costs as it can only influence the distribution and transmission portions of the final bill.

Figure 6: Residential Two Rate Tariff, 2003-5



2.2.2 Anticipated Tariff Directions and Movements

It is anticipated that, consistent with price controls and rebalancing constraints set out by the Commission, most of CitiPower’s tariffs will undergo uniform adjustments in the current pricing period. Refer to section 4.1 for further detail on anticipated directions and tariff movements.

2.2.3 Outcomes

CitiPower's current tariffs are designed to reflect service costs and thus provide efficient signals to customers. CitiPower is constantly reviewing tariffs to improve their efficiency and in the current regulatory period intends to devote particular attention to improving time of use price signals. Where necessary, changes to tariffs will be implemented in accordance with price controls and rebalancing constraints.

Price signals will encourage customers to change their consumption behaviour and acquire more energy efficient appliances. The proposed changes will provide customers with the opportunity to reduce their energy costs, while assisting CitiPower to manage peak load. Data made available through the bulk rollout of interval meters will assist CitiPower to incorporate further cost reflectivity, efficiency and price signals into its tariffs.

It is anticipated that the structure of CitiPower's distribution tariffs will remain largely unchanged within the 2006-2010 regulatory period. The only structural changes anticipated are the introduction of Embedded Network Tariffs and Reactive Demand Charges. Structural changes that may arise from the review of interval meter data are likely to be considered in the 2011-2015 regulatory period.

2.3 Proposed Structure 2006-10

This section outlines current tariff structures and proposed structural changes for the forthcoming regulatory period. CitiPower's current network tariffs are designed to be cost reflective and thus provide efficient price signals. CitiPower is constantly monitoring its tariff efficiency to ensure cost reflectivity and adherence to price controls and rebalancing constraints.

2.3.1 Block Tariffs

CitiPower has introduced an inclined block tariff structure for residential tariffs. This involved establishing a series of price bands (or "blocks") within certain tariff categories. Customers pay lower prices for low levels of electricity consumption, with prices rising progressively over a series of price blocks as consumption increases. Tariffs are designed so that customers consuming electricity only for basic household functions will fall into the lowest price block.

Block tariffs function as a demand management tool by providing a disincentive for customers to increase consumption. By incorporating a series of price steps, the tariff design provides a graduated incentive to target individual customers with varying price sensitivity.

CitiPower will continue to use an inclined block tariff structure on tariffs where this mechanism is effective.

2.3.2 Time of Use Tariffs

Time of use pricing is designed to create an incentive for customers to use the network in an optimal manner. Peak and off-peak pricing is the key mechanism for time of use pricing. Peak and off peak charges encourage customers to shift consumption from periods of high demand to periods of low demand. By balancing network utilisation CitiPower is able to deliver lower distribution prices because networks may be designed and maintained to support lower maximum demand requirements.

CitiPower's peak and off peak prices are designed to take account of differing usage patterns across different classes of customers. For example, tariffs offering non-residential users off-peak rates on weekends account for differences in the demand profile of residential and commercial customers. It is anticipated that changes to time of use tariffs over the regulatory period are more likely to impact residential customers as interval meter data is expected to improve profiling of residential usage. Time of use signals can be more effectively applied to residential tariffs as their consumption is subject to greater volatility.

The gradual introduction of meters with the capacity to take half-hourly readings will provide an improved profile of how CitiPower's services are utilised, particularly in the small business and residential sector. It is anticipated that CitiPower will reform time of use tariffs during the 2006-10 period to allow for sharper pricing signals during peak periods. The exact format of any tariff changes will be determined after an initial period of data collection and analysis to evaluate how customer groups contribute to network peaks.

CitiPower is reducing off-peak rates more than peak rates in 2006 to send sharper price signals during times of network peak demand.

2.3.3 Bulk Tariffs

In 1997 CitiPower introduced a series of “bulk” distribution tariffs designed to reflect the cost differences in distributing electricity to customers who rely extensively on the low voltage system relative to those who rely primarily on the high voltage system. This innovation provides more cost reflective and equitable outcomes for all CitiPower customers. CitiPower will continue to use bulk tariffs in those situations where they currently operate and will monitor other opportunities.

2.3.4 Interval Meter Tariffs

CitiPower introduced new interval meter tariffs on 1 January 2005 to coincide with the introduction of interval meters into the Victorian market. An interval meter records data on how much electricity was consumed every half hour. Interval meters were introduced to replace accumulation meters, which record only the aggregate amount of peak or off peak consumption within the billing period.

CitiPower will offer the following interval meter tariffs in 2006; residential interval (C3R), residential interval bulk (C3RB), non-residential interval (C3G) and non-residential interval bulk (C3GB). These tariffs will allow interval meter distribution tariffs to be amended over time to incorporate improved cost reflectivity without causing sudden price shocks. CitiPower customers will be assigned to the appropriate interval meter tariff when they receive an interval meter.

2.3.5 Summer and Winter Tariffs

A proportion of CitiPower’s costs are driven by seasonal peaks in demand on the network. CitiPower anticipates that during the 2006-10 period there may be an introduction of seasonal tariffs to send sharper price signals to customers when demand on the distribution network is highest. The exact nature of the seasonal tariffs will be determined after gathering and analysing data on seasonal network peaks across customer groups. Data collection will be facilitated by the rollout of interval meters.

2.3.6 Embedded Network Tariffs

The Victorian regulatory environment exempts certain parties from the need to obtain a distribution or retail licence to operate embedded networks within the CitiPower area. CitiPower has downstream obligations to the end users of an embedded network and thus incurs additional processing and administrative costs to serve the operator of the embedded network. CitiPower will propose Embedded Network Tariffs to encourage greater cost reflectivity in this area and prevent other electricity customers from having to bear the costs of serving embedded network customers. CitiPower intends to introduce new Embedded Network Tariffs from 1 January 2007.

The operators of embedded networks will be assigned these tariffs as and when they become embedded network customers. Separate tariffs are to be proposed for embedded networks operating primarily in residential and commercial areas.

2.3.7 Excessive Reactive Demand Charge

CitiPower proposes to introduce an Excessive Reactive Demand Charge from 1 January 2007 to provide customers with an incentive to comply with power factor requirements under the *Electricity Distribution Code*. This charge will apply to all customers on distribution tariffs incorporating a demand charge.

The implementation of the Excessive Reactive Demand Charge will ensure that customers who cause a deterioration of CitiPower’s network power factor will be required to meet the costs of rectifying the loss. This mechanism will prevent this cost from having to be met by the majority of customers who remain within power factor limits.

2.3.8 Land Tax

The Victorian Government on 1 July 2004 abolished the smelter levy charged on retailers under the National Electricity Code and replaced it with a land tax on transmission easements. This resulted in a marked increase in the transmission charges levied on CitiPower by SP AusNet and Vencorp. As price controls only provide for adjustment to tariffs on an annual basis, the land tax recovery of \$15.7M in 2005 was for the 18 month period from 1 July 2004 to 31 December 2005. In 2006, customers will see a reduction in transmission charges as a result of distribution business needing to recover 12 months of land tax of \$11.1M. Further shocks are not anticipated beyond 2006.

2.4 Excluded Service Charges and Prescribed Metering Service Tariffs

2.4.1 Excluded Service Charges

Excluded service charges apply to certain activities not covered by network tariff price controls. Excluded service charges are regulated by the Commission.

CitiPower's current schedule of excluded services charges can be found at:

http://www.citipower.com.au/body/pdf/schedule_fees.pdf

This schedule contains a complete list of CitiPower's excluded services, a description of these services and related prices. Charges may be reviewed from time to time to take account of new services, changes to existing services or reviews of excluded service prices. The only anticipated structural change to excluded services in the current regulatory period is the proposed introduction of a reactive demand charge.

2.4.2 Prescribed Metering Service Tariffs

Prescribed metering service tariffs apply for the provision of interval meters and meter data services for customers consuming less than 160 MWh/pa and where the meter is not remotely read. This service consists of two components; meter provision charges and charges for meter data services.

2.4.2.1 *Meter Provision*

From 1 January 2006, the capital and operating costs associated with providing meters will be funded by new meter provision charges. There are four categories of meter provision charges, reflecting differing costs associated with providing different types of meters. The meter types available are:

- Single Phase Peak
- Single Phase Off-Peak
- Multi Phase Direct Connected
- Three Phase CT

CitiPower will levy meter provision charges on a per NMI basis. The 2006 charges consist of a set charge per NMI per annum, such that customers will pay the same charge regardless of whether they have an interval or accumulation meter. Metering charges are subject to a CPI + 20% price path from 2007.

Since the *Determination*, the Victorian Government introduced its Advanced Interval Meter Roll Out (AIMRO) program. Under the AIMRO the meters of all customers consuming less than 160 MWh per annum will be replaced with automated interval meters. The exact timing of the program is still to be confirmed but it is anticipated it will commence around 2008-09 and take four years to complete. As a consequence it is expected that meter provision charges will be required to increase to fund the roll out of automated interval meters.

2.4.2.2 *Meter Data Services*

From 1 January 2006, the capital and operating costs associated with providing meter data services will be funded by new meter data service charges. There are three categories of meter data service charge, reflecting differing costs associated with different read frequencies. The options for meter read frequency are:

- Quarterly read meter
- Monthly read meter
- Unmetered supply

CitiPower will levy quarterly and monthly read charges to customers on a per NMI basis. Unmetered supply charges will be levied each month on a per light basis. The 2006 charges consist of a set charge per NMI (or light) per annum, such that customers will pay the same charge regardless whether they have an interval or accumulation meter. Metering charges are subject to a CPI + 20% price path from 2007 onwards.

Since the *Determination*, the Victorian Government introduced its AIMRO program. Under the AIMRO the meters of all customers consuming less than 160 MWh per annum will be replaced with automated interval meters. The exact timing of the program is still to be confirmed but it is anticipated it will commence around 2008-09 and take four years to complete. As a consequence it is expected that meter data service charges will be required to increase to fund the processing of automated interval meter reads.

3. TARIFF POLICY FRAMEWORK

3.1 Pricing Principles and Outcomes

3.1.1 Distribution Tariffs

The Commission has determined the following three pricing principles for distribution tariffs:

- Each distribution tariff should be above the avoidable cost of servicing distribution customers assigned to that distribution tariff;
- Each distribution tariff should be below the cost of providing the service on a stand alone basis to distribution customers assigned to that distribution tariff; and
- Each distribution tariff should signal the impact of additional usage on future investment costs.

3.1.2 Transmission Tariffs

The Commission has determined the following three pricing principles for transmission tariffs:

- Each transmission tariff should be above the avoidable cost of servicing distribution customers assigned to that transmission tariff;
- Each transmission tariff should be below the cost of providing the service on a stand alone basis to distribution customers assigned to that transmission tariff; and
- Each transmission tariff should signal the impact of additional usage on future investment costs.

3.1.3 Pricing Objectives

Preparation of network tariffs requires a robust set of objectives that can be used to evaluate the suitability of network tariffs. The objectives employed by CitiPower in setting both distribution and transmission tariffs can be summarised as follows:

- **Economic Signals:** Ensure there is appropriate signalling to customers of their impact on the distribution and transmission system;
- **Stability:** Distribution and transmission tariffs should be stable and predictable through time;
- **Simplicity:** Distribution and transmission tariffs should be readily understood by customers and easy to apply;
- **Equity:** Distribution and transmission tariffs should avoid undue discrimination between customer classes; and
- **Regulatory Compliance:** Distribution and transmission tariffs must comply with the pricing principles and price controls set out by the Commission.

Distribution and transmission tariffs can be designed to include a number of tariff components. Typically a distribution or transmission tariff will consist of 3 or more components. How tariff components are included will have a significant impact on the economic signals provided by the tariff to the customer.

3.1.4 Compliance with the Pricing Principles

CitiPower engaged an independent consultant, Harding Katz, to examine CitiPower's distribution tariffs and they found that all are within the efficient cost window according to the Commission's criteria. CitiPower will continue to monitor its existing tariffs and all proposed new tariffs to ensure they remain efficient.

Under clauses 2.3.16 and 3.3.6 of the *Determination* distributors are required to, in the setting of distribution and transmission tariffs, have regard to the principle that each tariff should signal the impact of additional usage on future investment costs.

CitiPower notes that the present state of metering technology is a practical limitation to the extent of pricing signals that can be provided to customers. CitiPower will continue to develop its interval meter tariffs to provide appropriate pricing signals to customers.

4. NETWORK TARIFF METHODOLOGY

4.1 2006 Tariffs and Future Developments

This section outlines CitiPower's proposed Network Tariffs for 2006, tariff components and likely development over the 2006-10 regulatory period. Tariff developments are intended to further refine the cost reflectivity of CitiPower's tariffs and enhance the efficiency of price incentives for consumption.

Data from the rollout of interval meters will provide CitiPower with a more accurate profile of customer demand. To date this profiling has been limited due to an insufficient number of installed interval meters and insufficient data on usage patterns over time. Data made available from interval meters is expected to lead to more accurate predictions of future investment requirements. When more data is available for modelling CitiPower will reassess tariffs accordingly.

4.1.1 C1R and C1RB – Residential Single Rate and Residential Single Rate Bulk

Description: are the basic network tariffs for residential usage such as lights and power.

2006 Structure: These network tariffs have a fixed standing charge and an energy charge that apply 24 hours per day, 7 days per week. There is an inclining block structure but no off-peak charge associated with this tariff.

Going Forward: Under the Victorian Government's AIMRO program, all new and replacement meters will be automated interval meters from sometime in 2008-09. After this, no new customers will be connected to these tariffs. Due to the metering associated with these tariffs, it is expected that there will not be major structural changes over the 2006-10 period.

4.1.2 C2R and C2RB – Residential Two Rate and Residential Two Rate Bulk

Description: These network tariffs apply to residential customers who have a meter capable of measuring peak and off peak energy usage. These network tariffs are also for residential usage such as lights and power. C2R and C2RB are only available to customers who have an existing C2R or C2RB configuration.

2006 Structure: These network tariffs include a fixed standing charge, peak and off-peak energy charge. The peak charge applies between 7am and 11pm, Monday to Friday. Off-peak periods, such as the weekend and overnight, have a very low rate relative to the peak charge.

Going Forward: Under the Victorian Government's AIMRO program, "off-peak" new and replacement meters will be automated interval meters from sometime in 2008-09. After this, no new customers will be connected to these tariffs. Customer numbers on these tariffs will reduce over the 2006-10 period due to the Victorian Government's AIMRO program. Due to the metering associated with these tariffs, it is expected that there will not be major structural changes over the 2006-10 period.

4.1.3 C3R and C3RB – Residential Interval and Residential Interval Bulk

Description: The C3R and C3RB residential interval meter tariffs apply to residential interval meter customers. These network tariffs are also for residential usage such as lights and power.

2006 Structure: These network tariffs include a fixed standing charge, peak and off-peak energy charge. The peak charge applies between 7am and 11pm, Monday to Friday. Off-peak periods, such as the weekend and overnight, have a very low rate relative to the peak charge.

Going Forward: Under the Victorian Government's AIMRO program customer numbers on these tariffs will increase over the 2006-10 period. The interval metering associated with these tariffs will enable structural reform over the 2006-10 period. After an initial period of data gathering and analysis, CitiPower anticipates that there will be structural changes such as the introduction of more time of use periods and the introduction of seasonal tariffs to send sharper price signals during times when demand on the distribution network is highest.

4.1.4 CDS and CDSB – Dedicated Circuit and Dedicated Circuit Bulk

Description: These network tariffs relate mainly to customers with off-peak hot water but also includes storage heating. CDS and CDSB are only available to customers who have an existing CDS or CDSB configuration.

2006 Structure: These network tariffs include a fixed standing charge and an off peak energy charge.

Going Forward: Under the Victorian Government's AIMRO program, "off-peak" new and replacement meters will be automated interval meters from sometime in 2008-09. After this, no new customers will be connected to these tariffs. Customer numbers on these tariffs will reduce over the 2006-10 period due to the Victorian Government's AIMRO program. Due to the metering associated with these tariffs, it is expected that there will not be major structural changes over the 2006-10 period.

4.1.5 C1G and C1GB – Non-Residential Single Rate and Non-Residential Single Rate Bulk

Formerly General Purpose Single Rate and General Purpose Single Rate Bulk

Description: These are the basic single rate non-residential network tariffs with little overnight or weekend usage.

2006 Structure: These network tariffs include a fixed standing charge and an energy charge that apply 24 hours per day, 7 days per week. There is no off-peak charge associated with these network tariffs.

Going Forward: The Victorian Government's AIMRO program will mean that all new and replacement meters will be automated interval meters from sometime in 2008-09. After this, no new customers will be connected to these tariffs. Due to the metering associated with these tariffs, it is expected that there will not be major structural changes over the 2006-10 period.

4.1.6 C2G5 and C2G5B – Non-Residential Two Rate 5d and Two Rate 5d Bulk

Formerly General Purpose Two Rate and General Purpose Two Rate Bulk

Description: These network tariffs are for non-residential customers with some overnight or weekend usage. Customers will benefit through lower charges during off-peak periods that extend both overnight and into the weekend. Examples include restaurants, farms and small businesses. C2G5 and C2G5B are only available to non-residential customers who have an existing C2G5 or C2G5B configuration.

2006 Structure: These network tariffs include a fixed standing charge, peak and off-peak charge. The peak charge applies between 7am and 11pm, Monday to Friday. The off-peak period includes overnight and into the weekend.

Going Forward: The Victorian Government's AIMRO program will mean that "off-peak" new and replacement meters will be automated interval meters from sometime in 2008-09. After this, customers will be connected to C3G or C3GB. Customer numbers on these tariffs will reduce over the 2006-10 period due to the Victorian Government's AIMRO program. Due to the metering associated with these tariffs, it is expected that there will not be major structural changes over the 2006-10 period.

4.1.7 C2G7 and C2G7B – Non-Residential Two Rate 7d and Two Rate 7d Bulk

Formerly General Purpose Two Rate 7 day and General Purpose Two Rate 7 day Bulk

Description: These network tariffs are for non-residential customers with little overnight usage. C2G7 and C2G7B are only available to customers who have an existing C2G7 or C2G7B configuration.

2006 Structure: These network tariffs include a fixed standing charge, peak and off-peak energy charge. The peak charge applies between 7am and 11pm, Monday to Sunday. Customers are charged lower off-peak rates during the remaining period.

Going Forward: No new customers will be connected to these tariffs. Customer numbers on these tariffs will reduce over the 2006-10 period due to the Victorian Government's AIMRO program. Due to the metering associated with these tariffs, it is expected that there will not be major structural changes over the 2006-10 period.

4.1.8 C3G and C3GB – Non-Residential Interval and Non-Residential Interval Bulk

Formerly General Purpose Interval and General Purpose Interval Bulk

Description: The C3G and C3GB non-residential interval meter tariffs apply to non-residential interval meter customers.

2006 Structure: These network tariffs include a fixed standing charge, peak and off-peak energy charge. The peak charge applies between 7am and 11pm, Monday to Friday. Off-peak periods, such as the weekend and overnight, have a very low rate relative to the peak charge.

Going Forward: The Victorian Government's AIMRO program will mean that customer numbers on these tariffs will increase over the 2006-10 period. The interval metering associated with these tariffs will enable

structural reform over the 2006-10 period. After an initial period of data gathering and analysis, CitiPower anticipates that there will be structural changes such as the introduction of more time of use periods and the introduction of seasonal tariffs to send sharper price signals during times when demand on the distribution network is highest.

4.1.9 C2U – Unmetered Supplies

Description: This tariff is designed for unmetered customers who require low voltage supply, such as public lighting.

2006 Structure: The tariff provides a time of use signal to promote efficient network use.

Going Forward: CitiPower anticipates that there will no structural changes over the 2006-10 period.

4.1.10 C2L7 – Large Two Rate 7d

Description: This tariff is designed for large customers such as small industrial sites and commercial buildings. This network tariff is available only to existing installations supplied under this tariff.

2006 Structure: This network tariff includes a fixed standing charge, peak and off-peak energy charge. The peak charge applies between 7am and 11pm, Monday to Friday. Off-peak periods, such as the weekend and overnight, have a very low rate relative to the peak charge.

Going Forward: The Victorian Government's AIMRO program will mean that "off-peak" new and replacement meters will be automated interval meters from sometime in 2008-09. Customer numbers on this tariff will reduce over the 2006-10 period due to the Victorian Government's AIMRO program. Due to the metering associated with this tariff, it is expected that there will not be major structural changes over the 2006-10 period.

4.1.11 C2DL and C2DLB - Large Low Voltage Demand and Large Low Voltage Demand Bulk

Description: These tariffs are designed for commercial and industrial customers who require low voltage supply, such as industrial sites, hospitals and commercial buildings. These tariffs are designed for customers with a minimum demand of 120kW or more.

2006 Structure: These tariffs will provide both a maximum demand price signal and a time of use price signal to promote efficient network utilisation.

Going Forward: After an initial period of data gathering and analysis, CitiPower anticipates that there will be structural changes such as the introduction of more time of use periods and the introduction of seasonal pricing to send sharper price signals during times when demand on the distribution network is highest.

4.1.12 C2DH – High Voltage Demand

Description: This tariff is designed for larger commercial and industrial customers who require high voltage supply such as large industrial sites, hospitals and commercial buildings. This tariff is designed for customers with a minimum demand of 1000kW or more.

2006 Structure: This network tariff provides both a maximum demand price signal and a time of use price signal to promote efficient network utilisation.

Going Forward: After an initial period of data gathering and analysis, CitiPower anticipates that there will be structural changes such as the introduction of more time of use periods and the introduction of seasonal pricing to send sharper price signals during times when demand on the distribution network is highest.

4.1.13 C2DHD1 – High Voltage Demand (Location-Based)

Description: This network tariff is designed for commercial and industrial customers who require high voltage supply. This tariff is designed for customers with a minimum demand of 40,000kW or more. Availability of these tariffs depends on the customer's location and connection characteristics.

2006 Structure: This tariff provides both a maximum demand price signal and a time of use price signal to promote efficient network utilisation.

Going Forward: After an initial period of data gathering and analysis, CitiPower anticipates that there may be structural changes such as the introduction of more time of use periods and the introduction of seasonal pricing to send sharper price signals during times when demand on the distribution network is highest.

4.1.14 C2DT – Subtransmission Demand

Description: This network tariff applies to very large connections operating at 22,000 volts.

2006 Structure: This tariff provides both a maximum demand price signal and a time of use price signal to promote efficient network utilisation.

Going Forward: After an initial period of data gathering and analysis, CitiPower anticipates that there will be structural changes such as the introduction of more time of use periods and the introduction of seasonal pricing to send sharper price signals during times when demand on the distribution network is highest.

4.2 Tariff Assignment

Network tariffs are assigned based on the load, connection and metering characteristics of the customer.

CitiPower's customers will be transferred to interval tariffs at the time that their accumulation meter is replaced by one with an interval capability. As a result of this policy, the time frame for shifting tariff assignments will be aligned with the progress of the Victorian Government's AIMRO program. It is expected that existing residential and non-residential customers on non-interval tariffs C1R, C1RB, C2R, C2RB, C1G, C1GB, C2G5, C2G5B, C2G7 and C2G7B will transfer to the equivalent interval meter tariffs during this regulatory period or the next. Customers that receive an interval meter will receive a notice from the distributor detailing general information on interval meters and how customers pay for the interval meter.

4.3 Methodology of Standalone and Avoidable Costs

CitiPower engaged independent consultants, Harding Katz, to undertake a detailed study to ensure all distribution tariffs were within the "efficient cost" window between avoidable and stand alone costs. The Harding Katz report defined the cost of serving customers as the cost attributable to an 'average' customer within the class of customers covered by each tariff. Cost per customer was established net of fixed costs, sunk costs and general overheads and formulated as the sum of average usage costs and an allocation of fixed costs per customer.

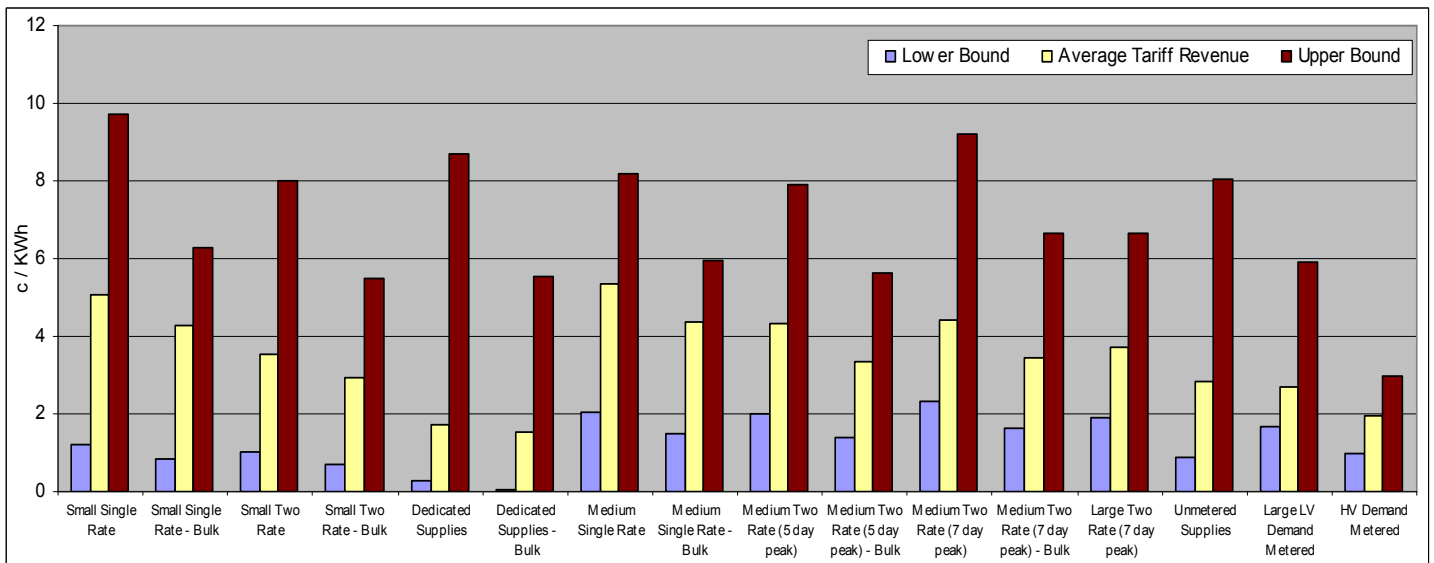
Stand alone costs was established by estimating the costs likely to be incurred by a notional efficient competitor to the network business. This approach was taken as economies of scale dictate that the stand-alone cost of providing for a single customer would set the upper bound so high as to provide no meaningful limit. The cost of providing for customers on a stand alone basis was then established as the networks and usage costs of providing for an 'average' customer within the class of customers covered by each tariff.

The Harding Katz model relied on the following assumptions in relation to cost data:

- The costs used in the model were future capital costs, not historical or "sunk" costs;
- The model incorporated actual costs faced by the distributor rather than relying upon a hypothetical situation;
- Direct network maintenance costs were incorporated; and
- Models considered indirect operational costs and overheads where appropriate.

Figure 7 illustrates the quantitative results from the Harding Katz report at the time that this Report was prepared. CitiPower's tariffs fall within the "efficient cost" window established by these bounds, implying that tariffs are sufficient to allow a reasonable return on regulated assets. CitiPower will continue to monitor its existing tariffs and all proposed new tariffs throughout the regulatory period to ensure they remain within the "efficient cost" window.

Figure 7: Tariffs Levels Related to Efficient Bounds



4.4 Fixed and Variable Charges

A large proportion of a distribution business' costs are fixed. A consequence of a predominantly fixed cost business is that a customer's consumption pattern may only impact on costs when the distribution assets servicing that customer fall due for renewal.

Levying a customer a variable charge where costs are fixed will result in large energy users subsidising small energy users. Hence where suitable metering is available CitiPower has sought to closely align the recovery of fixed costs through fixed charges i.e. through minimum demand charges.

For residential and non-residential customers a standing charge is applied as a proxy for the recovery of fixed costs. In the interests of not disadvantaging residential customers, CitiPower has placed a relatively low reliance on standing charges.

4.5 Future Investment Requirements

CitiPower produces a Distribution System Planning Report each year which details network capacity issues and future network investment requirements at a zone substation and subtransmission level, Network capacity constraints are a key driver of distribution costs. For more detailed network constraint information, please refer to CitiPower's Distribution System Planning Report. The most recent report can be found at: <http://www.citipower.com.au>

CitiPower's tariffs have been developed to provide cost-reflective signals through addressing coincident demand issues that place pressure on network capacity. Tariff devices targeting coincident demand include block tariffs and differentiation between customers on five day and seven day tariffs. Such tariffs are designed to have regard to the long run marginal costs of consumption. It is anticipated that structural tariff changes may be introduced in future where interval meter data reveals opportunities for CitiPower to improve the cost reflectivity of its tariffs.

4.6 Allocation of Transmission Costs

CitiPower is required, through the *Victorian Electricity Industry Tariff Order*, to collect transmission use of system fees (TUOS) on behalf of Vencorp and a connection charge on behalf SP AusNet. The transmission charges applied to CitiPower are as follows:

- A TUOS Usage Charge (Summer Demand) based on the average of the ten highest peaks during weekdays (between 7am and 11pm) for each of CitiPower’s terminal stations during the extended summer period from November to March;
- A TUOS General Charge This price is based on the total actual energy supplied to each terminal station for the billing period from the previous financial year;
- A Common Service Charge that includes costs for planning and operating the network and costs related to reactive plant; and
- A fixed connection charge levied by SP AusNet.

CitiPower also pays a fixed transmission charge under the Grid Equalisation Scheme. The Scheme transfers transmission charges from rural and remote customers to urban customers, reducing the differential between urban and rural transmission tariffs.

CitiPower’s transmission tariffs are designed to recover the company’s transmission costs on a “user pays” basis. Customers are subject to transmission tariffs designed to recover the charges paid by CitiPower to Vencorp and SP AusNet. Transmission tariffs are designed to be cost reflective within the limits of price controls and rebalancing constraints. Due to seasonal fluctuations, TUOS charges have the potential to be volatile from year to year and CitiPower’s transmission tariffs may vary accordingly to recover costs.

4.7 Allocation of Prescribed Metering Service Costs

CitiPower has adopted the following prescribed metering service tariff cost allocation pricing principles:

4.7.1 Cost of Service Provision

Prescribed metering charges are based on the estimated forward looking costs to provide these services. Within each prescribed metering category, charges have been designed to reflect associated costs and comply with the Commission’s modelling template.

4.7.2 Cost Allocation

In respect of the costs incurred by CitiPower in providing a prescribed metering service:

- (1) the costs do not include costs in respect of which CitiPower is remunerated under CitiPower’s distribution tariff or excluded service charge; and
- (2) those costs only include an appropriate allocation of any shared or common costs incurred by CitiPower in providing the prescribed metering services.

4.7.3 Cost Differentials

CitiPower will levy the same charge for customers regardless of whether an interval or an accumulation meter is installed. The different charges have been determined to provide appropriate signals to customers that impose clearly differing costs on the distribution business.

4.7.4 Simplicity

CitiPower has incorporated simplicity into the design of its prescribed metering charges by differentiating customers on factors that can be easily understood. Meter data service charges are determined based on how often a customer’s meter is read, while meter provision charges are determined by the type of meter provided. All charges are calculated on a per NMI per annum basis.

5. CONSUMPTION SIGNALS

CitiPower will consider the following tariff structures over the 2006-10 regulatory period to provide price signals that encourage efficient cost efficient consumption.

Figure 8: Proposed Tariff Structures 2006-10

TARIFF STRUCTURE	SIGNAL	OUTCOME
Interval meter tariffs	<ul style="list-style-type: none"> Allow for distribution tariffs for interval metered customers to be amended over time to create more efficient price signals for customers without causing sudden price shocks. Over time to sharpen the pricing signals to encourage customers to adopt efficient consumption patterns. 	<ul style="list-style-type: none"> Shift load and consumption during periods of network congestion. Introduction over time will ensure customers have time to respond and avoid price shocks. The exact format of the time of use periods will be determined after an initial period of data gathering and analysis of how specific tariff and customer groups contribute to network peaks at particular times.
Seasonal tariffs	<ul style="list-style-type: none"> CitiPower's costs are driven by seasonal peaks in demand on the network. 	<ul style="list-style-type: none"> Seasonal tariffs may send sharper price signals to customers during times when demand on the distribution network is highest.
Excessive Reactive Demand Charge	<ul style="list-style-type: none"> This new charge will apply to all customers on distribution tariffs that have a demand charge, and will provide customers with commercial incentives to remain within the power factor limits set out in the Electricity Distribution Code. 	<ul style="list-style-type: none"> Customers who cause poor network power factor are required to meet the costs of rectifying that power factor and not the majority of customers who remain within power factor limits.

6. CONSULTATION

CitiPower has undertaken the following consultative processes in the development of the Tariff Strategy Report:

- Regular updates and consultation regarding tariff issues and the draft tariff strategy report with the CitiPower and Powercor Customer Consultative Committee (PACCCC);
- A forum held for retailers to provide guidance and consult on tariff issues and the Draft Tariff Strategy Report;
- The Tariff Strategy Report being made available to all stakeholders through the CitiPower website; and
- The establishment of the CitiPower stakeholder register

Any customers, retailers or other interested parties who would like to be included on the stakeholder register are requested to email their details to register@citipower.com.au. CitiPower requests that stakeholders direct any comments on this report, CitiPower's tariff strategy or its Annual Tariff Reports to this email address.

CitiPower intends to consult with the PACCCC and other key stakeholders each year on the Annual Tariff Report as part of its tariff development process. Further information regarding the future development of the report and the related Annual Tariff Reports will be provided to all parties on the stakeholder register.