AEMC

REVIEW

Australian Energy Market Commission

FINAL REPORT

Future Possible Retail Electricity Price Movements: 1 July 2010 to 30 June 2013

Commissioners
Pierce
Henderson
Spalding

30 November 2010

Inquiries

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

E: aemc@aemc.gov.au
T: (02) 8296 7800
F: (02) 8296 7899

Reference: EPR0021

Citation

AEMC 2010 , Future Possible Retail Electricity Price Movements: 1 July 2010 to 30 June 2013, Final Report, 30 November 2010 , Sydney

About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005 to be the rule maker for national energy markets. The AEMC is currently responsible for rules and providing advice to the MCE on matters relevant to the national energy markets. We are an independent, national body. Our key responsibilities are to consider rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

Executive Summary

This report sets out future possible residential electricity prices and associated cost components at a national level and in each state and territory in Australia over the next three financial years from 2010/11 to 2012/13.

Data in this report has been sourced from existing retail price determinations by jurisdictional regulators, network determinations by the Australian Energy Regulator, and jurisdictional governments and regulators where possible. However, where data has been unavailable for some or all of the reporting period, data has been modelled using trends in the movement of the specific cost component and a number of assumptions. As a result, prices should be treated as indicative of future trends in residential electricity prices (and, in the case of Western Australia, future trends in the cost of supplying electricity) for standing offer electricity contracts only rather than a definitive forecast of future prices for all residential electricity customers. As jurisdictional regulators have used different methodologies in making retail electricity price determinations, the outcomes in each jurisdiction can differ. Appendix A sets out the data sources and methodologies that have been used to compile the prices in this report.

Key trends in residential electricity prices over 2009/10 to 2012/13

Over the 2009/10 to 2012/13, the total increase in residential electricity prices is relatively consistent across most jurisdictions and is in the order of around 20% to 40% in nominal terms. There are significant variations in the drivers of residential electricity prices in each jurisdiction, which has contributed to differences in the forecast movements of prices over the reporting period. On a national level, residential electricity prices are forecast to increase by 30% in nominal terms over the reporting period, which is an increase of 5.84c/kWh. In real terms, this would equate to an increase of around 19% over the 2009/10 to 2012/13 period.[1]

Table 1 below sets out further detail regarding the drivers of expected price increases by cost component at a national level and in each jurisdiction.

The most significant driver of the expected increase in residential electricity prices is the increasing cost of distribution services, which is expected to contribute 41% of the total increase in residential electricity prices at a national level over the reporting period. The cost of distribution services will increase in most jurisdictions, as a result of both increasing levels of capital works and increases in the cost of undertaking these works.

Increasing levels of capital works on the distribution networks are forecast compared to the previous regulatory determination, largely to meet growing levels of maximum demand and to replace aging assets. In some jurisdictions, higher reliability standards

1 This is based on actual CPI for 2009/10, which has been sourced from the Australian Bureau of Statistics. Forecast CPI for 20010/11, 2011/12 and 2012/13 have been sourced from the Commonwealth Government's 'Mid-Year Economic and Fiscal Outlook 2010-11', 9 November 2010.

and increased safety requirements have also driven increases in forecast capital works. A total of $33.3 billion dollars in capital expenditure is forecast to be spent on distribution networks in the National Electricity Market and in Western Australia over the current regulatory determination, which is an increase of 54% compared to the previous regulatory determination.[2] Capital investment in distribution networks will be particularly high in NSW and Queensland, where $14.4 billion and $10.5 billion respectively is forecast to be spent over the current regulatory determination.

The cost of undertaking capital works has also increased for distribution networks, as a result of higher rates of return on capital investment and increasing input costs. Rates of return on capital in absolute terms are generally over 1% higher compared to the previous regulatory period, following the increase in debt premiums in the wake of the Global Financial Crisis from 1% to 3%. Changes in the return on capital have a significant effect on the cost of distribution services, as the return on capital will account for 38% to 69% of annual distribution charges over the current regulatory determination.

The cost of inputs such as aluminum, steel, copper and crude oil are expected to increase significantly over the 2010/11 period as the commodities market recovers from the Global Financial Crisis. Over 2011, the Australian Energy Regulator has forecast that the cost of copper, aluminum, steel and crude oil will increase in real terms by 14% to 22%. Smaller real increases or decreases in the price of materials are expected over the remainder of the reporting period as prices return to long term averages. Real increases in the cost of labour of over 2% each year are also forecast in most jurisdictions over the next four years.

Increasing levels of capital works, higher returns on capital and increases in the cost of inputs are also driving increases in transmission costs, which is estimated to contribute 8% of the forecast increase in residential electricity prices at a national level over the reporting period. This is significantly lower than the contribution of increasing distribution costs, as the combined value of the regulatory asset base of the distribution networks is far larger than the combined value of the regulatory asset base of the transmission networks.[3]

Increases in wholesale electricity and retail costs are also contributing to increases in residential electricity prices over the reporting period. Wholesale electricity cost increases are forecast to comprise 19% of the total increase in residential electricity prices at a national level over the reporting period, while increases in retail costs are forecast to comprise 14% of the total increase.

There are a number of factors behind higher wholesale cost allowances: changes in generation mix; higher capital costs for generators; increasing gas prices; and financing

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2 The start date of regulatory determination periods are different for each distribution business. However, all regulatory determinations for distribution businesses cover a five year period in the National Electricity Market. In WA, the current regulatory period for transmission and distribution networks is a three year period, but the regulatory period can be variable.

3 In the National Electricity Market, the regulatory asset base of the distribution networks is over three times larger than the combined regulatory asset base of the transmission networks.

risks associated with uncertainty around carbon pricing. Jurisdictional regulators have also sought to provide retailers with an increased allowance for hedging costs to reflect both changes in load profiles and increased volatility in spot prices.[4] Over 2012/13, a tightening in the supply-demand balance is also forecast which may further increase wholesale electricity prices going forward.

Retail costs have increased in some jurisdictions, as jurisdictional regulators have provided for higher allowances for customer acquisition and retention costs due to higher levels of customer switching between retailers. This increase in retail competition has served to increase costs associated with new entrant retailers seeking market share and incumbent retailers defending their market share. The dollar value of the retail margin has also increased as retail margins are typically calculated as a percentage of around 5% on the total costs of providing residential electricity services.

Renewable Energy Target (RET) costs are forecast to comprise around 11% of the total increase in residential electricity prices at a national level. This increase in costs is related to an expansion in the renewable energy generation target from the Mandatory Renewable Energy Target of 9,500 GWh to the RET of 45,000 GWh by 2020.

Other components of the residential electricity price include feed in tariff scheme costs and the costs of other state based energy efficiency and demand management schemes. Together these cost components comprise around 5% of residential electricity prices at a national level and are not expected to have a significant impact on the total residential electricity price over the reporting period in most jurisdictions.

4 As forecast increases in maximum demand have been outstripping forecast increases in electricity consumption in most jurisdictions, load profiles have become more peaky which is likely to have increased hedging costs for retailers.

Table 1 The contribution of each cost component to future possible residential standing offer electricity price increases

	National	ACT	Victoria	Tasmania	South Australia	Western Australia	Northern Territory	Queensland	NSW
2009/10 price (c/kWh)	**19.38**	14.73	19.20	18.17	20.98	20.96	20.69	18.26	18.55
2012/13 price (c/kWh)	**25.22**	17.63	24.32	22.76	27.53	30.39	23.56	24.16	25.86
Total c/Kwh Increase	**5.84**	2.90	5.12	4.59	6.54	9.43	2.87	5.90	7.30
Total % increase (2009/10 to 2012/13)	**30.15%**	19.71%	26.66%	25.28%	31.17%	45.00%	13.86%	32.33%	39.37%
Wholesale	**19.07%**	33.81%	-7.01%	47.73%	35.88%	11.01%	44.82%	24.36%	10.90%
Transmission	**8.02%**	9.07%	0.68%	7.22%	6.74%	12.24%	0.00%	7.18%	5.50%
Distribution	**41.24%**	21.83%	9.84%	21.77%	39.25%	63.11%	28.34%	48.62%	59.12%
Retail	**13.83%**	10.95%	60.61%	10.76%	3.02%	3.96%	1.12%	11.41%	7.41%
Feed in tariff	**3.25%**	11.10%	2.93%	0.00%	3.36%	0.00%	0.00%	0.48%	6.17%
RET/LRET	**2.59%**	2.93%	1.18%	2.22%	3.29%	2.11%	9.14%	1.19%	1.99%
SRES	**8.13%**	16.27%	10.28%	10.29%	7.23%	5.07%	16.58%	8.01%	6.47%
Energy efficiency and demand management State schemes	**3.41%**	-5.97%	21.49%	0.00%	1.22%	0.00%	0.00%	-1.27%	2.45%
Other state based schemes	**0.00%**	0.00%	0.00%	0.00%	0.00%	3.00%	0.00%	0.00%	0.00%

Notes

In Victoria, all of the retail margin is included in the retail cost component. However in other jurisdictions, wholesale costs may include an additional retail margin as part of the wholesale cost allowance provided by jurisdictional regulators. 'Energy efficiency and demand management jurisdictional schemes' include: ACT - Greenhouse Gas Abatement Scheme; Victoria - Smart meter roll-out; South Australia - Residential Energy Efficiency Scheme; Queensland - Queensland Gas Scheme; and NSW - Greenhouse Gas Reduction Scheme, Energy Savings Scheme. 'Other jurisdictional schemes' includes the Western Australian Tariff Equalisation Contribution. Data sources: For most jurisdictions data sources for each cost component are: wholesale- jurisdictional retail price determinations and jurisdictional governments; distribution and transmission data- AER; feed in tariffs – AER/jurisdictional governments; RET/LRET and SRES – Commonwealth Department of Climate Change and Energy Efficiency; all State based schemes – jurisdictional retail price determinations. Further information on data sources is at Appendix A.

Contents

1 Purpose of this Report

This report sets out future possible residential electricity prices and associated cost components at a national level and in each state and territory in Australia over the next three financial years from 2010/11 to 2012/13, in response to a terms of reference for this advice from the Ministerial Council on Energy (MCE).[5] The possible drivers and trends in retail electricity price movements and cost components in each state and territory are also discussed in this report.

The Australian Energy Market Commission (AEMC) will provide a further report to the MCE in November 2011, which will outline future possible residential electricity prices over the 2011/12 to 2013/14 period.

1.1 Factors to consider when reviewing prices in this report

In accordance with the requirements in the MCE's terms of reference, prices in this report are expressed in nominal terms and are also GST exclusive. Prices include both fixed and variable charges associated with residential electricity tariffs. The prices in this report do not include any peak or off-peak standing offer tariffs, and are based on a flat charge for all consumption.

Data has been sourced from existing retail price determinations by jurisdictional regulators, network determinations by the Australian Energy Regulator (AER), and jurisdictional governments and regulators were possible. However, where data has been unavailable for some or all of the reporting period, data has been modelled using trends in the movement of the specific cost component and a number of assumptions.[6] As a result, the prices in this report should be treated as indicative of future trends in residential electricity prices for standing offer electricity contracts only rather than a definitive forecast of future prices for all residential electricity customers. For Western Australia and the Northern Territory, the prices in this report are indicative of trends in the costs of providing residential electricity services, as residential electricity prices are set below cost reflective levels in these jurisdictions.

In all jurisdictions, except for Victoria, the standing offer contract price is regulated by jurisdictional regulators or governments. This has made the estimation of individual cost components difficult in Victoria.

Residential standing offer electricity prices comprise only a component of all electricity prices that are paid in each state and territory. Residential electricity consumption only comprises approximately 28% of total electricity consumption, as most electricity is

5 The AEMC received terms of reference from the MCE on 17 September 2010 under section 6(b) of the *Australian Energy Market Establishment Act 2004*.

6 A summary of the data sources and methodologies that were used in compiling this report is contained in Appendix A.

consumed by the commercial, manufacturing and mining sectors.[7]Further, where there is full retail competition residential customers also have the choice of being supplied under a 'market contract'.

Under a market contract the price of electricity is set by each retailer rather than by a jurisdictional regulator. Market contracts tend to be priced at a competitive discount to the standing offer. The proportion of residential customers which are being supplied on regulated standing offer contracts compared to market contracts differs in each jurisdiction depending on if and when full retail competition was introduced and the extent of retail competition in that jurisdiction.[8] Despite standing offer contract prices being determined by jurisdictional regulators in most jurisdictions, there is also the potential for standing offer contract prices to vary over the reporting period due to the pass through of unexpected costs from one or more of the various components.

Different methodologies have been used to set wholesale electricity allowances and retail costs by each jurisdictional regulator. The methods that have been used to classify different types of network expenditure by the network businesses in their regulatory proposals to the AER are also different for each distribution and transmission business.[9] These differences in methodologies result in different outcomes across the jurisdictions. Variations also exist in terms of jurisdictional energy profiles and consumption, supporting infrastructure and associated investment, and the underpinning policy and regulatory environments. These represent just some of the factors that influence the level and change in cost components and the total residential electricity price across different jurisdictions.

7 Energy Supply Association of Australia, 2010, 'Australia's energy supply industry- Facts in brief 2010'.

8 However, as generally all residential customers are subject to the same distribution and transmission costs, the main point of difference between market contract prices and standing offer contract prices relates to the wholesale electricity and retail component of the residential electricity price.

9 However, it is understood that the AER is currently undertaking work to create a common template for reporting by the network businesses.

2 Trends in the cost components of residential electricity prices

This section provides an overview of the trends in the cost components of residential standing offer electricity prices over the reporting period. The main cost components of the residential electricity price in Australia and their contribution to the total residential electricity price include:

- Wholesale electricity costs, which comprises around 35% to 40% of the total residential electricity price level (and contributes 19% of the total increase in prices over the reporting period at a national level);
- Transmission network costs, which comprises around 8% of the total residential electricity price level (and contributes 8% of the total increase in prices over the reporting period at a national level);
- Distribution network costs, which comprise around 36% to 45% of the total residential electricity price level (and contributes 41% of the total increase in prices over the reporting period at a national level);
- Retail costs (including margins), which comprise around 8% to 16% of the total residential electricity price level (and contributes 14% of the total increase in prices over the reporting period at a national level);
- Renewable Energy Target (RET) costs, which comprise around 2% to 4% of the total residential electricity price level (and contributes 11% of the total increase in prices over the reporting period at a national level);
- Feed in tariff scheme costs, which comprise around 0.12% to 2.4% of the total residential electricity price level (and contributes 3% of the total increase in prices over the reporting period at a national level); and
- Other costs associated with State and Territory Government programs and policies, which comprise around 1% to 7% of the total residential electricity price level (and contributes 3% of the total increase in prices over the reporting period at a national level).

The proportion of each cost component varies by jurisdiction, depending on the generation fuel mix, level of capital investment which is being undertaken by the network businesses, the level of retail competition, and the nature of any relevant jurisdictional programs and policies, amongst other factors. Changes in each of these components will contribute to movements in future possible residential standing offer electricity prices. Further detail on the changes and drivers of these cost components for each state and territory is set out in Chapter 3.

2.1 Wholesale electricity costs

In most jurisdictions the wholesale electricity component of residential electricity standing offer prices is set by a jurisdictional regulator. In Western Australia and the Northern Territory, wholesale electricity costs are determined by the jurisdictional government; while in Victoria the regulation of retail electricity prices has been removed.

Jurisdictional regulators determine an energy purchase cost allowance for each retailer within each jurisdiction to reflect an estimate of the costs they would face in purchasing energy from the wholesale market and managing the associated risks. The methodology that is used by each regulator varies across jurisdictions. However, generally regulators take into account the long run marginal cost of generation plant options or a modelled market-based purchase cost approach, or a combination of both.[10]

In Queensland, New South Wales, the Australian Capital Territory (ACT), Victoria, South Australia and Tasmania; generators and retailers trade all wholesale electricity through a wholesale spot market - the National Electricity Market (NEM). NEM participants also enter into formal hedging contracts to manage their risk in the NEM. In Western Australia (WA), energy is traded through a combination of bilateral contracts, a day-ahead short-term energy market, and a balancing market. However, in contrast to the NEM, 95% of electricity in WA is traded through bilateral contracts outside of the short term energy market and balancing market. In the Northern Territory (NT) there is no wholesale electricity market.

In recent retail price determinations by some jurisdictional regulators, there has been a trend in providing higher allowances for wholesale energy costs, which has contributed to expected increases in residential electricity prices. Nationally, increases in wholesale prices are forecast to contribute 19% of the expected increase in residential electricity prices over the reporting period. This contribution is higher in the ACT, the NT, Tasmania, Queensland, and South Australia, where increases in wholesale costs are forecast to contribute over 24% of the expected increase in residential electricity prices.

Some jurisdictional regulators have indicated that these price increases are related to increasing fuel costs and higher capital costs for generation. There are a number of factors behind this including: changes in generation mix; increasing gas prices; and financing risks associated with uncertainty around carbon pricing. Jurisdictional regulators have also sought to provide retailers with an increased allowance for wholesale energy costs to allow them to better manage volatility in the price of energy and to provide for more cost reflective prices.

10 In developing a long run marginal cost of generation, a number of jurisdictional regulators use a 'greenfield' or 'stand alone' approach which is based on the building and pricing of a whole new generation system to supply the regulated load for the least cost.

In South Australia, where summer peak demand for electricity can be particularly high and volatile, the jurisdictional regulator has moved to a floor and cap approach to setting wholesale energy costs from 2011/12 to provide greater flexibility for retailers to cope with unexpected and material changes in prices. The potential for increases in fuel and capital costs has increased the expected long run marginal costs of generation in South Australia, resulting in an increase in forecast wholesale electricity costs of 28% in nominal terms over the reporting period. Similarly, in Tasmania, wholesale energy costs are forecast to increase by 32% in nominal terms over 2009/10 to 2012/13, following changes to Tasmanian regulations to allow the Tasmanian electricity retailer to recover the costs of its wholesale electricity purchasing costs through the regulated tariff.[11]

In other jurisdictions, such as NSW, Victoria, WA, and the NT, wholesale prices are expected to increase at a lower rate or decrease slightly over the course of the reporting period. In these jurisdictions, wholesale electricity costs are projected to increase by approximately 11% or less over the 2009/10 to 2012/13 reporting period.

2.2 Transmission and distribution network costs

Transmission costs comprise approximately 8% of the total residential electricity price, while distribution costs comprise approximately 36% to 45% of the total residential electricity price. Transmission networks transmit electricity from generators to distribution networks, which in turn transmit electricity to end use residential and business customers. The total length of distribution infrastructure across Australia is approximately 17 times longer than Australia's transmission infrastructure, which results in the need for significantly higher capital and operational expenditure to maintain and expand distribution networks compared to transmission networks.[12]In the NEM, the regulatory asset base of the distribution networks is over three times larger than the combined regulatory asset base of the transmission networks.

The cost of transmission and distribution services is based on the maximum allowed revenue or price cap which has been determined by the AER for a regulatory period of usually five years in the NEM. As transmission and distribution prices are passed directly to end use customers the costs of transmission and distribution services in the NEM are cost reflective.

In WA, the cost of transmission and distribution services is regulated by the Economic Regulatory Authority (ERA) through amendments to the access arrangements for Western Power's network in the South West Interconnected System (SWIS). Similarly, in the NT, the NT Utilities Commission regulates the distribution networks through the access arrangements for the Power and Water Corporation. However, in both WA and the NT network prices are not passed directly through to customers, as retail electricity prices are subsidised by the relevant jurisdictional governments.

11 Premier Bartlett, 2010, 'Ministerial Statement on Energy, 16 June, pg. 12.

12 AER, 2009, State of the Energy Market- 2009, pg. 155.

Over the 2009/10 to 2012/13 reporting period, transmission charges in NSW, Queensland, ACT and South Australia will increase by between 25% and 35%. In Victoria and Tasmania transmission costs will increase at a slower rate by 3% and 16% respectively over the reporting period, while in Western Australia transmission costs will increase by 45% between 2009/10 and 2011/12.

As transmission costs comprise a relatively small component of the total residential electricity price, in nominal terms the increase in transmission costs in NSW, Queensland, ACT and South Australia will only result in an increase of less than 0.5c/kWh over the 2009/10 to 2012/13 period. In WA, a 45% increase in transmission costs will result in a 0.7 c/kWh increase between 2009/10 and 2011/12. On a national level, increases in transmission costs are forecast to comprise around 8% of the total increase in residential electricity prices over the reporting period.

Distribution costs are expected to increase significantly over the reporting period in all jurisdictions except for Victoria, the ACT, and the NT. In NSW, distribution costs are expected to increase by 62% over the 2009/10 to 2012/13 reporting period, while in Queensland and South Australia they are expected to increase by around 35% over the same period. In Western Australia, distribution prices are forecast to increase by 65% between 2009/10 and 2011/12 alone.[13] In nominal c/kWh terms these increases relate to more than a 4c/kWh increase in NSW and around a 3c/kWh increase in Queensland and South Australia between 2009/10 to 2012/13. In Western Australia, distribution costs will increase by over 3 c/kWh between 2009/10 and 2011/12.

In Victoria, distribution prices (excluding metering charges) will increase by 9% over the reporting period, while in the Northern Territory they are expected to increase by 3%. In ACT, distribution prices will increase by 13% over the reporting period.

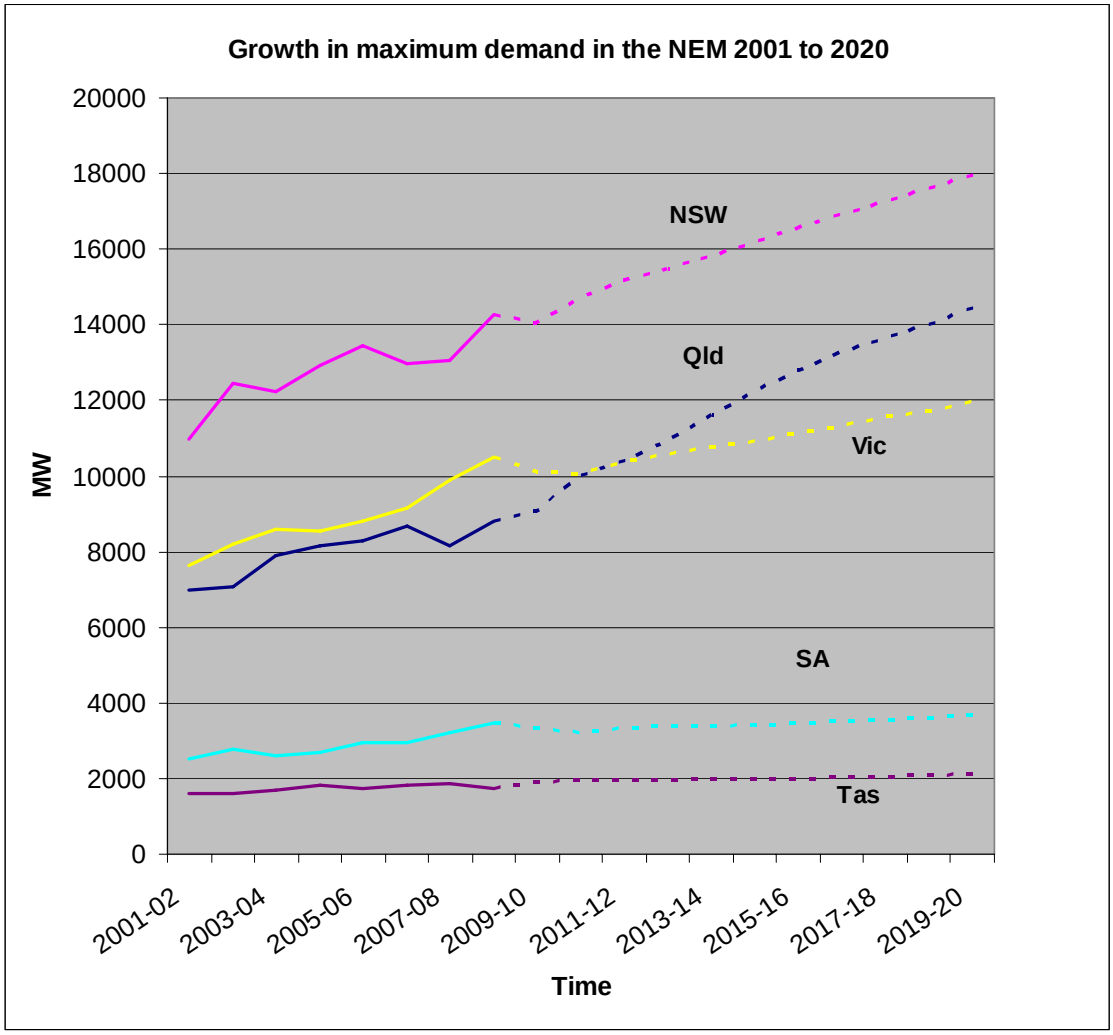
The increase in the cost of network services, particularly distribution services, is the most significant driver in the increasing residential electricity prices over the reporting period. On a national level, distribution costs are forecast to contribute 41% of the total increase in residential electricity prices over the reporting period. However, in NSW the contribution of distribution costs to increases in the total residential electricity price is close to 60%. The cost of network services is increasing due to increased forecast levels of capital works over the current regulatory period by the network businesses, as a result of high forecast annual increases in the maximum demand for electricity and the need to replace aging assets.

Maximum demand is expected to increase each year by around 3% or more in most jurisdictions. This has resulted in the need for distribution and transmission businesses' to expand the capacity of their networks to ensure that this demand for electricity can be met, even though this capacity may only be required for a few peak periods over the course of a year. The increasing penetration of air conditioners, particularly in the residential sector, has been cited by network businesses as a key reason for increasing maximum demand. In contrast, energy consumption and customer numbers are expected to rise by around 2% or less in most jurisdictions. As a

13 Distribution prices have not be yet been determined by the ERA for 2012/13.

result, while overall energy consumption and customer numbers are expected to increase, the demand for electricity at peak periods is expected to increase even further. Figure 2.1 below demonstrates the growth in maximum demand over the last few years, particularly in NSW and Queensland. It sets out actual maximum demand for 2001/02 to 2008/09 and forecast maximum demand for 2009/10 to 2019/20 in the NEM jurisdictions.

Figure 2.1 Growth in maximum demand in the NEM - 2001/02 to 2019/20



Notes

Data has been sourced from AEMO's 'Electricity Statement of Opportunities' for 2010 and 2004. Summer maximum demand has been used for all jurisdictions except for Tasmania, where winter maximum demand was used. Actuals are used for 2001/02 to 2008/09. For 2009/10, estimates have been used. Forecasts for 2010/11 onwards are based on 50% probability of exceedance under a medium growth scenario.

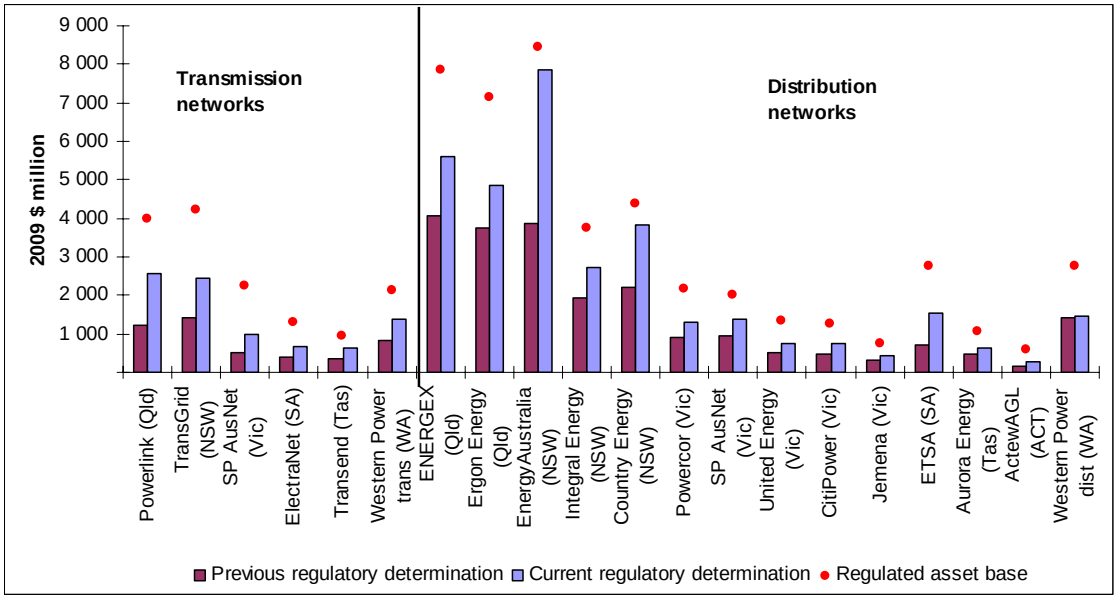
The aging nature of many of the distribution and transmission businesses has also lead to the need for increased capital expenditure to replace assets. The proportion of capital expenditure which is spent on replacements will vary with each network, depending on their asset replacement strategy, overall network age, and operational and maintenance procedures. For many networks, forecast expenditure on replacements will comprise around 20 - 35% of their capital expenditure over the next

three to four years. However, for some networks, such as EnergyAustralia's distribution network, forecast capital expenditure on replacements will be far higher and will comprise almost half of their forecast capital expenditure over the next three years.

Some states such as NSW, Tasmania and South Australia, have also recently adopted higher reliability standards for their network businesses. This has required further capital investment to ensure these standards can be met within the required timeframes over the five year regulatory period.

The cost of undertaking higher levels of capital expenditure has also increased due to higher returns on capital and higher input costs in the current regulatory determination compared to the previous regulatory determination. The forecast increase in the value of capital expenditure by the distribution and transmission networks in the current regulatory determination compared to the previous five year regulatory determination is demonstrated in Figure 2.2 below.

Figure 2.2 Increases in network capital expenditure compared to the last regulatory determination



Notes

Source: AER and the WA Economic Regulatory Authority. For WA, the current regulatory determinations cover a three year period rather than the five year period that applies for NEM jurisdictions.

The return on capital is by far the biggest component to network charges. For transmission business, return on capital accounts for around 65% of total annual charges. For distribution, the proportion varies from 38% for ActewAGL to over 60% for Energex. Under the current five year regulatory period there has been an increase of over 1% in the regulated rate of return compared to the previous regulatory period for network businesses in the NEM. The rate of return for network businesses in

Australia now tends to be between 9.5% to 10%[14], compared to between 8% to 9% in the previous regulatory period.

Under the National Electricity Rules, the return on capital must be set by the AER for the duration of the five year regulatory determination, which in some cases will not end until 2014. This increase in the rate of return is solely due to increases in debt financing costs which has occurred following the Global Financial Crisis. Required premiums on comparable corporate bonds have jumped from around 1% to over 3%.[15]

The required inputs for capital investment in distribution and transmission networks, such as steel, copper, aluminium and crude oil are also forecast to increase significantly over the next two years, as a result of the recovery in the commodities market following the Global Financial Crisis. In its most recent determination, the AER has forecast that over 2011 the real increase in copper, crude oil, steel and aluminium will range from 14% to 22%.

Over 2012, aluminium, crude oil, steel and copper are forecast to increase at a slower rate or decrease as prices return to long-term averages. The cost of construction and manufacturing are forecast to increase by around 2% each year in real terms over the next five years. As Australia returns to resource boom conditions, the utilities sector will face competition from other sectors of the economy with transferable labour skills such as construction and mining sectors.[16] Forecast increases in the costs of materials and manufacturing have been a factor in further increasing the cost of undertaking the required capital investment to meet increasing maximum demand and replace aging assets.

2.3 Retail costs

Retail costs generally comprise between 8-16% of the total residential electricity price and are set by jurisdictional regulators in most jurisdictions. In WA and the NT, the retail component of the residential electricity price is determined by the jurisdictional government. In Victoria, retail price regulation for electricity has been removed.

In competitive markets, retail costs generally include retail operating costs, customer acquisition and retention costs, and a retail margin. In NSW, Queensland, ACT a retail margin of around 5% on all costs has been determined by jurisdictional regulators.[17] In

14 This rate is based on the 'nominal vanilla weighted average cost of capital', which is the return on capital after tax.

15 A number of network businesses have also had their return on capital increased following a merits review of the AER's determinations by the Australian Competition Tribunal.

16 The cost of materials and manufacturing comprise approximately 43% of the costs which are used by the AER when determining how the costs of capital investment should be escalated when setting the maximum allowed revenue for network businesses over the five year regulatory period.

17 This includes wholesale energy costs, network costs, retail operating and customer acquisition and retention costs, and program costs. In South Australia, a retail margin of 10% on wholesale electricity costs and retail operating costs applies, which is similar to the 5% margin on total costs that applies in other NEM jurisdictions.

Tasmania a retail margin of 3.8% has been set as it was considered that the Tasmanian retailer faced lower risks than retailers operating in the NEM.

Retail costs are not expected to increase significantly over the reporting period in most jurisdictions. On a national level, retail costs are expected to contribute around 14% of the expected increases in total residential electricity prices over the reporting period.[18] In Queensland and NSW, higher allowances for customer acquisition and retention costs have been provided by jurisdictional regulators due to higher levels of customer switching between retailers. This increase in retail competition has served to increase costs associated with new entrant retailers seeking market share and incumbent retailers defending their market share.

2.4 Renewable Energy Target costs

The RET comprises approximately 2% to 4% of the total residential electricity price. The RET was established by the Commonwealth Government in August 2009 to encourage additional renewable energy generation to meet the Commonwealth's commitment to achieving a 20% share of renewables in Australia's electricity supply by 2020. The RET commenced on 1 January 2010 and served to expand the previous Mandatory Renewable Energy Target (MRET) by more than four times from 9,500 GWh to 45,000 GWh.

Under the RET legislation wholesale purchasers of electricity have a legal liability to surrender Renewable Energy Certificates (RECs) or pay the penalties for non-compliance. The cost of these RECs serve to increase wholesale energy purchase costs for retailers, which are passed on to end use customers. The additional large-scale generation encouraged through the RET can also place some small, generally downward pressure on wholesale electricity prices, which can partially offset the impact of the RET compliance costs on retail electricity prices. An estimate of the costs of complying with the RET is generally considered by jurisdictional regulators as part of their decision on the wholesale electricity cost allowance.

From 1 January 2011, the RET will be split into two parts, the Large scale Renewable Energy Target (LRET) and the Small scale Renewable Energy Scheme (SRES).[19] Under these enhancements, the LRET will cover large scale renewable energy projects and has a target of 41,000 GWh by 2020. The SRES will provide a financial benefit for small scale renewable energy technologies, such as the purchase of eligible solar water heaters, small-scale solar photovolatic panels and small wind and micro-hydro systems. The SRES has an uncapped target and will provide $40 for each small scale technology certificate which is created by small-scale technologies. Each year a Small Scale Technology Percentage will be set which will estimate the amount of small scale technology certificates which will be created each year.

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18 The contribution of retail costs to the total increase in national prices may be slightly overstated, due to the difficulty of estimating and forecasting retail prices in Victoria.

19 The Commonwealth Parliament passed legislation to separate the RET into the LRET and the SRES on 24 June 2010.

Forecasts of RET costs for 2009/10 were sourced from jurisdictional determinations and modelling undertaken by an external consultant, where data was unavailable. From 2010/11 onwards, forecasts of the LRET and the SRES were sourced from the Commonwealth Department of Climate Change and Energy Efficiency for all jurisdictions. The Commonwealth's forecasts provide indicative estimates of the impact of the LRET and SRES and a key general assumption underpinning the indicative estimates is that retailers will spread their RET compliance costs equally across all units of RET-liable electricity in all states and territories. As the wholesale price impacts of the RET in different states and territories are uncertain and depend on location of new generation and the degree of network constraints between states, the Commonwealth's indicative modelling has not disaggregated wholesale price impacts to the state/territory level. NEM-wide average impacts have been used as a guide instead.

Over the reporting period, the total cost of the RET is expected to increase by around over 360% nationally, as a result of the expansion in the target from the MRET to the RET. On a national level, the LRET is expected to contribute 2.6% of the total increase in residential electricity prices, while the SRES is forecast to contribute 8% of the total increase. There remains some uncertainty regarding the future costs of the SRES as the Small Scale Technology Percentage will be set each year. The Small Scale Technology Percentage will effect the liability on retailers and the amount of certificates that they need to purchase. Over time, it is likely that the absolute value of the SRES will decrease as the amount of certificates that retailers will need to purchase per a system will decline as the cost of small-scale technologies decrease. In converse, it is likely that the absolute value of the LRET will increase as the target for the LRET moves towards the target of 41,000 GWh by 2020.

2.5 Feed in tariff scheme costs

In recent years, a number of state and territories have introduced feed in tariff schemes, which pay a premium rate for renewable energy which is fed back into the electricity grid. The objective of these schemes is to encourage renewable electricity generation. In Australia, feed in tariff schemes have generally been targeted at small scale generation from solar photovoltaic systems. These schemes have increased the cost of residential electricity prices by a relatively small amount in most cases, as the cost of these initiatives are generally spread across all consumers rather than only those which may be receiving the direct benefit of the scheme.[20] This results in a cross subsidy from all consumers to those consumers participating in the scheme.

Factors which affect the cost of feed in tariff schemes include: whether the scheme provides 'net' or 'gross' feed in tariff payments; the total capacity of the scheme; the period of the scheme's operation; the eligibility requirements; and the rate that is paid for the electricity that is generated. The most important factors that affect the cost of these schemes is the rate of the payment and whether they provide 'net' feed in payments or 'gross' feed in payments. Under a 'net' feed in payment scheme, payments

[20] In WA, feed in tariff costs are funded through a community service obligation payment to the Government owned electricity retailers, Synergy and Horizon Power. As a result, the feed in tariff scheme costs do not have an effect on the level of residential electricity prices in WA.

are only made on the amount of electricity which is generated after the household's consumption has been supplied. In contrast, under a 'gross' feed in payment, payments are made for all electricity which is generated.

Relatively strong demand by customers for feed in tariff schemes has resulted in increasing participation rates, which will contribute to future movements in residential electricity prices. Recent higher than expected demand for the gross feed in tariff scheme in NSW has resulted in a reduction in the feed in tariff payment from 60c/kWh to 20c/kWh to limit the cost of the scheme. The cost of gross feed in tariff scheme the ACT are expected to increase from 0.8% in 2009/10 to approximately 2.5% of the total residential electricity price respectively by 2012/13. This is significantly higher than the cost of net feed in tariff schemes. In contrast, in Queensland, the cost of the net feed in tariff schemes is expected to increase from 0.09% of the total residential electricity price in 2010/11 to 0.12% in 2012/13.

However, as feed in tariff costs comprise a relatively small component of the total residential electricity price, on a national level feed in tariffs are only expected to contribute 3% of the total increase in residential electricity prices over the reporting period. Further information on the costs of feed in tariffs will become available in 2011 as distribution businesses submit their annual pricing proposals to the AER.

2.6 Other State and Territory program costs

In addition to feed in tariff schemes, some states have also implemented additional jurisdictional programs which contribute to the residential electricity price. As the scope, scale and objective of these programs vary by jurisdiction, the effect of these programs on the residential electricity price also differ significantly by jurisdiction. These programs include initiatives such as the smart meter roll-out in Victoria, the Queensland Gas Scheme in Queensland, the Energy Savings Scheme in NSW; the Greenhouse Gas Reduction and Abatement Schemes in NSW and the ACT, and the Residential Energy Efficiency Scheme in South Australia.

In most cases the objective of these programs is to encourage energy efficiency, demand management and a reduction in greenhouse gases by requiring retailers or distributors to undertake specific activities. Usually there are targets which need to be met and penalties for non-compliance. The allowances for these programs are determined by jurisdictional regulators, and program costs are generally passed directly through to end users through distribution charges. Generally these programs comprise 1% to 2% of the total residential electricity price and are not expected to increase significantly over the reporting period. However in Victoria, metering costs which include the cost of the smart meter roll-out, are expected to comprise approximately 6.6% of the total residential electricity price in 2010. In Western Australia, the Tariff Equalisation Contribution, which facilitates a uniform residential electricity price across the state, is expected to comprise 4% of the total cost of providing residential electricity services over the reporting period.

3 National and jurisdictional summaries of future possible residential electricity prices

This Chapter sets out possible future residential electricity prices and associated cost components at a national level and in each state and territory in Australia over the next three financial years from 2010/11 to 2012/13. Prices and costs are expressed in nominal terms and are GST exclusive. Actual electricity prices and cost components in 2009/10 have been used as a base year for comparison. Prices are expressed in nominal terms and are GST exclusive. The possible drivers in retail electricity price movements and cost components in each state and territory are also discussed in this Chapter.

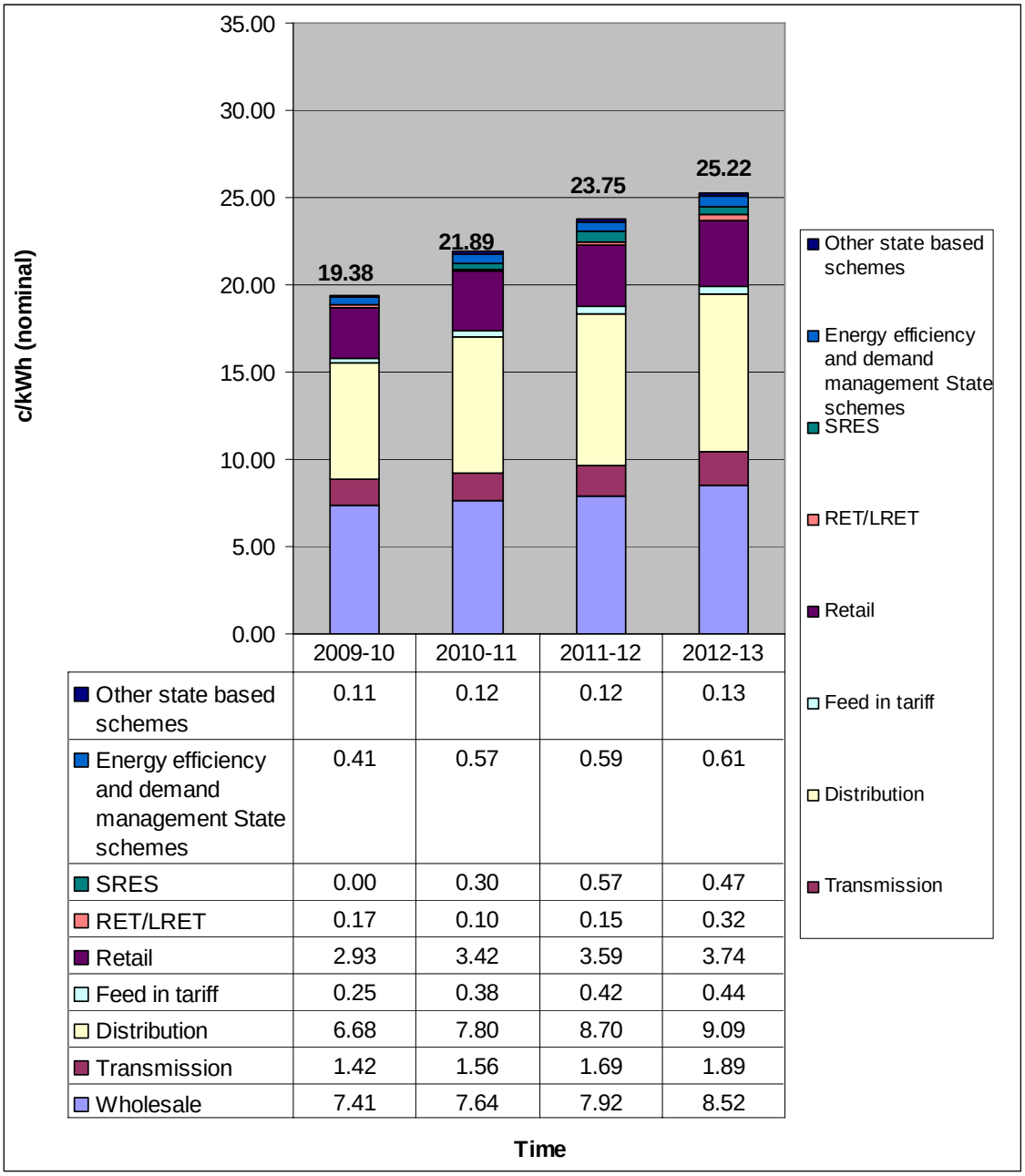
Where data has been unavailable for some or all of the reporting period, data has been estimated using trends in the movement of the specific cost component and a number of assumptions. As a result, the prices in this report should be used to provide an indication of future possible residential electricity prices only. A summary of the data sources and methodologies that were used in compiling this report is contained in Appendix A.

As discussed earlier in this Report, as jurisdictional regulators have used different methodologies in making retail electricity price determinations, the pricing outcomes in each jurisdiction can differ. Many other factors such as jurisdictional energy profiles, the generation mix, the supporting infrastructure and associated investment, and the underpinning policy and regulatory environments, also contribute to the level and change in cost components and the total residential electricity price across different jurisdictions.

3.1 National summary of future possible residential electricity prices

Figure 3.1 below provides a national summary of future possible residential electricity prices over the 2009/10 to 2012/13 reporting period. These prices have been weighted by the number of residential customers and the average residential electricity price in each state and territory. For Queensland, Western Australia and the Northern Territory, the actual costs of providing residential electricity services have been used in the national summary, as a breakdown of the prices that customers pay by cost component was not available. Further detail on average state and electricity prices is contained in section 3.2 below.

Figure 3.1 National summary of future possible residential electricity prices



	2009-10	2010-11	2011-12	2012-13
Other state based schemes	0.11	0.12	0.12	0.13
Energy efficiency and demand management State schemes	0.41	0.57	0.59	0.61
SRES	0.00	0.30	0.57	0.47
RET/LRET	0.17	0.10	0.15	0.32
Retail	2.93	3.42	3.59	3.74
Feed in tariff	0.25	0.38	0.42	0.44
Distribution	6.68	7.80	8.70	9.09
Transmission	1.42	1.56	1.69	1.89
Wholesale	7.41	7.64	7.92	8.52

Note - For the Victorian contribution to the national summary, the Victorian calendar year prices were averaged to produce financial year prices. As a result, all of the prices used to develop the national summary were financial year prices.

3.1.1 Trends in national electricity prices over 2009/10 to 2012/13

Over the 2009/10 to 2012/13 reporting period, residential electricity prices are expected to increase by 30% in nominal terms, which is an increase of 5.84 c/kWh.

The most significant driver of this increase in residential electricity prices is the increasing cost of distribution services, which is expected to contribute 41% of the total increase in residential electricity prices over the reporting period. The cost of distribution services is forecast to increase in most jurisdictions as a result of higher

rates of return on capital investment, following the tightening of debt premiums in the wake of the Global Financial Crisis. The level of capital works has also increased significantly as a result of growth in maximum demand and the need to replace aging assets.

These factors have also contributed to the increasing cost of transmission services, which is forecast to comprise 8% of the total increase in residential electricity prices over the reporting period. A total of $8.7 billion in capital expenditure in 2009 dollars is forecast to be spent on transmission networks in the NEM and WA over the current regulatory period, which is 84% more than the level of capital expenditure that was spent in the previous regulatory period.

Wholesale electricity costs are forecast to contribute 19% of the expected increase in residential electricity prices over the reporting period. This is the result of a range of factors including: increasing fuel costs; higher capital costs of generation; price volatility; and the recovery of more cost reflective tariffs. Looking beyond 2012/13, wholesale electricity costs may increase further as a result of an expansion in higher cost renewable generation in response to the expanded RET.

Retail costs, which include retail operating costs and a retail margin, are expected to contribute 14% of the forecast increase. This increase is related to higher levels of retail competition in some jurisdictions, as retailers require higher allowances in order to maintain their market share. The value of retail margins has also increased as retail margins in most jurisdictions are calculated as a percentage of around 5% of the total residential electricity price. Therefore, as the total residential electricity price has been increasing, largely as a result of higher distribution costs, the value of the retail margin has also increased.

Other components of the residential electricity price such as the RET, feed in tariff schemes, and other state based schemes comprise in total around 7% of the residential electricity price. Feed in tariff schemes and other state based schemes are not expected to increase significantly over the reporting period. However, the total impact of the RET (i.e. LRET and SRES) is expected to contribute around 11% of the total increase in residential electricity prices, as a result of the expansion in the target from the MRET to the RET.

3.2 State and Territory residential electricity prices

This section outlines future possible residential electricity prices (and, in the case of Western Australia, costs of supply) at a state and territory level. These state and territory prices are weighted average prices and have been based on the future possible residential electricity prices and the number of residential electricity customers in each distribution area. Further detail on the future possible residential electricity prices in each distribution business in each state and territory is contained in Appendix B.

3.2.1 Queensland

Residential electricity prices in Queensland may not be completely cost reflective, as the Queensland Government subsidies the costs of providing electricity services through the provision of community service obligation payments to Ergon Energy. This ensures that there is a uniform regulated electricity price across the state for residential electricity customers. Approximately 58.4% of small customers (i.e. both residential and small business customers) remained on regulated standing offer contracts in Queensland in June 2010.[21]

Figure 3.2 below provides an indication of the future possible residential electricity prices in Queensland over 2009/10 to 2012/13. It shows the standard regulated residential electricity tariff (including fixed and variable charges) for 2009/10 and 2010/11[22] and the forecast residential electricity price for 2011/12 and 2012/13. The forecast prices for 2011/12 and 2012/13 have been based on a weighted average of the costs in Energex's and Ergon Energy's distribution areas.[23]

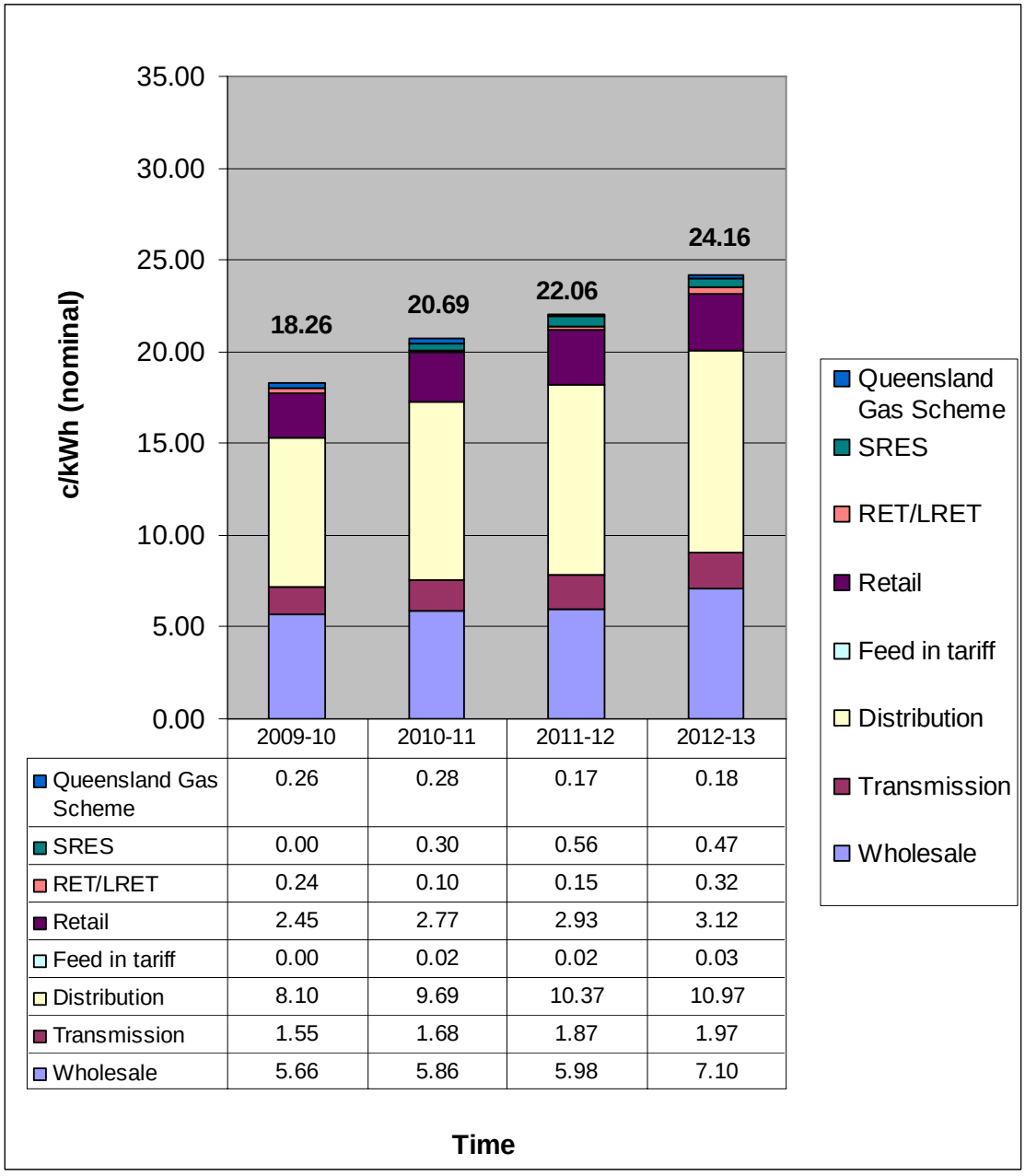
Wholesale electricity and retail cost components for 2011/12 and 2012/13 and transmission costs for 2012/13 have been estimated, as jurisdictional and AER determinations do not cover the whole reporting period.

21 Queensland Competition Authority, 2010, *Market and Non-Market Customers – June Quarter 2010*.

22 This reflects 'Tariff 11' charges.

23 As a result prices for 2011/12 and 2012/13 may not reflect future 'Tariff 11' charges in these years.

Figure 3.2 Queensland - Future possible residential electricity prices 2009/10 to 2012/13



	2009-10	2010-11	2011-12	2012-13
Queensland Gas Scheme	0.26	0.28	0.17	0.18
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.24	0.10	0.15	0.32
Retail	2.45	2.77	2.93	3.12
Feed in tariff	0.00	0.02	0.02	0.03
Distribution	8.10	9.69	10.37	10.97
Transmission	1.55	1.68	1.87	1.97
Wholesale	5.66	5.86	5.98	7.10

Trends in Queensland residential electricity prices over 2009/10 to 2012/13

Residential electricity prices in Queensland are forecast to increase by 32% in nominal terms between 2009/10 and 2012/13, which is an increase 5.90 c/kWh. 49% of the expected increase is due to increases in the cost of distribution services, which will increase by 36% in nominal terms over the reporting period.

The main drivers in the costs of distribution services in Queensland over 2009/10 to 2012/13 include strong increases in maximum demand and energy consumption, a higher return on capital compared to previous regulatory determinations, and high real increases in the costs of materials and land. There is the potential for distribution

costs to change as the AER's distribution determination for Queensland is currently under merits review with the Australian Competition Tribunal.

Maximum demand and energy consumption are expected to grow strongly over the next four years, as a result of stronger economic activity in the minerals and residential sectors. Maximum demand is forecast to increase by 3.8% on average each year in south east Queensland and by 3.4% each year in regional Queensland. Energy consumption is forecast to increase by 3.6% each year in south east Queensland and by 3% each year in regional Queensland. This growth in maximum demand and consumption is driving a significant expansion in the distribution networks in Queensland, resulting in higher levels of capital works. Around $10.5 billion of capital expenditure (in 2009 dollars) on Queensland's distribution networks is forecast over the current regulatory determination, which is a 34% increase on the level of capital expenditure which was spent in the previous regulatory determination.

A higher return on capital compared to previous regulatory periods has also significantly increased the cost of capital works over the current regulatory period. The higher return on capital reflects a higher cost of debt, following the Global Financial Crisis. The AER has set a rate of return of 9.72% for both of the Queensland distributors, which is 1.22% higher than the rate that applied in the previous regulatory period. For Energex, which has a distribution area covering south east Queensland, this increase in the return on capital accounts for 64% to 69% of the total annual cost of its distribution services over the reporting period.

High real increases in the costs of materials and land are also contributing to increases in distribution costs. Over 2010/11, the cost of aluminium, copper, steel and crude oil are expected to increase by over 20% in real terms, before reducing in real terms or increasing marginally. The cost of rural land is also expected to increase in real terms by around 8% each year over the 2009/10 to 2014/15 period.

Transmission costs are expected to increase by 28% in nominal terms over the reporting period. However, as transmission costs only comprise around 8% of the total residential electricity price, this increase is only expected to contribute 7% of the total increase in residential electricity prices over the reporting period. Transmission costs are increasing in Queensland in response to many of the same factors which are driving distribution cost increases. However, the rate of return on capital investment on the transmission network is significantly lower at 8.76% than the rate of return on the distribution networks, as this rate of return was set prior to the Global Financial Crisis. Over the 2007/08 to 2011/12 regulatory determination, capital expenditure on the transmission network is forecast to increase by 109% compared to the previous regulatory determination. The majority of this capital expenditure is being driven by increasing demand for electricity in Queensland.

Transmission costs for 2012/13 have been estimated using the national average increase in transmission costs for this year. However, transmission costs may increase by more than the national average for 2012/13 due to the strong growth in maximum demand in Queensland and the potential for a higher rate of return compared to the rate that has been applied in the current regulatory determination.

The wholesale electricity cost is expected to contribute 24% of the forecast increase in residential electricity prices over the reporting period. Over 2009/10 to 2012/13, wholesale electricity costs are forecast to increase by 25% in nominal terms. This increase is related to rising coal and gas costs and higher energy market prices.

Between 2011/12 and 2012/13, an increase of 19% in wholesale electricity costs has been forecast as a result of a tightening in the supply demand balance. This tightening in the supply demand balance is expected to have a significant effect on wholesale prices in Queensland as it is forecast that new entrant capacity in Queensland will be predominantly open cycle gas generation, which will be developed in response to the expanded RET. Open cycle gas generation typically has higher long run marginal costs than other types of generation which is expected to be developed in response to the RET, such as wind capacity, which is forecast to enter the market in other jurisdictions over 2012/13.

As noted above, wholesale costs have been modelled by external consultants for 2011/12 and 2012/13, as the existing Queensland retail price determination does not cover this period. Over this period, there is the potential for off-setting factors to place downward pressure on wholesale prices which may reduce the forecast impact of the tightening supply demand balance on wholesale costs for residential electricity customers. As a result, the prices in this report should be used to provide indicative trends in cost components rather than a definitive forecast of future prices.

Retail costs are expected to contribute 11% of the increase in the cost of residential electricity prices over the reporting period. Retail costs are forecast to increase by 28% over the reporting period. This increase reflects an increased allowance that has been provided by the Queensland Competition Authority for customer acquisition and retention costs, as a result of the increasing number of new entrant retailers to Queensland and growth in customer switching rates. This has lead to an increased allowance for costs associated with new entrant retailers seeking market share and incumbent retailers defending their market share.

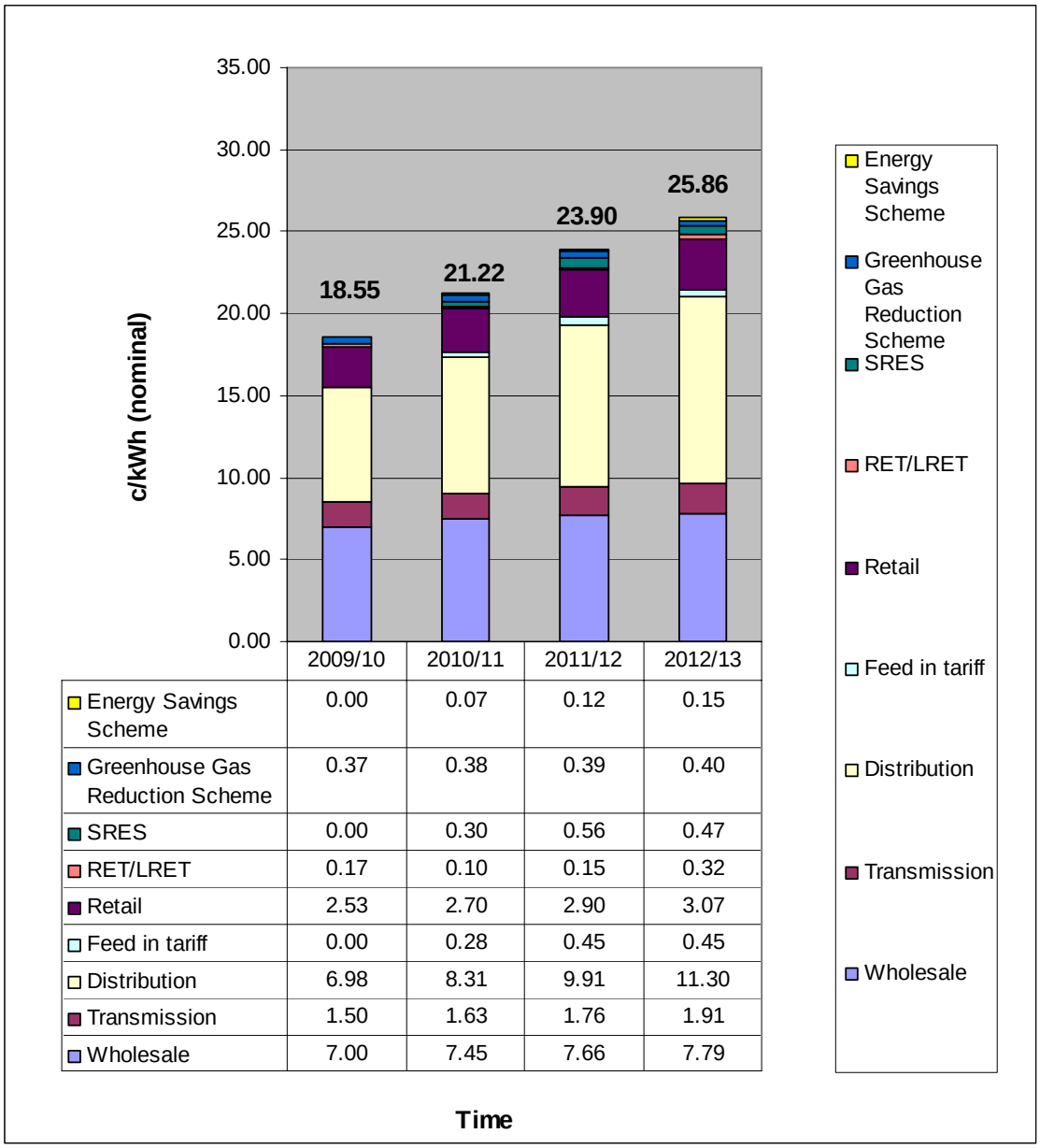
The SRES and the LRET are expected to contribute around 8% and 1% respectively of the total increase in residential electricity prices, as a result of the expansion from the MRET to the RET. Other components of the residential electricity price such as feed in tariffs and the Queensland Gas Scheme comprise a relatively small proportion of the total cost of residential electricity price and are not expected to increase significantly over the reporting period.

3.2.2 New South Wales

Figure 3.3 below outlines future possible residential electricity prices in NSW over 2009/10 to 2012/13. It shows estimated actual prices for 2009/10 and forecast residential electricity prices for 2010/11 to 2012/13. Prices in jurisdictional regulatory determinations and the AER's network determinations have been used to derive prices for the whole reporting period.

The prices in figure 3.3 are representative of the prices that residential customers on standing offer contracts may face over the reporting period. Approximately 66% of small customers (i.e. both residential and small business customers) remained on standing offer contracts in NSW in December 2009. [24]

Figure 3.3 NSW - Future possible residential electricity prices in NSW over 2009/10 to 2012/13



	2009/10	2010/11	2011/12	2012/13
Energy Savings Scheme	0.00	0.07	0.12	0.15
Greenhouse Gas Reduction Scheme	0.37	0.38	0.39	0.40
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.17	0.10	0.15	0.32
Retail	2.53	2.70	2.90	3.07
Feed in tariff	0.00	0.28	0.45	0.45
Distribution	6.98	8.31	9.91	11.30
Transmission	1.50	1.63	1.76	1.91
Wholesale	7.00	7.45	7.66	7.79

Trends in NSW residential electricity prices over 2009/10 to 2012/13

In NSW residential electricity prices are forecast to increase by 39% in nominal terms between 2009/10 and 2012/13, which is an increase of 7.30 c/kWh. About 59% of the

24 IPART, 2010, *Review of regulated retail tariffs and charges for electricity 2010-2013- Electricity – Final Report*, March, pg. 50. .

forecast increase in residential electricity prices is related to increases in distribution costs, which will increase by 62% in nominal terms between 2009/10 and 2012/13. As a result of this increase in distribution costs, the proportion of distribution costs will increase from 38% to 44% of the total residential electricity price in NSW between 2009/10 and 2012/13.

The main drivers of the rising costs of distribution services in NSW include: strong increases in maximum demand; the need to replace ageing assets; higher reliability standards; and a higher return on capital compared to previous regulatory periods.

Maximum demand growth is forecast to increase by between 2.7% and 3.5% per a year between 2009/10 and 2013/14, depending on the distribution area in NSW. Maximum demand growth is expected to be highest in Integral Energy's distribution area, due to higher and more sustained peak temperatures in south and western Sydney and the high uptake of air conditioners across its network. This trend is resulting in a shift towards higher maximum demand in summer compared to winter in NSW.[25]As a result, significant increases in capital works are required to ensure this forecast growth in maximum demand can be met.

The need to replace aging assets has served to further increase forecast capital works over the next four years. Asset replacement is a particular issue for EnergyAustralia, the largest electricity distributor in the country, who is forecast to spend 46% of its capital expenditure on replacements over the 2009/10 to 2013/14 period. Country Energy and Integral Energy, the other two distributors in NSW, are both forecast to spend over 20% of their forecast capital expenditure on replacements over the same period.

Additional capital expenditure over the current regulatory determination is also needed to meet higher reliability standards for NSW distributors. In 2005, the NSW Minister for Energy amended the license conditions of NSW distributors to require them to comply with new design, reliability, and performance requirements by 2013/13. This has contributed to further forecast capital works by the distribution businesses, particularly by Country Energy, to meet these standards within the required timeframes. [26] The AER has advised that reliability and quality of service enhancements comprise 9% of the total capital expenditure by NSW distributors over the current regulatory determination.

Capital expenditure by NSW distributors over the current regulatory period is expected to reach $14.4 billon in 2009 dollars, which is an increase of 80% compared to the previous regulatory period. A high rate of return on capital of 10.02% than has applied in previous regulatory periods has also served to further increase the cost of

25 Maximum demand is forecast to increase at more than double the rate of increases in energy consumption and customer numbers in NSW.

26 Country Energy stated in its regulatory proposal to the AER for the 2009/10 to 2014/15 regulatory period that there are currently 140 cumulative non compliant feeders that exceed either both individual feeder standards or exceed only one of the individual feeder standards. Country Energy, 2008. Regulatory proposal 2009-2014, 2 June, pg. 131.

undertaking capital expenditure. This rate of return reflects recent increases in debt financing costs which has occurred following the Global Financial Crisis.

Wholesale electricity costs are expected to contribute 11% of the increase in residential electricity prices over the reporting period. Wholesale electricity costs are forecast to increase by 11% in nominal terms between 2009/10 and 2012/13. Close to 60% of this increase in wholesale electricity costs will occur between 2009/10 and 2010/11. The Independent Pricing and Regulatory Tribunal (IPART) has indicated that this reflects increases in fuel costs and capital costs for generators in recent years.

Fuel price increases have combined with an expectation of assumed increases in the costs of construction and variable operating and maintenance costs to increase the short run marginal cost of generation by approximately 20-25% for coal and closed cycle gas plant. Increases in the capital costs of generation plant of between 30% and 40%, depending on technology type, have also been incorporated in the wholesale cost allowance, reflecting increases in commodity prices and increases in the prices for generating turbines.

The combined impact of the LRET and the SRES will contribute around 8% of the expected increase in residential electricity prices in NSW, as a result of the expansion from the MRET to the RET.

Increases in transmission costs, retail costs and feed in tariff costs are each expected to contribute around 5% to 7% of the forecast increase in residential electricity prices over the reporting period. Transmission costs, similarly to distribution costs, are forecast to increase as a result of increased capital expenditure and higher rates of return on capital. Retail costs are forecast to increase as a result of an increase in the retail margin from 5% to 5.4% of total costs for the 2010/11 to 2012/13 period by IPART, to reflect updated analysis of the systematic risks associated with electricity retailing. Higher customer acquisition and retention costs allowances were also approved by IPART due to high levels of customer switching. However, this increase was offset by a reduction in the retail operating cost allowance.

Feed in tariffs costs will grow to comprise around 1.7% of the total residential electricity price by 2012/13. Modelling published by the NSW Government regarding the reduction in the rate of the gross feed in tariff from 60c/kWh to 20c/kWh in late October 2010 have been reflected in this forecast.[27] However, it should be noted that the extent to which feed in tariff costs may be passed through to customers and over what time period is unclear as NSW distributors are yet to make applications to the AER seeking the pass through of feed in payment costs.

3.2.3 Australian Capital Territory

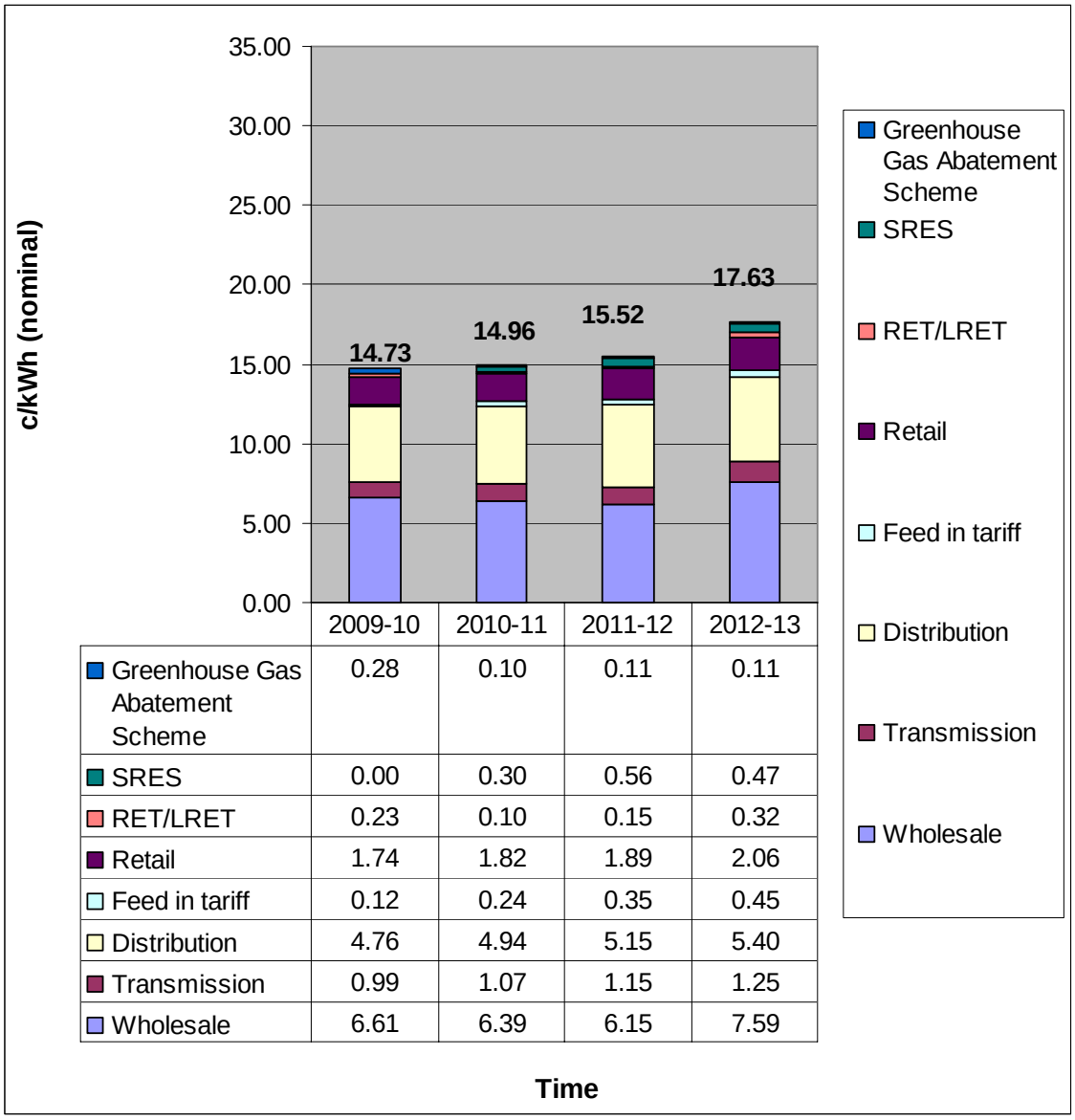
Figure 3.4 below provides an indication of future possible residential electricity prices in the ACT over 2009/10 to 2012/13. It shows estimated actual prices for 2009/10 and

27 Further details on changes to the NSW feed in tariff scheme can be found here: http://www.industry.nsw.gov.au/energy/sustainable/renewable/solar/solar-scheme

forecast residential electricity prices for 2010/11 to 2012/13. Wholesale electricity costs, Greenhouse Gas Abatement Scheme costs and retail costs have been estimated for 2011/12 and 2012/13, as the jurisdictional regulator's determination does not cover the whole reporting period.

The prices in figure 3.4 are representative of the prices that residential customers on standing offer contracts may face over the reporting period. Approximately 80% of residential electricity customers remained on the transitional franchise tariff in the ACT in June 2009. [28]

Figure 3.4 ACT - Future possible residential electricity prices over 2009/10 to 2012/13



	2009-10	2010-11	2011-12	2012-13
Greenhouse Gas Abatement Scheme	0.28	0.10	0.11	0.11
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.23	0.10	0.15	0.32
Retail	1.74	1.82	1.89	2.06
Feed in tariff	0.12	0.24	0.35	0.45
Distribution	4.76	4.94	5.15	5.40
Transmission	0.99	1.07	1.15	1.25
Wholesale	6.61	6.39	6.15	7.59

28 Figure derived from data in: ICRC, 2010, *Draft Decision – Retail prices for non-contestable electricity customers 2010–12*, April, pg. 47.

Trends in ACT residential electricity prices over 2009/10 to 2012/13

Over 2009/10 to 2012/13, residential electricity prices in the ACT are expected to increase by 20% in nominal terms, which is an increase of 2.90 c/kWh.

Wholesale costs are forecast to contribute 34% of the expected increase in residential electricity prices over the reporting period. Between 2009/10 and 2011/12, wholesale electricity costs are forecast to fall from 6.61c/kWh to 6.15c/kWh due to lower market prices. This may reflect a softening in demand following the Global Financial Crisis. Between 2011/12 and 2012/13 wholesale costs are forecast to increase significantly from 6.15 c/kWh to 7.59 c/kWh as the supply-demand balance tightens, following an expected recovery of demand.

Increases in distribution costs are forecast to comprise 22% of the total increase in residential electricity prices over the reporting period. Distribution costs will increase by 13% over the reporting period. Over the current regulatory determination, significant capital works on the distribution network in the ACT are forecast to build and augment substations and improve the security of the electricity supply to the ACT. An increase of 69% in capital expenditure is expected to be spent in the current regulatory determination on the distribution network compared to the previous regulatory determination.

However, relatively small average annual increases in maximum demand of 0.6% a year and a reduction in average annual energy consumption by -0.1% each year over the 2009/10 to 2014/15 regulatory period is forecast. Maximum demand and energy consumption were revised down during the AER's determination process to take into account slowing economic growth following the Global Financial Crisis and the impact of the proposed Carbon Pollution Reduction Scheme. The ACT electricity distributor has also indicated that winter peak demand has also been falling due to increased energy efficiency and the movement of customers towards gas heating. The ACT electricity distributor's rate of return on capital investments for the current regulatory period of 8.79% is also lower than other network businesses, as it did not seek a merits review of its determination by the Australian Competition Tribunal.[29] These factors have reduced the level of capital works and the cost of undertaking capital works compared to other network businesses.

Transmission costs are expected to increase by 27% in nominal terms over the reporting period. This reflects growth in NSW transmission costs, as the ACT is serviced by the NSW transmission business. This increase is expected to contribute 9% of the expected increase in residential electricity prices over the reporting period.

Feed in tariff scheme costs are forecast to contribute 11% of the increase in residential electricity prices over the reporting period. Like NSW, the ACT has a gross feed in

29 It is estimated that if ActewAGL had received the same increase in its rate of return as the NSW distribution businesses following their merits review with the Australian Competition Tribunal (i.e. 10.02%), that ActewAGL's maximum allowed revenue would have been increased by $8 million to $10 million a year over its regulatory determination. It is estimated that this would have resulted in a 1.5% increase in residential electricity prices in the ACT over the regulatory determination.

tariff scheme. Feed in tariff payments were revised down from 50.05 c/kWh to 45.7 c/kWh by the ACT Government in July 2010. The scope of the scheme was also recently expanded to include medium and large scale generation. Over the 2009/10 to 2012/13 period, the cost of the scheme is expected to increase from 0.8% to 2.5% of the total residential electricity price. However, the cost of the scheme may increase further over the reporting period as a result of the expansion in the scope of the scheme.

Retail costs are forecast to contribute 11% of the total increase in residential electricity prices, and are forecast to increase from 1.74 c/kWh to 2.06 c/kWh over the reporting period. The increase in retail costs reflects an increase in the retail margin from 5% to 5.4%, which was considered necessary by the jurisdictional regulator to provide retailers with an appropriate return on their investments.

The combined impact of the LRET and the SRES are forecast to contribute 19% of the expected increase in residential electricity prices in the ACT, as a result of the expansion from the MRET to the RET. The Greenhouse Gas Abatement Scheme comprises a small proportion of the total residential electricity price in the ACT and is not estimated to have a significant effect on the overall price.

3.2.4 Victoria

Figure 3.5 outlines future possible residential electricity prices in Victoria over 2009 to 2013. It shows estimated actual prices for 2009 and forecast residential electricity prices for 2010 to 2013. Prices have been reported in calendar rather than financial years for Victoria, as distribution and transmission prices are determined on a calendar year basis in Victoria. An additional year (i.e. 2013) has been forecast for Victoria, to allow 2013 prices to be incorporated into the national summary. However, for the purposes of consistency with other jurisdictions, discussion on trends in the Victorian residential electricity price has focused on trends between 2009 and 2012 only.

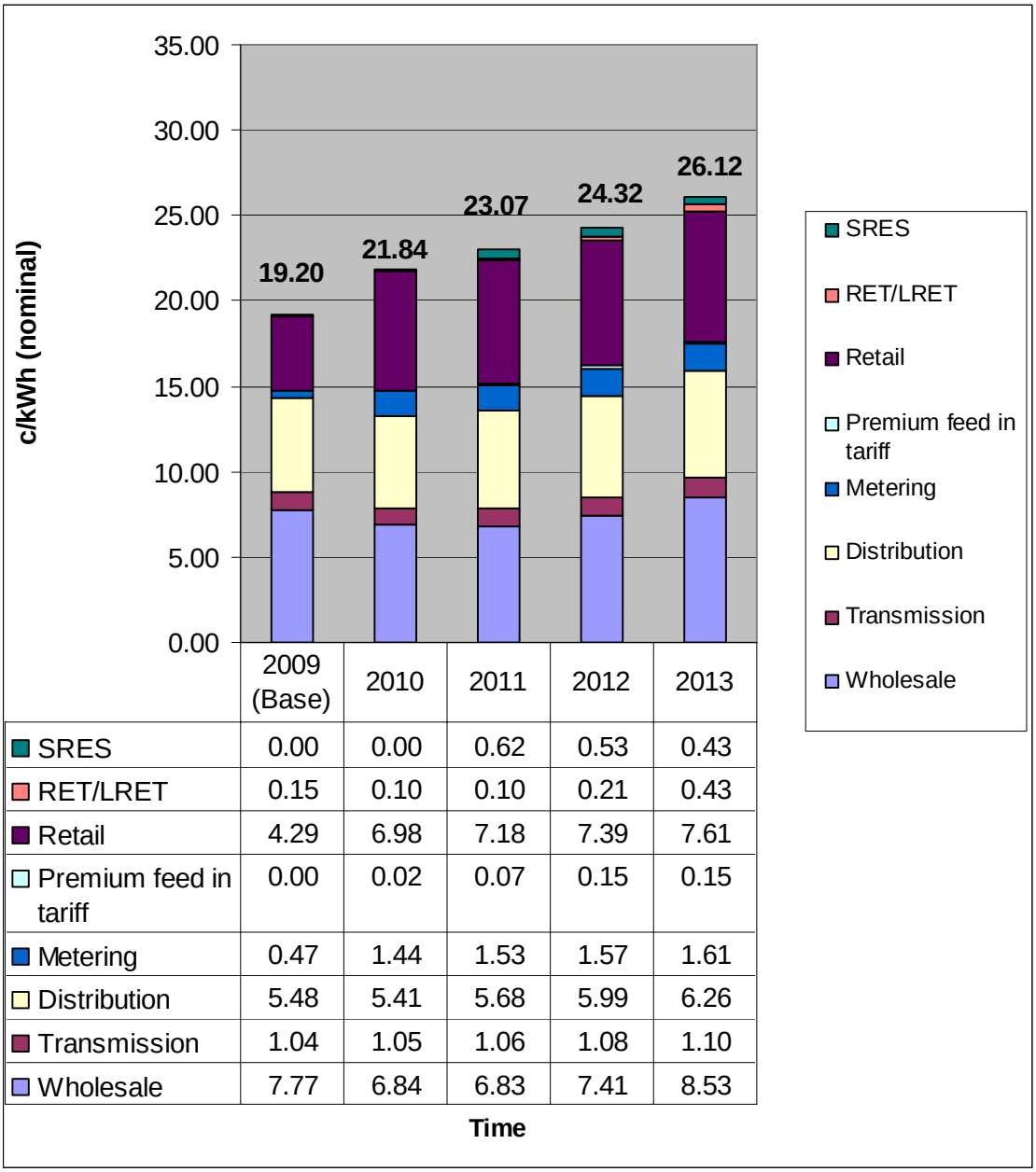
As retail electricity price regulation was removed in Victoria at the beginning of 2009, wholesale and retail costs for the whole reporting period have been estimated. Other cost components that have been estimated include: premium feed in tariff payments for 2011 and 2012, and 2013 and metering charges for 2012 and 2013.

The prices in figure 3.5 are representative of the standing offer contract prices that may be paid by residential electricity customers in Victoria over the reporting period. There is limited publicly available information on the proportion of residential electricity customers that currently remain on standing offer contracts in Victoria. In June 2008, approximately 46% of all electricity and gas customers remained on standing offer contracts. [30]However, it is likely that the proportion of residential customers on standing offer contracts has fallen further over the last two years as there has been a

30 Essential Services Commission of Victoria, 2008, *Energy retailers: Comparative performance report – customer service 2007 – 08*, December.

significant level of switching between retailers by electricity customers in Victoria.[31] Further reporting on the proportion of residential electricity customers on standing offer contracts in the future may clarify this.

Figure 3.5 Victoria- Future possible residential electricity prices 2009 to 2013



	2009 (Base)	2010	2011	2012	2013
SRES	0.00	0.00	0.62	0.53	0.43
RET/LRET	0.15	0.10	0.10	0.21	0.43
Retail	4.29	6.98	7.18	7.39	7.61
Premium feed in tariff	0.00	0.02	0.07	0.15	0.15
Metering	0.47	1.44	1.53	1.57	1.61
Distribution	5.48	5.41	5.68	5.99	6.26
Transmission	1.04	1.05	1.06	1.08	1.10
Wholesale	7.77	6.84	6.83	7.41	8.53

Note – As retail price regulation has been removed in Victoria, the estimation of individual cost components, particularly wholesale and retail costs, is difficult. These prices are indicative of future possible trends only.

31 For instance, the Essential Services Commission of Victoria reported that over 2008/09 635,191 electricity customers switched retailers in Victoria, an increase of 14.1% from 2007/08. See: ESCV, 2009, *Energy retailers: Comparative performance report – customer service 2008 – 09, December*, pg. 5.

Trends in Victorian residential electricity prices over 2009 to 2012

In considering the prices in figure 3.5, it should be noted that the proportion of customers that remain on standing offer contracts in Victoria is likely to be relatively low. As a result, the prices in figure 3.5 are likely to be representative of a small proportion of the total number of residential electricity customers. The majority of residential electricity customers in Victoria are supplied on market contracts, which can provide discounts of around 9% on standing offer contract prices.[32] The deregulation of retail price regulation in Victoria has resulted in limited publicly available information on retailer's wholesale costs and retail costs. As a result, the prices in figure 3.5 provide an indication of possible trends in standing offer contract prices in Victoria only.

Over 2009 to 2012, residential electricity prices are forecast to increase by 27%, which is an increase of 5.12 c/kWh. 61% of the increase in residential electricity prices is due to increases in retail costs over the reporting period. This appears to be related to higher wholesale electricity costs in 2009, which served to squeeze the retail operating costs and retail margins of retailers. Over 2010 and 2011, wholesale electricity costs are forecast to fall due to softer demand growth as a result of the Global Financial Crisis and slower economic growth. As wholesale costs are expected to fall over 2010 and 2011, retail operating costs and retail margins are forecast to comprise a larger proportion of the standing offer price over these years. It should also be noted that in Victoria, all of the retail margin is also included in the retail cost component. In other jurisdictions, wholesale costs may include an additional retail margin as part of the wholesale cost allowance provided by jurisdictional regulators. As noted above, these figures should be interpreted with caution.

Between 2011 and 2012, demand for electricity is expected to recover and a tightening in the demand-supply balance is forecast. This is likely to increase wholesale electricity prices in 2012. However, in Victoria this increase is not expected to be as great as in other jurisdictions such as NSW and Queensland as new wind capacity is forecast to emerge in Victoria and South Australia in response to the expanded RET. This new capacity is expected to dampen rises in wholesale electricity prices in Victoria over 2012.

22% of the expected increase in residential electricity prices in Victoria over the reporting period is related to increases in the cost of metering services, which includes the cost of the roll-out of smart meters in Victoria. Between 2009 and 2010 alone, the cost of metering services in Victoria will increase from 0.47 c/kWh to 1.44 c/kWh. Currently metering services comprise approximately 7% of residential electricity prices, which is expected to be maintained over the remainder of the reporting period as the progressive roll-out of smart meters will not be completed until the end of 2013.

Network costs are not expected to increase significantly over the reporting period in Victoria. Of the forecast increase in residential electricity prices over the reporting

32 This discount is based on a comparison of standing offer contract prices and market contract prices on www.yourchoice.vic.gov.au

period, 0.68% is related to increases in transmission costs and 10% is related to increases in distribution costs. Over the 2011 to 2015 regulatory period, the five electricity distributors in Victoria are forecast to spend $4.57 billion in total in capital expenditure over the 2011 to 2015 regulatory period, while the transmission network is forecast to spend $1 billion over the 2008/09 to 2013/14 regulatory period.

Over the reporting period, distribution costs are forecast to increase by 9% in nominal terms in Victoria, while transmission costs are forecast to increase by 3% in nominal terms. There is the potential for distribution costs to change as the period for Victorian distributors to appeal the AER's distribution determination has not yet elapsed.

The increase in distribution costs is related to forecast increases in capital expenditure on the distribution network, which is expected to increase by 46% in total compared to the previous regulatory period. Capital expenditure on the Victorian distribution networks is increasing over the 2011 to 2015 regulatory period as a result of relatively strong annual increases in maximum demand, which is forecast to increase by between 2.38% and 4.32% on average each year over 2011 to 2015, depending on the distribution area. Maximum demand is forecast to increase by the most in eastern Victoria, as a result of the increasing penetration of air conditioners and increases in the duration of their use.

Increases in capital expenditure are also required by the Victorian distribution networks to replace aging assets and to meet new safety obligations following the Victorian bushfires. All distributors in Victoria are now required to develop and implement Energy Safety Management Schemes, which has lead to a step increase in replacement expenditure. Further safety obligations may be placed on Victorian distributors following the consideration of measures from the Victorian Bushfires Royal Commission by the Victorian Government, which may result in the need to pass further costs through over the regulatory period.

Capital expenditure on the transmission network is forecast to increase by 91% compared to the previous regulatory control period, as a result of a substantial refurbishment and redevelopment program for a number of terminal stations which are expected to reach a high risk of failure during the current regulatory determination.

The cost of undertaking transmission and distribution capital expenditure is also forecast to increase over the next few years as a result of higher rates of return compared to previous regulatory period and real increases in input costs, such as aluminum, steel, copper and crude oil.

Like other jurisdictions, the combined impact of the LRET and SRES is expected to contribute around 11% of the total increase in residential electricity prices, as a result of an expansion from the MRET to the RET.

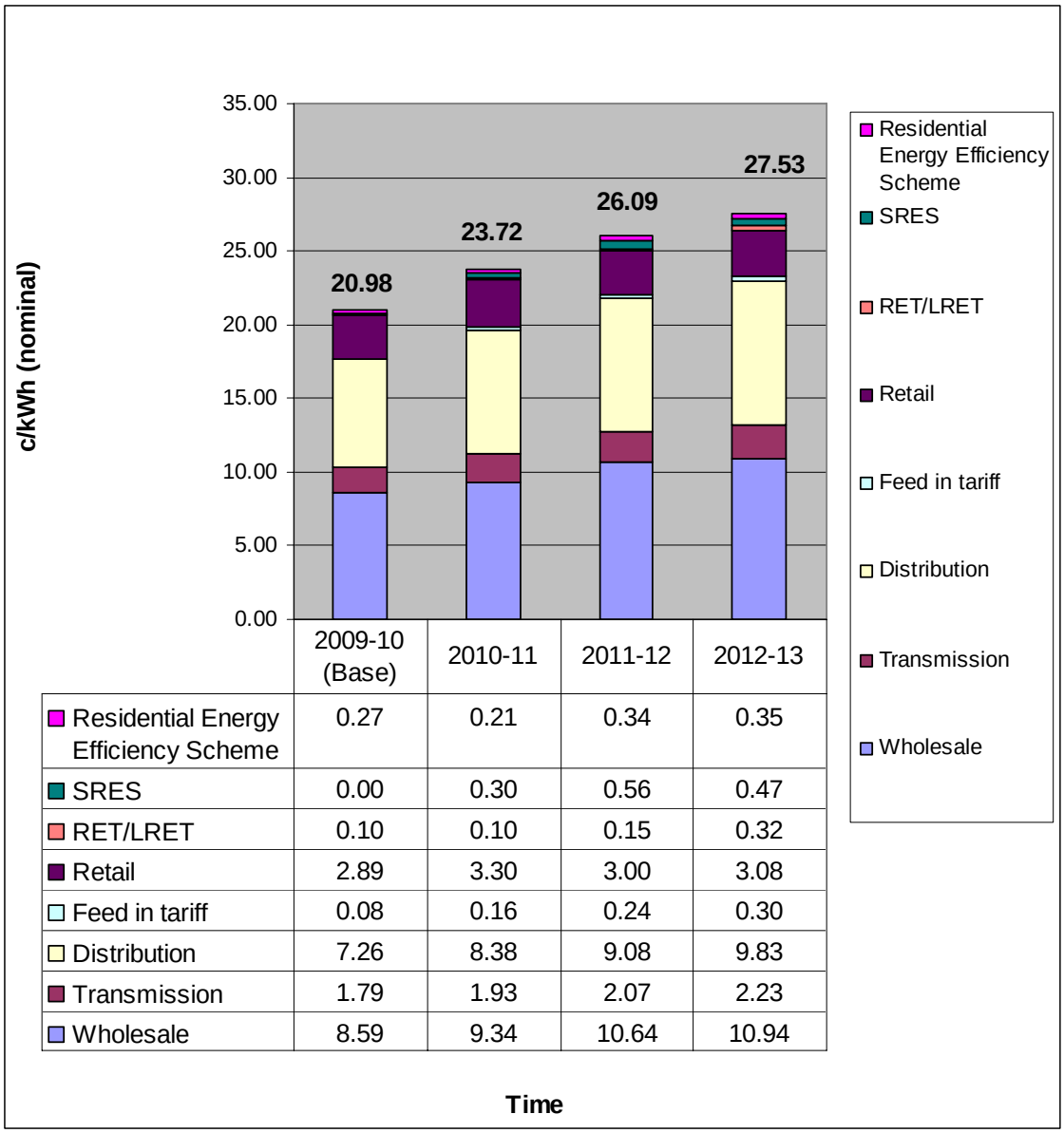
Victoria's premium feed in tariff comprise a fairly small proportion of the total residential electricity price. In 2010, the feed in tariff is expected to comprise 0.1% of the total residential electricity price and is not expected to comprise a significant component of future price increases.

3.2.5 South Australia

Figure 3.6 outlines future possible residential electricity prices in South Australia over 2009/10 to 2012/13. It shows estimated actual prices for 2009/10 and forecast residential electricity prices for 2010/11 to 2012/13. Jurisdictional and AER determinations have been used to derive prices for the whole reporting period.

The prices in figure 3.6 are representative of the prices that residential electricity customers on standing offer contracts in South Australia may face over the reporting period. Approximately 28% of residential electricity customers in South Australia remained on standing offer contracts in June 2009.[33]

Figure 3.6 South Australia - Future possible residential electricity prices over 2009/10 to 2012/13



	2009-10 (Base)	2010-11	2011-12	2012-13
Residential Energy Efficiency Scheme	0.27	0.21	0.34	0.35
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.10	0.10	0.15	0.32
Retail	2.89	3.30	3.00	3.08
Feed in tariff	0.08	0.16	0.24	0.30
Distribution	7.26	8.38	9.08	9.83
Transmission	1.79	1.93	2.07	2.23
Wholesale	8.59	9.34	10.64	10.94

33 ESCOSA, 2009, *2008/09 Annual Performance Report South Australian Energy Supply Industry*, November, pg. 24

Trends in South Australian residential electricity prices over 2009/10 to 2012/13

Residential electricity prices in South Australia are forecast to increase by 31% in nominal terms between 2009/10 and 2012/13, which is an increase of 6.54 c/kWh. 76% of the forecast increase in residential electricity prices over the reporting period is related to increases in wholesale electricity and distribution costs.

Over the 2009/10 to 2012/13 reporting period, wholesale electricity costs are forecast to increase by 27% in nominal terms from 8.59 c/kWh to 10.94 c/kWh. Wholesale costs comprise around 40% of the total residential electricity price in South Australia.

Wholesale electricity costs are highly volatile in South Australia due to high summer peak demands. To assist retailers to accommodate this volatility, the South Australian energy regulator, the Essential Services Commission of South Australia (ESCOSA), has proposed to apply a floor and cap approach to wholesale electricity prices from 2011/12. For instance under ESCOSA's draft determination wholesale energy costs may vary in nominal terms by between 9.84 c/kWh and 11.44 c/kWh over 2011/12 and by between 10.00 c/kWh and 11.88 c/kWh over 2012/13.[34] The average of the floor and cap have been used to derive wholesale electricity costs for this report. Higher expected long run marginal costs of generation in South Australia has resulted in a significant increase in forecast wholesale electricity costs between 2010/11 and 2011/12 of 17%.

As well as highly volatile demand, a number of other factors which are unique to the South Australian electricity market can contribute to higher wholesale costs on average, compared to other jurisdictions. These factors include:

- A relatively small market;
- A high dependence on gas fired generation, which is on average more costly than coal fired generation; and
- Relatively limited interconnection capability, which limits the amount of potentially cheaper electricity than can be imported from other jurisdictions.

As discussed above, increases in the costs of distribution services is the other key drivers in the increasing cost of residential electricity prices in South Australia. Distribution costs are expected to increase by 35% over the reporting period, from 7.26c/kWh to 9.83 c/kWh. Increases in distribution costs comprise 39% of the total forecast increase in residential electricity prices over the reporting period. There is also the potential for distribution costs to change, as the AER's distribution determination for South Australia is currently under merits review by the Australian Competition Tribunal.

Distribution costs in South Australia are forecast to increase as a result of increasing maximum demand and higher rates of return on capital compared to previous

34 ESCOSA's final determination for retail electricity prices in South Australia for the period from 1 January 2011 to 30 June 2014 will be published by 30 November 2010

regulatory periods. Maximum demand is forecast to increase by 2.4% per a year over the 2009/10 to 2014/15 regulatory period. This increase in maximum demand is largely driven by the growing use of air conditioners during summer heatwaves, despite customer consuming less energy on average as a result of energy efficiency programs. As a result, the costs of providing distribution services must be recovered from a smaller volume of electricity sold.

During the current regulatory period, almost 50% of the South Australian electricity distributor's forecast capital expenditure will be driven by increases in demand. In total $1.5 billion in capital expenditure in 2009 dollars is forecast to be spent on the distribution network in South Australia over the current regulatory period, which is an increase of 117% on the level of capital expenditure which was spent in the previous regulatory period.

A higher rate of return on capital compared to previous regulatory periods has also contributed to increasing distribution costs. The rate of return for the South Australian distribution network is 9.76% for the 2010/11 to 2014/15 period. This reflects a slight easing of debt premiums following the Global Financial Crisis, compared to the rates of return that were set for other network businesses in 2009.

Transmission costs are forecast to contribute 7% of the total increase in residential electricity prices over the reporting period, as transmission costs are expected to increase by 25%. This is the result of a 61% increase in capital expenditure over the current regulatory period compared to the precious regulatory period. 39% of forecast capital expenditure on the transmission network will be spent on replacements due to the aging nature of the transmission network. Increased levels of capital expenditure are also required to meet higher transmission reliability standards due to recent changes in the South Australian Transmission Code, which came into effect in July 2008. Similarly to the distribution network, higher rates of return on capital for the transmission network have also contributed to increasing transmission costs.

The impact of the LRET and the SRES are expected to contribute close to 11% of the total increase in residential electricity prices, as a resulted of the expanded RET. Other components of the residential electricity price such as feed in tariffs, retail costs and the Residential Energy Efficiency Scheme are not estimated to drive significant increases in the residential electricity price at this stage. However, AGL has indicated to the jurisdictional regulator that it considers there will be a step change in the cost of the Residential Energy Efficiency Scheme over 2011, as a result of increased compliance and materials costs.[35]

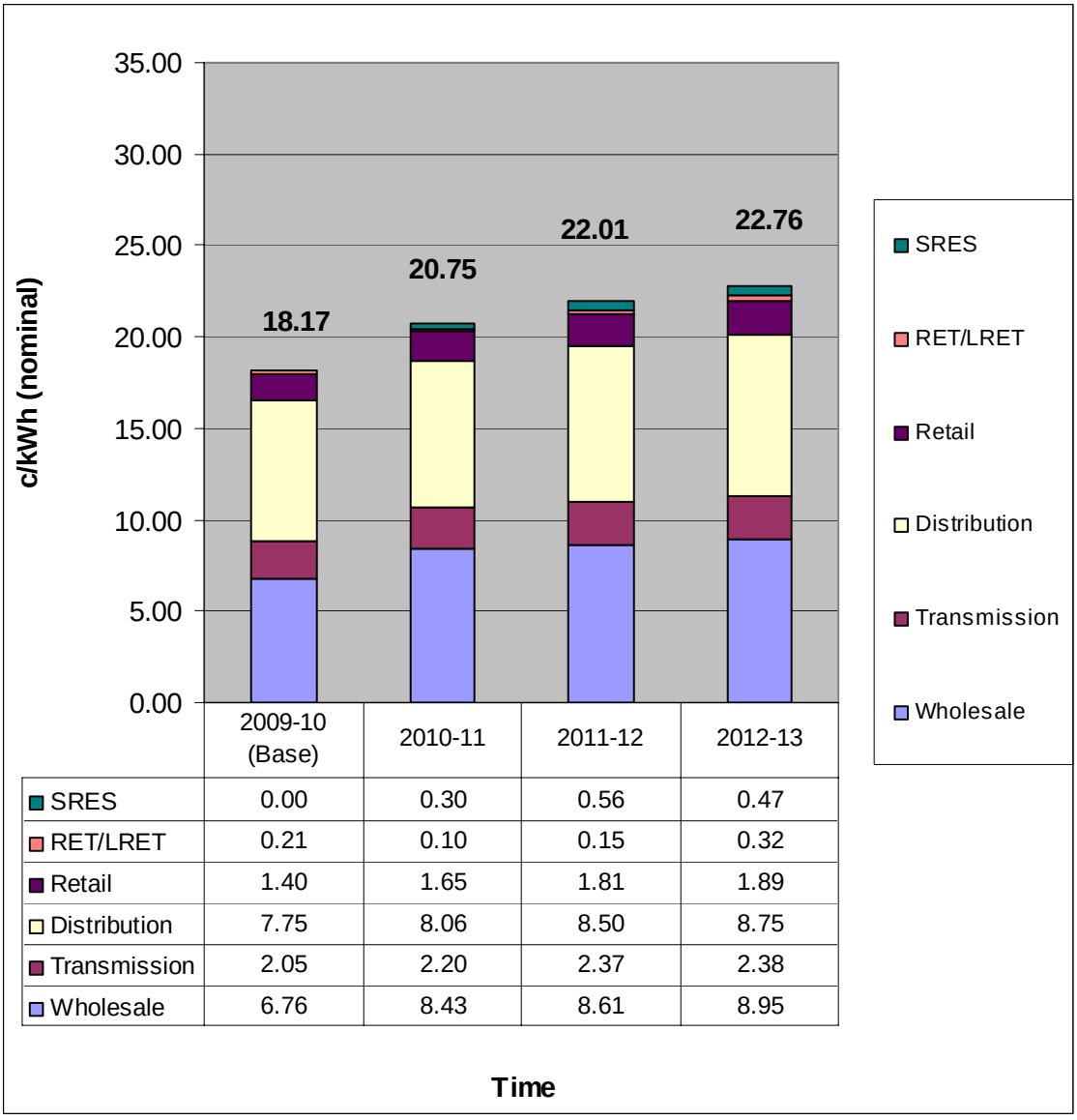
3.2.6 Tasmania

Figure 3.7 sets out future possible residential electricity prices in Tasmania over 2009/10 to 2012/13. It shows estimated actual prices for 2009/10 and forecast residential electricity prices for 2010/11 to 2012/13. Jurisdictional and AER determinations have been used to derive prices for the whole reporting period.

35 AGL, 2010, Submission to the 2010 Electricity Standing Contract Price Path Inquiry, 19 August.

As full retail electricity competition has not yet been introduced for residential electricity customers in Tasmania, currently all residential electricity customers are on standing offer contracts in Tasmania. The Tasmanian Government announced in December 2009 that it would not proceed to full retail contestability for small business and residential customers at this point, but would continually review the costs and benefits of doing so.[36]

Figure 3.7 Tasmania - Future possible residential electricity prices over 2009/10 to 2012/13



	2009-10 (Base)	2010-11	2011-12	2012-13
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.21	0.10	0.15	0.32
Retail	1.40	1.65	1.81	1.89
Distribution	7.75	8.06	8.50	8.75
Transmission	2.05	2.20	2.37	2.38
Wholesale	6.76	8.43	8.61	8.95

Trends in Tasmanian residential electricity prices over 2009/10 to 2012/13

Over 2009/10 to 2012/13, Tasmania's residential electricity prices are forecast to increase by 25% in nominal terms, which is an increase of 4.59 c/kWh. 48% of this

36 Office of the Tasmanian Energy Regulator, 2010, 'Investigation of maximum prices for declared retail electrical services on mainland Tasmania', October, pg. 4.

increase is related to increases in wholesale energy and 22% is related to increases in distribution network costs.

Wholesale costs are forecast to increase by 32% in nominal terms from 6.76 c/kWh to 8.95 c/kWh. In particular, between 2009/10 and 2010/11, wholesale costs are expected to increase by 25% alone in nominal terms. This increase reflects recent changes in Tasmanian regulations, which require the Tasmanian economic regulator to ensure that the Tasmanian retailer is able to recover its purchasing costs for wholesale energy from its regulated retail tariff.[37]

Distribution costs are forecast to increase by 13% in nominal terms over the reporting period from 7.75 c/kWh to 8.75 c/kWh. This increase is related to increased capital expenditure over the current regulatory period, which is forecast to increase by 36% compared to the previous regulatory period. Over the 2008/09 to 2011/12 regulatory period, $631 million in capital expenditure in 2009 dollars is forecast to be spent on the Tasmanian distribution network.

The main drivers of in increasing capital expenditure on the distribution network include increasing customer demand; the need to replace ageing assets, the need to meet higher reliability standards, and higher rates of return on capital compared to previous regulatory periods.

Maximum demand is forecast to increase by 1.8% each year and energy consumption by 1.9% each year over the next 10 years in Tasmania, due to continuing customer demand from new connections, growth in demand from existing connections, and major new commercial developments. Strong economic growth over the last few years has also resulted in reduced spare capacity in many parts of the network, resulting in the need for an expansion in the distribution network.

Replacements on the distribution network is expected to comprise 23% of total capital expenditure on the distribution network over the current regulatory period. This is a significant increase in capital expenditure for the distribution network, which is forecast to spend approximately 80% more capital expenditure on replacements each year compared to the last two years of the previous regulatory period. Higher reliability standards in the Tasmanian Electricity Code for distribution have also required augmentations in a number of Tasmania's regional centres.

Retail costs are forecast to contribute 11% of the expected increase in residential electricity prices over the reporting period. As retail operating costs are not expected to increase in real terms over the reporting period, this increase appears to be related to an increase in the value of the retail margin. As the retail margin comprises 3.8% of the total standing offer price, increases in the costs of residential electricity prices will serve to increase the value of the retail margin.

Transmission costs are expected to contribute 7% of the expected increase in residential electricity prices. This is the result of a 70% increase in capital expenditure compared to the previous regulatory determination and a high rate of return on capital of 10.04%.

Capital expenditure on the transmission network is forecast to increase as a result of increased replacement expenditure, increases in the Tasmanian reliability standards for transmission, and higher input costs due to the minerals boom.

Increases in the RET are forecast to contribute around 12% of the expected increase in residential electricity prices. This increase represents forecast changes to the RET scheme, to split the scheme into the LRET and the SRES. Between 2010/11 to 2012/13, the cost of complying with the RET has been forecast to increase from $11.54 million to $19.96 million in 2010/11 dollars by the Tasmanian jurisdictional regulator.[38]

There are no feed in tariff schemes or any other additional State based schemes which contribute to the total residential electricity price in Tasmania.

3.2.7 Western Australia

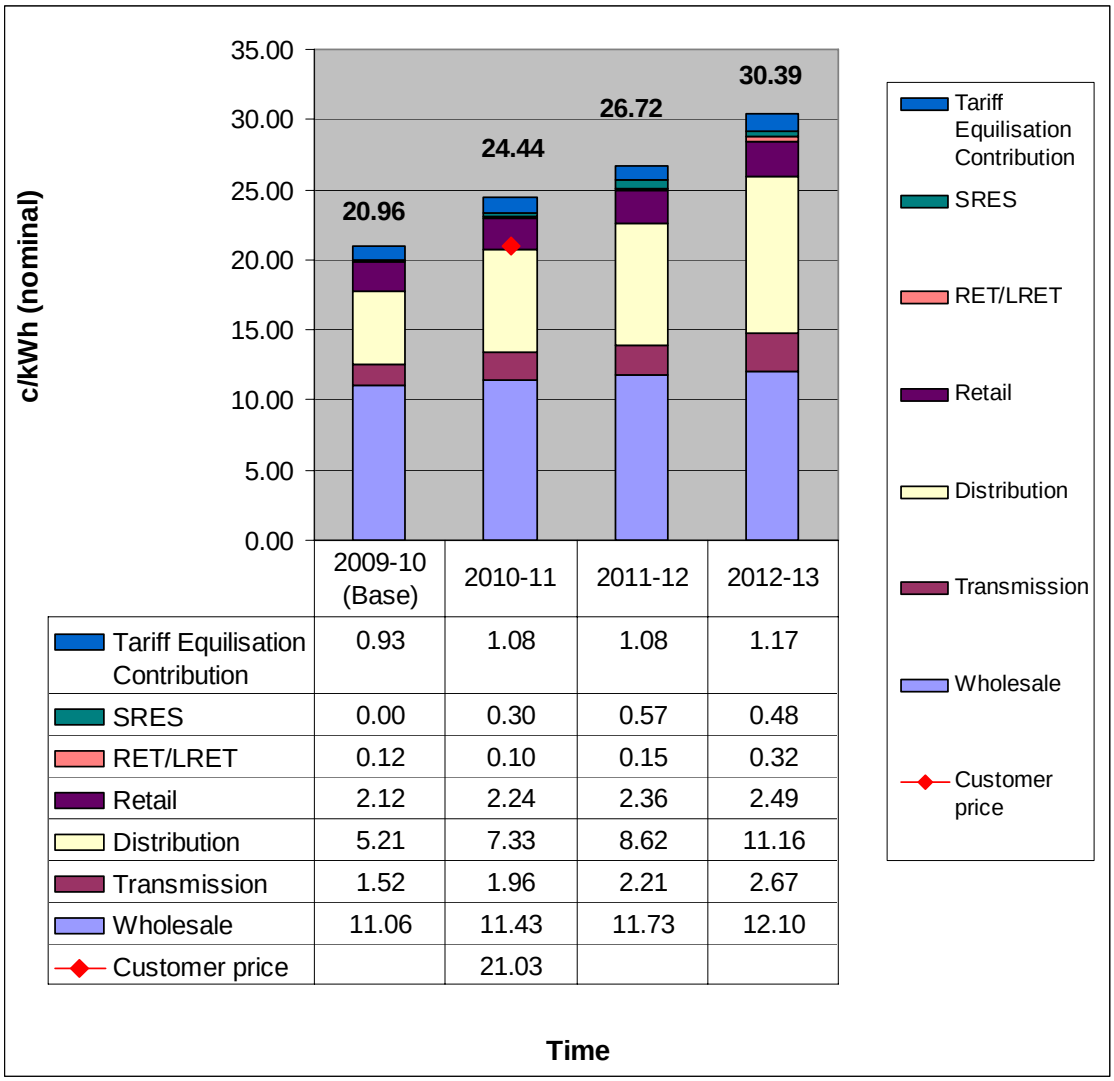
Figure 3.8 sets out an indication of the actual costs of providing residential electricity services in Western Australia over 2009/10 to 2012/13. It shows estimated actual cost of providing services for 2009/10 and forecast costs for 2010/11 to 2012/13. All cost components for 2012/13 have been estimated based on trends in each cost component in Western Australia for the previous three years, as prices for 2012/13 have not been determined by the Western Australian Government.

As full retail competition is yet to be introduced in Western Australia for residential electricity customers, all residential electricity customers in Western Australia remain on standing offer contracts. The Office of Energy in Western Australia will commence a review of the costs and benefits of introducing further retail contestability in electricity, including full retail contestability, in early 2011.

37 Premier Bartlett, 2010, 'Ministerial Statement on Energy', 16 June, pg. 12.

38 Office of the Tasmanian Energy Regulator, 2010, 'Investigation of maximum prices for declared retail electrical services on mainland Tasmania', October, pg. 105.

Figure 3.8 **WA - Actual costs of providing residential electricity services over 2009/10 to 2012/13**



	2009-10 (Base)	2010-11	2011-12	2012-13
Tariff Equilisation Contribution	0.93	1.08	1.08	1.17
SRES	0.00	0.30	0.57	0.48
RET/LRET	0.12	0.10	0.15	0.32
Retail	2.12	2.24	2.36	2.49
Distribution	5.21	7.33	8.62	11.16
Transmission	1.52	1.96	2.21	2.67
Wholesale	11.06	11.43	11.73	12.10
Customer price		21.03		

Trends in WA residential electricity supply costs over 2009/10 to 2012/13

The forecast data in figure 3.8 above was provided by the WA Government and represents the actual cost of providing residential electricity services in the SWIS. The WA Government is currently reviewing these costs. The prices that customers pay are significantly lower than the actual cost of providing these services, as the WA Government provides a tax payer funded community service obligation (CSO) payment to the retailers to fund the difference between the actual cost of supplying energy in the SWIS and the price paid by consumers.

In addition to the CSO payment provided by the WA Government, customers in the SWIS also pay a contribution, the Tariff Equilisation Contribution (TEC). The TEC is used to fund the difference between the cost of supplying electricity in the SWIS and the cost of supplying electricity outside the SWIS and comprises approximately 4% of the cost stack for the supply of electricity to residential customers in the SWIS.

Together the WA Government's CSO payments and the TEC ensure that there a uniform price for residential electricity services across WA.

The WA Government has estimated that the current residential electricity price is 21.03 c/kWh in the SWIS, which is approximately 16% less than the actual cost of providing residential electricity services. In April and July 2010, retail electricity tariffs were increased by 7.5% and 10% respectively by the WA Government. These increases followed increases in retail electricity tariffs in April and July 2009 of 10% and 15% respectively, to bring tariffs closer to cost reflective levels. Prior to these increases in 2009 and 2010, the retail electricity tariff had not increased for over 10 years in WA. It is uncertain whether retail electricity tariffs will increase further over the reporting period as retail electricity tariffs are at the discretion of the WA Government.

Over the 2009/10 to 2012/13 period, the actual cost of providing residential electricity services is forecast to increase by 45% in nominal terms, which is an increase of 9.43 c/kWh.

75% of the forecast increase in the costs of supplying electricity to residential customers over the reporting period is related to increases in the costs of network services. Distribution services are forecast to contribute 63% of the total increase in residential electricity supply costs, while transmission services are expected to contribute 12% of the total increase in supply costs. Between 2009/10 and 2011/12, distribution services will increase by 65% in nominal terms, while transmission costs will increase by 45%. If this trend continues in 2012/13, distribution costs would increase by a further 30% and transmission costs by a further 21% between 2011/12 and 2012/13.

The main drivers in the cost of transmission and distribution services in WA over the reporting period include:

- A 31% increase in operational and maintenance costs in the current regulatory determination, due to activities such as the planned inspection and maintenance of wood poles and the need to address a backlog of maintenance works;
- A 50% increase in capital expenditure compared to the previous regulatory determination, which is largely driven by increases in customer demand;
- Higher than forecast capital expenditure in the previous regulatory determination, which has lead to a higher return on capital and depreciation allowance in the current regulatory determination. Actual investment in the previous regulatory determination was 53% higher than forecast;
- Increases in the TEC, which has increased from $213 million in the previous regulatory determination to $479 million in the current regulatory determination. The TEC comprises approximately 23% of the revenue requirement for the current regulatory determination for the WA distribution network; and
- Higher rates of return on capital compared to previous regulatory determinations, due to increases in the cost of debt financing following the Global Financial Crisis. The rate of return has increased from 6.76% in real pre-

tax terms in the last regulatory determination to 7.98% in real pre-tax terms in the current regulatory determination.

Wholesale costs are expected to contribute 11% of the expected increase in residential electricity supply costs over the reporting period. Wholesale electricity prices in WA are forecast to increase by 9% over the reporting period.

However, as wholesale electricity costs are relatively high in WA, the impact of increasing wholesale prices has a greater impact on the residential electricity price. The differential between wholesale electricity prices in WA and other jurisdictions is the result of higher coal and gas costs, the small scale of the WA market, and higher labour and materials costs.

Coal and gas costs are higher in WA compared to other jurisdictions due to competition for these resources with the mining industry and strong international demand for LNG. As coal prices typically shadow gas prices in WA, the difference between coal and gas prices remains smaller than in other jurisdictions. The relatively small scale of the WA market, which is not inter-connected with the rest of the country, also results in higher wholesale electricity costs as all of WA's demand must be met from generation within WA. The small WA market has also resulted in relatively small scale new capacity, which limits the economies of scale which can be achieved with larger generating units. Labour and materials costs are also generally higher in WA, due to the commodities boom.

The impact of the LRET and the SRES is expected to contribute around 7% of the expected increase in residential electricity supply costs, as a result of the expansion in the target from the MRET to the RET.

Other components of the cost stack for residential electricity supply in WA such as the TEC and retail costs are not expected to have a significant impact on overall movements in the cost of providing residential electricity services over the reporting period.

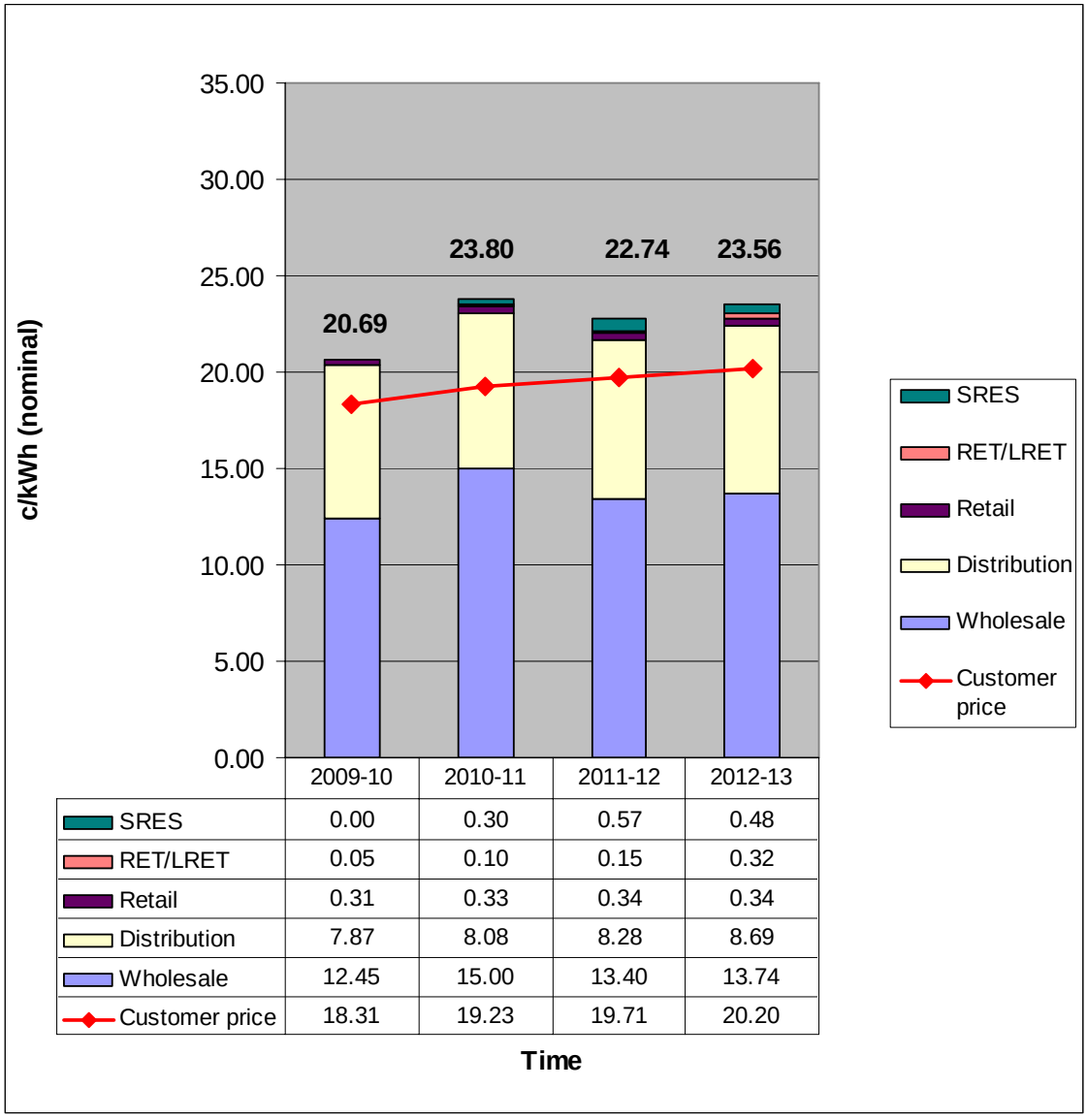
3.2.8 Northern Territory

Figure 3.9 sets out an indication of the actual costs of providing residential electricity services in the NT over 2009/10 to 2012/13. It shows the estimated actual cost of providing services for 2009/10 and forecast costs for 2010/11 to 2012/13. Data on each cost component for the whole reporting period was provided by the NT Government. As residential electricity prices in the NT are not cost reflective, figure 3.9 sets out both the actual cost of providing residential electricity services and the prices that end use residential customers may pay.

Full retail contestability was introduced in the NT on 1 April 2010. However, as yet no new retailers have entered the retail electricity market. The NT Utilities Commission has recommended that further supporting frameworks may be required to create the necessary conditions to create a competitive retail electricity market, particularly in

light of the small size of the market.[39] As a result, it is likely that the majority of residential customers in the NT remain on regulated tariffs.

Figure 3.9 NT- Actual costs of providing residential electricity services over 2009/10 to 2012/13



	2009-10	2010-11	2011-12	2012-13
SRES	0.00	0.30	0.57	0.48
RET/LRET	0.05	0.10	0.15	0.32
Retail	0.31	0.33	0.34	0.34
Distribution	7.87	8.08	8.28	8.69
Wholesale	12.45	15.00	13.40	13.74
Customer price	18.31	19.23	19.71	20.20

Trends in NT residential electricity prices over 2009/10 to 2012/13

The prices that residential electricity customers pay in the NT are approximately 13% to 24% less than the actual cost of providing retail electricity services. Subsidies by the NT Government limit the prices paid by retail electricity customers and also ensures that households and small to medium businesses pay a uniform tariff across the NT.

39 Northern Territory Utilities Commission, *Review of full retail contestability for Northern Territory electricity customers,* December, pg. 6.

Retail electricity prices for small customers are set by the Regulatory Minister by issuing Electricity Pricing Orders. In 2009, the Regulatory Minister announced the following increases in residential electricity prices:

- 18% in 2009-10;
- 5% in 2010-11; and
- Consumer price index (CPI) in 2011-12.

In data provided by the NT Government, residential electricity prices for 2012/13 have been escalated by CPI.

Over the 2009/10 to 2012/13 reporting period, the actual cost of providing residential electricity services is expected to increase by 14%, which is an increase of 2.87 c/kWh.

The key drivers in the costs of residential electricity prices over the reporting period relate to the need for increased capital expenditure in generation and distribution infrastructure. Wholesale electricity costs comprise between 68% and 78% of the price paid by customers, and are expected to contribute 45% of the expected increase in the cost of providing residential electricity services. Distribution costs comprise approximately 38% of the price paid by customers, and are forecast to contribute 28% of the of the increase in cost of residential electricity services over the reporting period.

Power and Water Corporation, the integrated provider of electricity generation, network and retail services in the Northern Territory, has estimated that approximately $1.3 billion in infrastructure investment is required over the next five years, in addition to $311 million in repairs and maintenance. Over 2010/11 a number of capital works are planned by Power and Water including:

- The installation of two new turbines at Channel Island Power Station at a cost of $120 million, which will provide an additional 90 MW to the Darwin-Katherine grid. This will allow refurbishment to occur to existing infrastructure, while meeting increasing electricity demand;
- The commissioning of three new engines at Owen Springs Power Station at a cost of $126 million, to meet future demand in Alice Springs;
- The completion of the new Archer zone substation at a cost of $27 million, which will provide secure power supplies to the growing city of Palmerston; and
- The implementation of an asset management capability project to improve information systems on the condition of assets to provide greater reliability.[40]

Over the 2009/10 to 2013/14 regulatory determination, the NT Utilities Commission has approved a 3.4% real average annual increase in network prices. This increase is the result of an expected rise in Power and Water's network input costs and an under-funding of Power and Water's costs during the previous regulatory determination, as

40 Power and Water Corporation, 2010, *Annual Report- 2010*, pp. 5, 7.

input prices in the energy sector increased at a higher rate than was forecast The Utilities Commission has estimated that approximately one third of Power and Water's projected capital works program on the NT's distribution network over the next five years is of a remedial nature, following past poor asset management practices and the diversion of financing away from the maintenance and renewal of existing network assets.[41]

Further increases in capital expenditure on the distribution network over the current regulatory determination are also expected, as Power and Water implements measures from the Davies Enquiry. The Davies Enquiry was established by the NT Government in response to concerns about the continued security of supply to the northern suburbs of Darwin, following a series of equipment failures at the Casuarina Zone Substation and surrounding network in late September and early October 2008. The enquiry made 11 recommendations to improve maintenance effectiveness, asset management, and leadership and supervision. The NT Government has indicated that Power and Water will implement all of the recommendations from the Davies Enquiry.

Power and Water Corporation had also indicated that there is likely to be a significant increase in its operational and maintenance costs over the current regulatory determination. In addition to higher materials and equipment costs, it considers its operational and maintenance costs will increase as a result of:

- Real wages growth because of a tight labour market;
- The ageing nature of its infrastructure, which requires increased expenditure to maintain reliability and security of supply; and
- Increasing demand for electricity, particularly in the Darwin area.[42]

The LRET and the SRES are forecast to contribute close to 26% of the total increase in the cost of providing residential electricity prices, as a result of the expansion in the target from the MRET to the RET.

41 Northern Territory Utilities Commission, 2009, Final Determination - Networks pricing: 2009 regulatory reset, March, pg. 23.

42 Northern Territory Utilities Commission, 2009, Final Determination - Networks pricing: 2009 regulatory reset, March, pg. 67.

Abbreviations

ACT	Australian Capital Territory
AEMC	Australian Energy Market Commission
CPI	Consumer price index
CSO	Community Service Obligation
ERA	Economic Regulatory Authority
ESCOSA	Essential Services Commission of South Australia
LRET	Large scale Renewable Energy Target
NEM	National Electricity Market
NT	Northern Territory
OTTER	Office of the Tasmanian Energy Regulator
RET	Renewable Energy Target
SRES	Small scale Renewable Energy Scheme
SWIS	South West Interconnected System
TEC	Tariff Equilisation Contribution
WA	Western Australia

A Data sources and methodology

This Appendix sets out the data sources and methodologies used to derive the future possible residential electricity prices in this report for each state and territory. The jurisdictions were consulted on the AEMC's proposed approach, data sources and methodology in late September 2010, and the comments that were received have been taken into account in preparing this report.

A.1 Queensland

Table A.1 Data sources and methodologies used for Queensland residential electricity prices

Data type	Data source
Wholesale energy costs	For 2009/10 and 2010/11, wholesale costs (including other purchase costs such as ancillary services, AEMO fees etc) were derived from the Queensland Competition Authority's (QCA's) 'Benchmark Retail Cost Index for Electricity' for 2009/10 and 2010/11. For 2011/12 and 2012/13, wholesale costs were estimated. Market prices were modelled by external consultants for these years. These prices were then combined with the long run marginal cost in the QCA's determination for 2010/11 using the same methodology that was adopted by the QCA in its determination.
Transmission costs	For 2009/10, 2010/11 and 2011/12, transmission costs were provided by the AER based on its existing Queensland transmission determination. For 2012/13, transmission costs were estimated by escalating transmission costs in 2011/12 by the national trend in transmission costs between 2011/12 and 2012/13.
Distribution costs	For the whole reporting period, distribution costs were provided by the AER based on its Queensland distribution determination.
Retail costs	For 2009/10 and 2010/11, retail operating costs (including customer acquisition and retention costs) were derived from the QCA's 'Benchmark Retail Cost Index for Electricity' for 2009/10 and 2010/11. The retail margin of 5% was re-calculated by the AEMC on the total residential electricity cost, in accordance with the QCA's determination. This margin was recalculated

Data type	Data source
	to take into account the distribution and transmission data provided by the AER, which has been updated since the QCA made its determination. For 2011/12 and 2012/13, retail operating costs were estimated by escalating retail costs by the national trend in retail costs for 2011/12 and 2012/13.
Feed in tariff costs	The Queensland Government has advised that no feed in tariff costs were passed through to consumers during 2009/10. Feed in tariff costs for 2010/11, 2011/12 and 2012/13 were derived using the feed in tariff payment costs and administrative costs in the AER's existing distribution determination for Energex and Ergon Energy. These figures were then converted to a c/kWh figure by dividing the AER approved costs of the scheme for each distributor by the forecast energy consumption for each relevant year. To convert the AER's figures which were in 2009/10 dollars to nominal dollars, the CPI assumptions in the AER's Queensland distribution determination were used. The c/kWh impact of the feed in tariff was then subtracted from the distribution costs provided by the AER, to ensure these costs were not double counted as feed in tariff costs are recovered through the distribution charge.
RET/LRET and SRES costs	For 2009/10, RET costs were sourced from the QCA's determination. For 2010/11 onwards LRET and SRES costs were provided by the Commonwealth Department of Energy Efficiency and Climate Change. These figures were converted to nominal terms using the CPI figures in the AER's distribution determination.
Queensland Gas Scheme costs	Costs for the Queensland Gas Scheme for 2009/10 and 2010/11 were sourced from the QCA's 'Benchmark Retail Cost Index for Electricity' for 2009/10 and 2010/11. For 2011/12 and 2012/13, Queensland Gas Scheme costs were estimated on the basis of modelling by external consultants.
State residential electricity prices	For 2009/10 and 2010/11, the state residential electricity price reflects the Tariff 11 residential electricity tariff provided by the

Data type	Data source
	Queensland Government. For 2011/12 and 2012/13, a state average was derived by weighting the cost of providing residential electricity services in Energex's and Ergon Energy's distribution areas. A state average was then calculated by the number of residential customers in each distribution area to derive a weighted state average. The number of residential customers by distribution area was provided by the AER.
Average annual residential consumption data	The average annual residential consumption figure was provided by the AER.

A.2 New South Wales

Table A.2 Data sources and methodologies used for NSW residential electricity prices

Data type	Data source
Wholesale energy costs	For the whole reporting period wholesale costs (including other purchase costs such as ancillary services, AEMO fees etc) were derived from the Independent Pricing and Regulatory Tribunal's 'Review of regulated retail tariffs and charges for electricity 2010-2013' (IPART's determination). Costs associated with the introduction of the Carbon Pollution Reduction Scheme that were included in IPART's report were not included in this report. To derive nominal figures from IPART's figures which were in 2009/10 dollars, the CPI figures contained in the AER's NSW distribution determination were used.
Transmission costs	Transmission costs were provided by the AER for the whole reporting period based on its NSW transmission determination.
Distribution costs	Distribution costs were provided by the AER for the whole reporting period based on its existing NSW distribution determination.
Retail costs	For the whole reporting period, retail operating costs (including customer acquisition and retention costs) were derived from IPART's determination. A retail margin of 5% for 2009/10 and 5.4% for 2010/11, 2011/12 and 2012/13 was recalculated on the total residential electricity price, which is

Data type	Data source
	in accordance with the margin and methodology specified in IPART's determination. This recalculated margin took into account updated distribution and transmission costs provided by the AER.
Feed in tariff costs	Feed in tariff costs for NSW were derived from modelling published by the NSW Government. This modelling report, 'Solar Bonus Scheme - Forecast NSW PV Capacity and Tariff Payments' was undertaken by AECOM for the NSW Government. The modelling scenario that was used to derive the feed in tariff costs is set out in Table A.19 of AECOM's report, which outlined forecast feed in tariff payments based on the continuation of the 60c/kWh payment until the end of December 2010 and then a gross feed in tariff of 20c/kWh with a 300 MW scheme cap and moderate take up. This scenario is the closest scenario that was modelled to the recent changes to the feed in tariff scheme that were adopted by the NSW Government. The total forecast payments in AECOM's report were then apportioned to each distributor in NSW based on the number of PV system connections in each distribution area, which were outlined in AECOM's report. The payments for each distributor were then divided by forecast energy consumption for each distributor, as outlined in the AER's NSW distribution determination, to derive a c/kWh impact. A state average was derived using the methodology discussed below. However, the timing and amount of costs passed through will depend on the submission of an application for pass through by NSW distributors to the AER. For EnergyAustralia, admin costs associated with the feed in tariff were also included in the forecast of feed in tariff costs. These admin costs were based on the pass through costs proposed by EnergyAustralia to the AER in its 'Solar bonus scheme cost pass through application'.
RET/LRET and SRES costs	For 2009/10, RET costs were sourced from IPART's determination. For 2010/11 onwards LRET and SRES costs were provided by the Commonwealth Department of Energy Efficiency and Climate Change. These figures were converted to nominal terms using the CPI figures in the AER's distribution determination.

Data type	Data source
Greenhouse Gas Scheme costs	Greenhouse Gas Scheme costs were derived from IPART's determination for 2009/10. To derive nominal figures from IPART's figures which were in 2009/10 dollars, the CPI figures contained in the AER's NSW distribution determination were used. For 2010/11, 2011/12 and 2012/13, Greenhouse Gas Scheme costs were estimated by applying the CPI figures contained in the AER's NSW distribution determination to the Scheme costs in 2009/10. These costs were estimated as IPART's determination assumed that the Scheme would end at the beginning of 2011 when the Carbon Pollution Reduction Scheme was implemented. As this is not expected to occur, costs for the Greenhouse Gas Scheme costs were estimated for the remaining years of the reporting period. It is understood that IPART will review GGAS compliance costs next year as part of its annual review of the wholesale cost allowance. IPART assesses the long run marginal cost of meeting the GGAS target, having regard to the surplus of NSW Greenhouse Abatement Certificates in estimating compliance costs.
Energy Saving Scheme costs	For the whole reporting period, Energy Saving Scheme costs were derived from IPART's determination. To derive nominal figures from IPART's figures which were in 2009/10 dollars, the CPI figures contained in the AER's NSW distribution determination were used.
State residential electricity prices	A state average of NSW's residential electricity prices was derived by using the residential electricity prices for each NSW distribution area for the whole reporting period. A state average was then calculated by the number of residential customers in each NSW distributor's distribution area to derive a weighted state average. The number of residential customers by distribution area was provided by the AER.
Average annual residential consumption data	The average annual residential consumption figure was provided by the AER.

A.3 Victoria

Table A.3 Data sources and methodologies used for Victorian residential electricity prices

Data type	Data source
Wholesale energy costs	For 2009, the wholesale costs were estimated by using modelling of the long run marginal cost of generation in Victoria, which was provided by external consultants. The long run marginal cost was then escalated by the hedging factor used in the ACT's Independent Competition and Regulatory Authority's 'Retail Prices for Non-contestable Electricity Customers 2010-2012'. For 2010, 2011, 2012, and 2013 wholesale costs were estimated by using modelled trends in Victoria's wholesale electricity market prices by external consultants. These trends were applied to the wholesale cost in 2009.
Transmission costs	Transmission costs were provided by the AER for the whole reporting period based on its Victorian transmission determination.
Distribution costs	Distribution costs were provided by the AER for the whole reporting period based on the Essential Services Commission of Victoria's (ESCV's) distribution determination for 2009 and 2010 and the AER's distribution determination for 2011, 2012 and 2013.
Metering costs	Metering costs were provided by the AER for 2009, 2010 and 2011. The 2009 costs were derived from the ESCV's distribution determination. The 2010 and 2011 costs were derived from the AER's advanced metering infrastructure charges determination. Metering costs for 2012 and 2013 were estimated by applying forecast CPI figures in the AER's distribution determination to the 2011 metering costs for each distributor.
Feed in tariff costs	Feed in tariff costs for 2010 were provided by the AER. Feed in costs for 2011 and 2012 were provided by the Victorian Government. For 2013, feed in tariff costs were estimated by applying CPI figures in the AER's distribution determination to the 2012 figures.
Retail costs	Retail costs were estimated by subtracting estimated wholesale costs and network costs provided by the AER from the standing offer price for 2009 and 2010. For 2009, the

Data type	Data source
	standing offer price in last year's, 'Possible Electricity Price Movements: 1 July 2009 to 30 June 2012' report was used. For 2010, standing offer prices for the three retailers with the largest market share in Victoria (AGL, Origin Energy and TRUenegry) in each of the five distribution areas were used. An average standing offer price for each distribution area was then calculated and these averages were weighted by the number of residential electricity customers in each distribution area to derive the Victorian 2010 standing offer price. For 2011, 2012, and 2013 retail costs were estimated by escalating retail operating costs by the national trend in retail costs for those years.
RET/LRET and SRES costs	For 2009 RET costs were modelled by an external consultant. For 2010 onwards LRET and SRES costs were provided by the Commonwealth Department of Energy Efficiency and Climate Change. These figures were converted to nominal terms using the CPI figures in the AER's distribution determination.
State residential electricity prices	A state average of Victorian residential electricity prices was derived by using the residential electricity prices for each Victorian distribution area for 2010. A state average was then calculated by the number of residential customers in each Victorian distributor's distribution area to derive a weighted state average. The number of residential customers by distribution area was provided by the AER. The state average of Victorian network prices for 2009, 2011, 2012, and 2013 was derived in the same way.
Average annual residential consumption data	The average annual residential consumption figure was provided by the AER.

A.4 Australian Capital Territory

Table A.4 Data sources and methodologies used for ACT residential electricity prices

Data type	Data source
Wholesale energy costs	For 2009/10 and 2010/11 wholesale costs

Data type	Data source
	(including other purchase costs such as ancillary services, AEMO fees etc) were derived from the Independent Competition and Regulatory Authority's (ICRC's) 'Retail Prices for Non-contestable Electricity Customers 2010-2012' report. For 2011/12 and 2012/13, wholesale costs were modelled by external consultants. These costs were then escalated by the hedging factor used by the ICRC in its most recent determination.
Transmission costs	Transmission costs were provided by the AER for the whole reporting period based on its NSW transmission determination for Transgrid.
Distribution costs	Distribution costs were provided by the AER for the whole reporting period based on its existing ACT distribution determination.
Retail costs	For 2009/10 and 2010/11, retail operating costs were derived from the ICRC's determination. A retail margin of 5% for 2009/10 and 5.4% for 2010/11 was recalculated on the total residential electricity price, which is in accordance with the margin and methodology specified in ICRC's determination. This recalculated margin took into account updated distribution and transmission costs provided by the AER. For 2011/12 and 2012/13, retail costs were estimated by escalating retail operating costs by the national trend in retail costs for 2011/12 and 2012/13.
Feed in tariff costs	Feed in tariff costs for the whole reporting period were derived using the feed in tariff payment costs and administrative costs in the AER's distribution determination for ActewAGL. These figures were then converted to a c/kWh figure by dividing the AER approved costs of the scheme for by the forecast energy consumption for each relevant year. To convert the AER's figures which were in 2009/10 dollars to nominal dollars, the CPI assumptions in the AER's ACT distribution determination were used. The c/kWh impact of the feed in tariff was then subtracted from the distribution costs provided by the AER, to ensure these costs were not double counted as feed in tariff costs are recovered through the distribution

Data type	Data source
	charge.
RET/LRET and SRES costs	For 2009/10, RET costs were sourced from the ICRC's determination. For 2010/11 onwards LRET and SRES costs were provided by the Commonwealth Department of Energy Efficiency and Climate Change. These figures were converted to nominal terms using the CPI figures in the AER's distribution determination
Greenhouse Gas Reduction Scheme costs	For 2009/10 and 2010/11, Scheme costs were sourced from the ICRC's determination. For 2011/12 and 2012/13, Scheme costs were derived by applying the CPI figures in the AER's distribution determination to the 2010/11 Scheme costs.
Average annual residential consumption data	The average annual residential consumption figure was provided by the AER.

A.5 South Australia

Table A.5 Data sources and methodologies used for South Australia residential electricity prices

Data type	Data source
Wholesale energy costs	For 2009/10, wholesale costs (including other purchase costs such as ancillary services, AEMO fees etc) were derived from the Essential Services Commission of South Australia's (ESCOSA's) '2007 Review of Retail Electricity Standing Contract Price Path: Final inquiry report and price determination'. As the wholesale costs in this report were based on quarters (rather than financial years), an average of the relevant quarters was used to derive the 2009/10 wholesale cost. To derive nominal figures from ESCOSA's figures, the CPI figures from the Australian Bureau of Statistics were used for 2009/10. For 2010/11, wholesale costs (including other purchase costs such as ancillary services, AEMO fees etc) were derived from ESCOSA's '2007 Review of Retail Electricity Standing Contract Price Path: Final inquiry report and price determination' and ESCOSA's '2010 Review of Retail Electricity Standing Contract Price Path: Draft inquiry report and draft price determination', as the 2010/11 year was split between these two determinations. Averages of quarters was

Data type	Data source
	used to derive figures for July to December 2010 and then this was then averaged again with figures for the January to June 2011 period. To derive nominal figures from ESCOSA's figures, the CPI figures contained in the AER's SA distribution determination were used. For 2011/12 and 2012/13, wholesale costs (including other purchase costs such as ancillary services, AEMO fees etc) were derived from the ESCOSA's '2010 Review of Retail Electricity Standing Contract Price Path: Draft inquiry report and draft price determination'. As the wholesale costs for these years are expressed in ranges in this report, the average of the ranges was used. To derive nominal figures from ESCOSA's figures, the CPI figures contained in the AER's SA distribution determination were used.
Transmission costs	Transmission costs were provided by the AER for the whole reporting period based on its SA transmission determination.
Distribution costs	Distribution costs were provided by the AER for the whole reporting period based on its existing SA distribution determination.
Retail costs	For 2009/10, retail operating costs were derived from the ESCOSA's '2007 Review of Retail Electricity Standing Contract Price Path: Final inquiry report and price determination'. As the retail operating costs in this report were based on quarters (rather than financial years), an average of the relevant quarters was used to derive the 2009/10 retail operating cost. To derive nominal figures from ESCOSA's figures, the CPI figures from the Australian Bureau of Statistics were used for 2009/10. A retail margin of 10% was recalculated based on the nominal retail operating costs and the wholesale costs in accordance with the methodology in ESCOSA's report. For 2010/11, retail operating costs were derived from ESCOSA's '2007 Review of Retail Electricity Standing Contract Price Path: Final inquiry report and price determination' and ESCOSA's '2010 Review of Retail Electricity Standing Contract Price Path: Draft inquiry report and draft price determination', as the 2010/11 year was split between these two determinations. Averages of quarters was used to derive figures for July to December 2010 and then this was then averaged again with figures for the January

Data type	Data source
	to June 2011 period. To derive nominal figures from ESCOSA's figures, the CPI figures contained in the AER's SA distribution determination were used. A retail margin of 10% was recalculated based on the nominal retail operating costs and the wholesale costs in accordance with the methodology in ESCOSA's report. For 2011/12 and 2012/13, retail operating costs were derived from the ESCOSA's '2010 Review of Retail Electricity Standing Contract Price Path: Draft inquiry report and draft price determination'. As the retail operating costs for these years are expressed in ranges in this report, the average of the ranges was used. To derive nominal figures from ESCOSA's figures, the CPI figures contained in the AER's SA distribution determination were used. A retail margin of 10% was recalculated based on the nominal retail operating costs and the wholesale costs in accordance with the methodology in ESCOSA's report.
Feed in tariff costs	Feed in tariff costs for SA were provided by the SA Government for the whole reporting period. These costs were based on data provided in ETSA Utilities' Regulatory Proposal 2010-2015. The costs take into account the changes to the scheme that were announced by the SA Government which are intended to be effective as of 1 January 2011, but are yet to pass the SA Parliament
RET/LRET and SRES costs	For 2009/10, the RET costs in last year's, 'Possible Electricity Price Movements: 1 July 2009 to 30 June 2012' report was used, as no RET costs had been estimated in ESCOSA's 2007 determination. For 2009/10, RET costs were sourced from IPART's determination. For 2010/11 onwards LRET and SRES costs were provided by the Commonwealth Department of Energy Efficiency and Climate Change. These figures were converted to nominal terms using the CPI figures in the AER's distribution determination.
Average annual residential consumption data	The average annual residential consumption figure was provided by the AER.

A.6 Tasmania

Table A.6 Data sources and methodologies used for Tasmanian residential electricity prices

Data type	Data source
Wholesale energy costs	For the whole reporting period wholesale costs (including other purchase costs such as ancillary services, AEMO fees etc) were provided by the Office of the Tasmanian Energy Regulator (OTTER), based on its '2010 Investigation of maximum prices for declared retail services on mainland Tasmania' (for 2011/12 and 2012/13) and its '2007 Investigation to determine maximum prices for distribution services and retail services' (for 2009/10 and 2010/11). To derive nominal figures from OTTER's figures which were in 2010/11 dollars, the CPI figures contained in OTTER's determinations were used for 2011/12 and 2012/13 and CPI figures from the Australian Bureau of Statistics was used for 2009/10.
Transmission costs	Transmission costs were provided by the AER for the whole reporting period based on its existing Tasmanian transmission determination.
Distribution costs	Distribution costs were provided by the AER for 2009/10, 2010/11 and 2011/12 based on OTTER's existing Tasmanian distribution determination. For 2012/13, distribution costs were derived by subtracting known transmission costs from the network cost allowance for 2012/13, which was provided by OTTER.
Retail costs	For the whole reporting period all retail costs were provided by OTTER, based on its '2010 Investigation of maximum prices for declared retail services on mainland Tasmania' (for 2011/12 and 2012/13) and its '2007 Investigation to determine maximum prices for distribution services and retail services' (for 2009/10 and 2010/11. To derive nominal figures from OTTER's figures which were in 2010/11 dollars, the CPI figures contained in OTTER's determinations were used for 2011/12 and 2012/13 and CPI figures from the Australian Bureau of Statistics was used for 2009/10.
RET/LRET and SRES costs	For 2009/10, RET costs were sourced from OTTER. For 2010/11 onwards LRET and

Data type	Data source
	SRES costs were provided by the Commonwealth Department of Energy Efficiency and Climate Change. These figures were converted to nominal terms using the CPI figures in OTTER's retail pricing determination.
Average annual residential consumption data	The average annual residential consumption figure was provided by the AER.

A.7 Western Australia

Table A.7 Data sources and methodologies used for the WA residential electricity prices

Data type	Data source
Wholesale energy costs	Wholesale energy costs for 2009/10, 2010/11 and 2011/12 were provided by the WA Government. For 2012/13, wholesale costs were estimated by escalating the costs in 2011/12 by the trend in WA wholesale costs between 2009/10 and 2011/12.
Transmission costs	Transmission costs for 2009/10, 2010/11 and 2011/12 were provided by the WA Government. For 2012/13, transmission costs were estimated by escalating the costs in 2011/12 by the trend in WA transmission costs between 2009/10 and 2011/12..
Distribution costs	Distribution costs for 2009/10, 2010/11 and 2011/12 were provided by the WA Government. For 2012/13, distribution costs were estimated by escalating the costs in 2011/12 by the trend in WA distribution costs between 2009/10 and 2011/12.
Retail costs	Retail costs for 2009/10, 2010/11 and 2011/12 were provided by the WA Government. For 2012/13, retail costs were estimated by escalating the costs in 2011/12 by the trend in WA retail costs between 2009/10 and 2011/12.
RET/LRET and SRES costs	RET costs were provided by the WA Government for 2009/10. For 2009/10, RET

Data type	Data source
	costs were sourced from IPART's determination. For 2010/11 onwards LRET and SRES costs were provided by the Commonwealth Department of Energy Efficiency and Climate Change. These figures were converted to nominal terms using the CPI figures in the WA Government's 2010/11 budget.
Tariff equalisation costs	Tariff equalisation costs for 2009/10, 2010/11 and 2011/12 were provided by the WA Government. For 2012/13, tariff equalisation costs were estimated by escalating the costs in 2011/12 by the trend in the tariff equalisation costs between 2009/10 and 2011/12.
Average annual residential consumption data	The average annual residential consumption figure was provided by the WA Government.

A.8 Northern Territory

Table A.8 Data sources and methodologies used for the NT residential electricity prices

Data type	Data source
Wholesale energy costs	Wholesale energy costs for the whole reporting period were provided by the NT Government.
Distribution costs	Distribution costs for the whole reporting period were provided by the NT Government.
Retail costs	Retail costs for the whole reporting period were provided by the NT Government.
RET costs	RET costs were provided by the NT Government for 2009/10. For 2010/11 onwards LRET and SRES costs were provided by the Commonwealth Department of Energy Efficiency and Climate Change. These figures were converted to nominal terms using the CPI forecasts by the NT Government for 2011/12.

B Future possible electricity prices by distribution area and average annual bill impacts

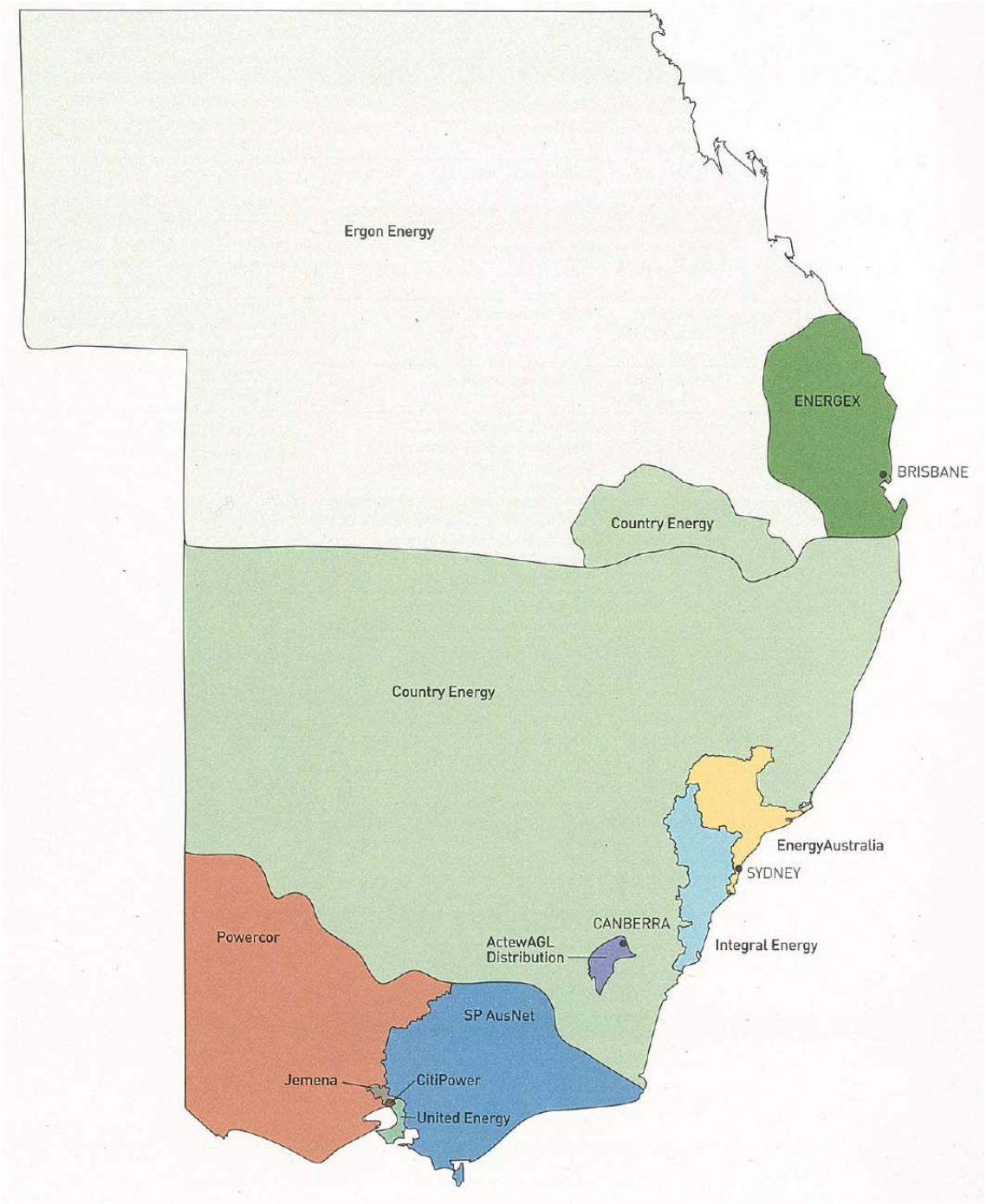
This Appendix outlines additional data which has been used in preparing this report. It outlines the future possible residential electricity prices by distribution area in each state and territory, which have been used in deriving weighted state and territory average prices. It also sets out average annual bill impacts of future possible residential electricity prices by each state and territory, based on the average annual consumption for each jurisdiction.

In all jurisdictions, except for WA and the NT, average annual consumption figures were provided by the AER. However, it is noted that over time average annual consumption has the potential to change, particularly as energy consumption is forecast to fall in some jurisdictions over the reporting period. The average annual consumption of each residential customer will depend on a number of factors such as: the size and type of their household and property; the type and number of appliances that are used; and the proportion of time that is spent at the residence; amongst many other factors. As a result, the average annual bill impacts in this Appendix are intended to provide an indication of possible bill annual impacts only.

B.1 Future possible residential electricity prices by distribution area

This section outlines future possible residential electricity prices by distribution area in each state and territory in Australia over the 2010/11 to 2012/13 reporting period, with 2009/10 as a base year. For WA and the NT, prices are based on the actual costs of providing residential electricity services, as the prices that customers pay are not cost reflective. Figure B.1 below outlines the distribution areas in Queensland, NSW, the ACT and Victoria.

Figure B.1 Distribution areas in Queensland, NSW, ACT and Victoria



B.1.1 Queensland

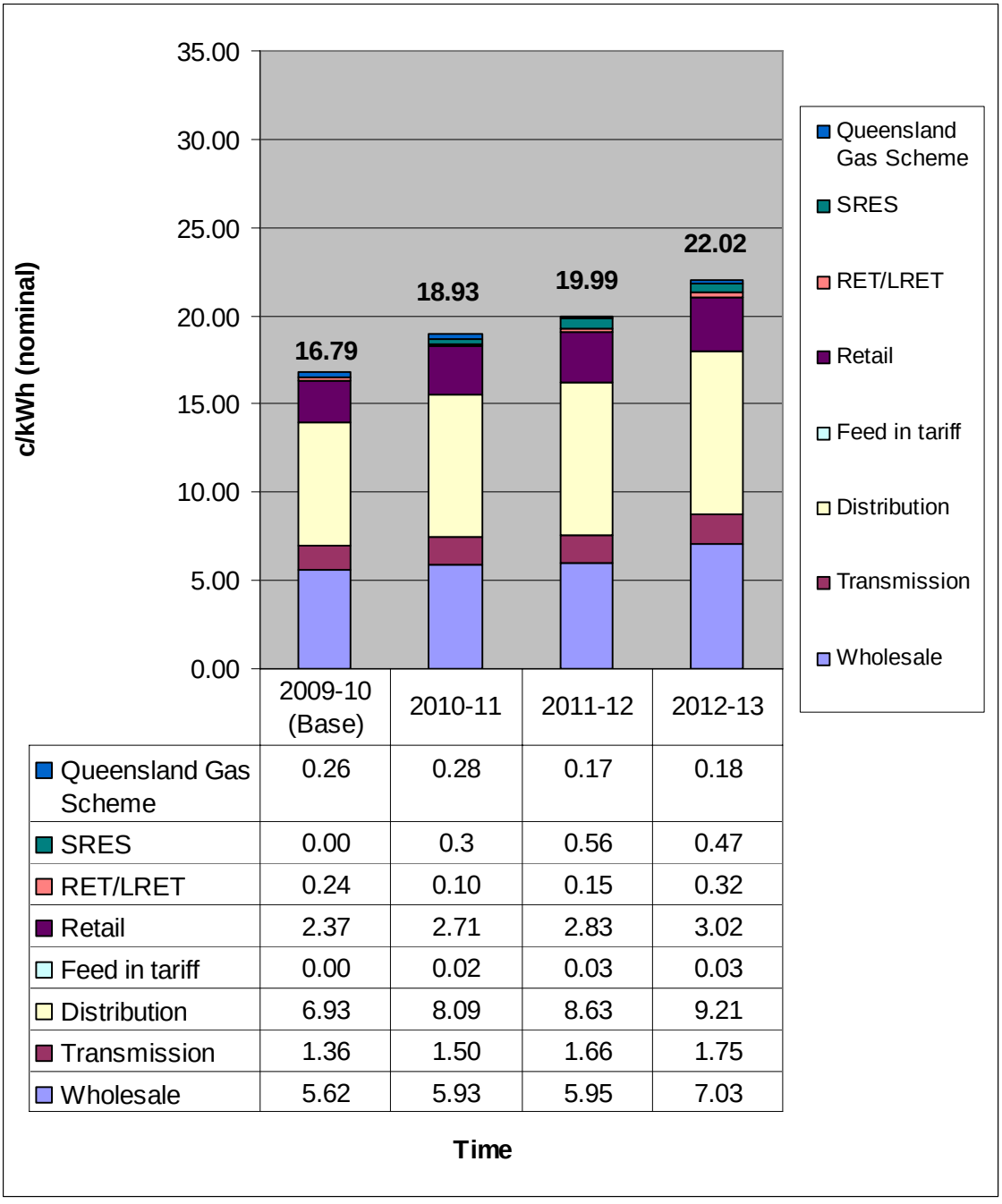
Queensland has two electricity distributors:

- Energex, which has a distribution area which encompasses Brisbane, the Gold Coast, and the Sunshine coast and surrounds; and
- Ergon Energy, which has a distribution area which encompasses country and regional Queensland.

Energex's distribution area has approximately 64% of Queensland's residential electricity customer connections, while Ergon Energy has the remaining 36% of the state's residential electricity customers connections in its distribution area.

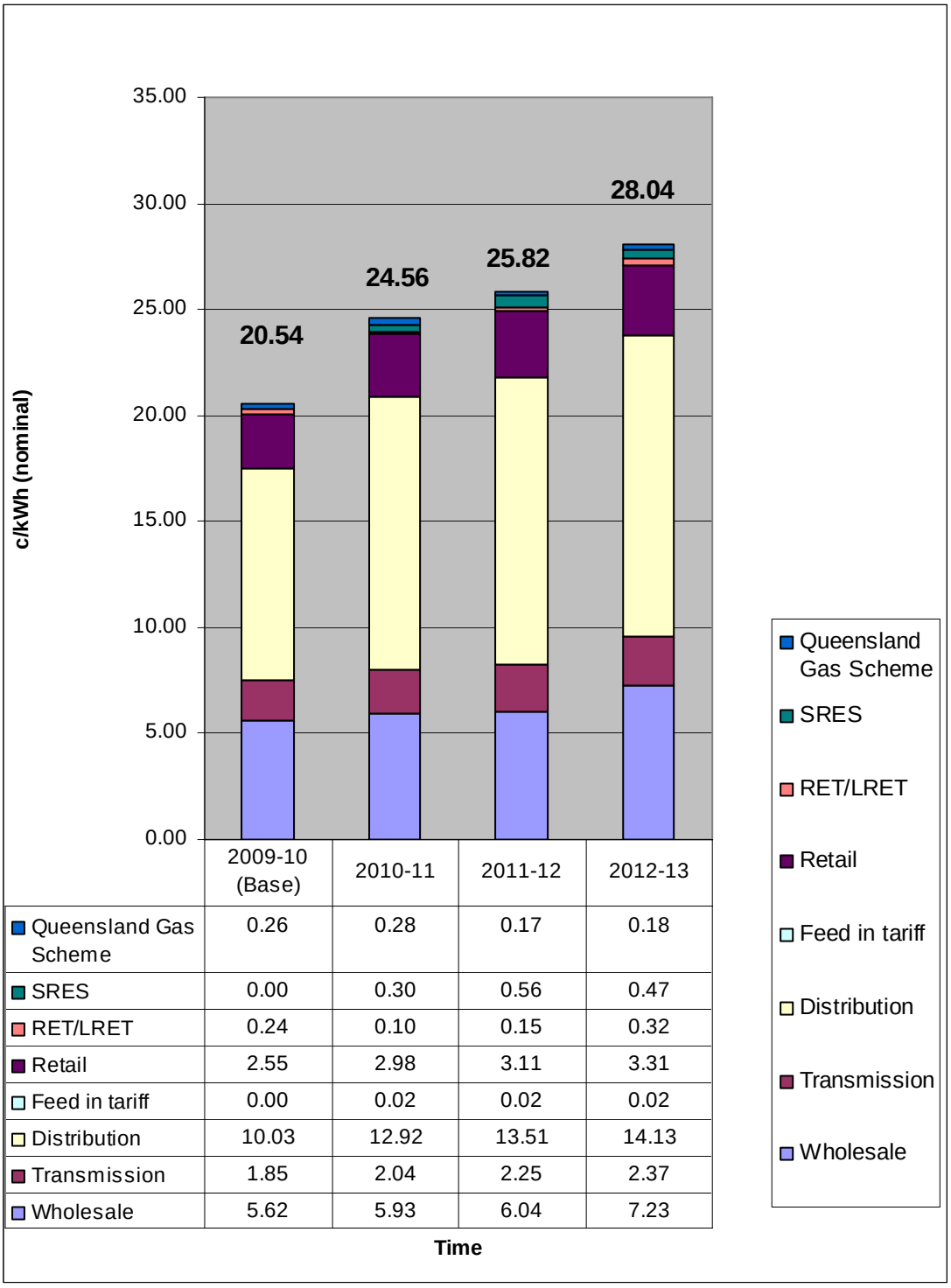
Figures B.2 and B.3 below set out future possible residential electricity prices over the 2009/10 to 2012/13 reporting period in each of the Queensland distribution areas.

Figure B.2 Energex - Future possible cost of providing residential electricity services 2009/10 to 2012/13



	2009-10 (Base)	2010-11	2011-12	2012-13
Queensland Gas Scheme	0.26	0.28	0.17	0.18
SRES	0.00	0.3	0.56	0.47
RET/LRET	0.24	0.10	0.15	0.32
Retail	2.37	2.71	2.83	3.02
Feed in tariff	0.00	0.02	0.03	0.03
Distribution	6.93	8.09	8.63	9.21
Transmission	1.36	1.50	1.66	1.75
Wholesale	5.62	5.93	5.95	7.03

Figure B.3 Ergon Energy - Future possible cost of providing residential electricity services 2009/10 to 20112/13



	2009-10 (Base)	2010-11	2011-12	2012-13
Queensland Gas Scheme	0.26	0.28	0.17	0.18
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.24	0.10	0.15	0.32
Retail	2.55	2.98	3.11	3.31
Feed in tariff	0.00	0.02	0.02	0.02
Distribution	10.03	12.92	13.51	14.13
Transmission	1.85	2.04	2.25	2.37
Wholesale	5.62	5.93	6.04	7.23

B.1.2 New South Wales

NSW has three electricity distributors:

- EnergyAustralia, which has a distribution area which encompasses inner, northern and eastern metropolitan Sydney and surrounds

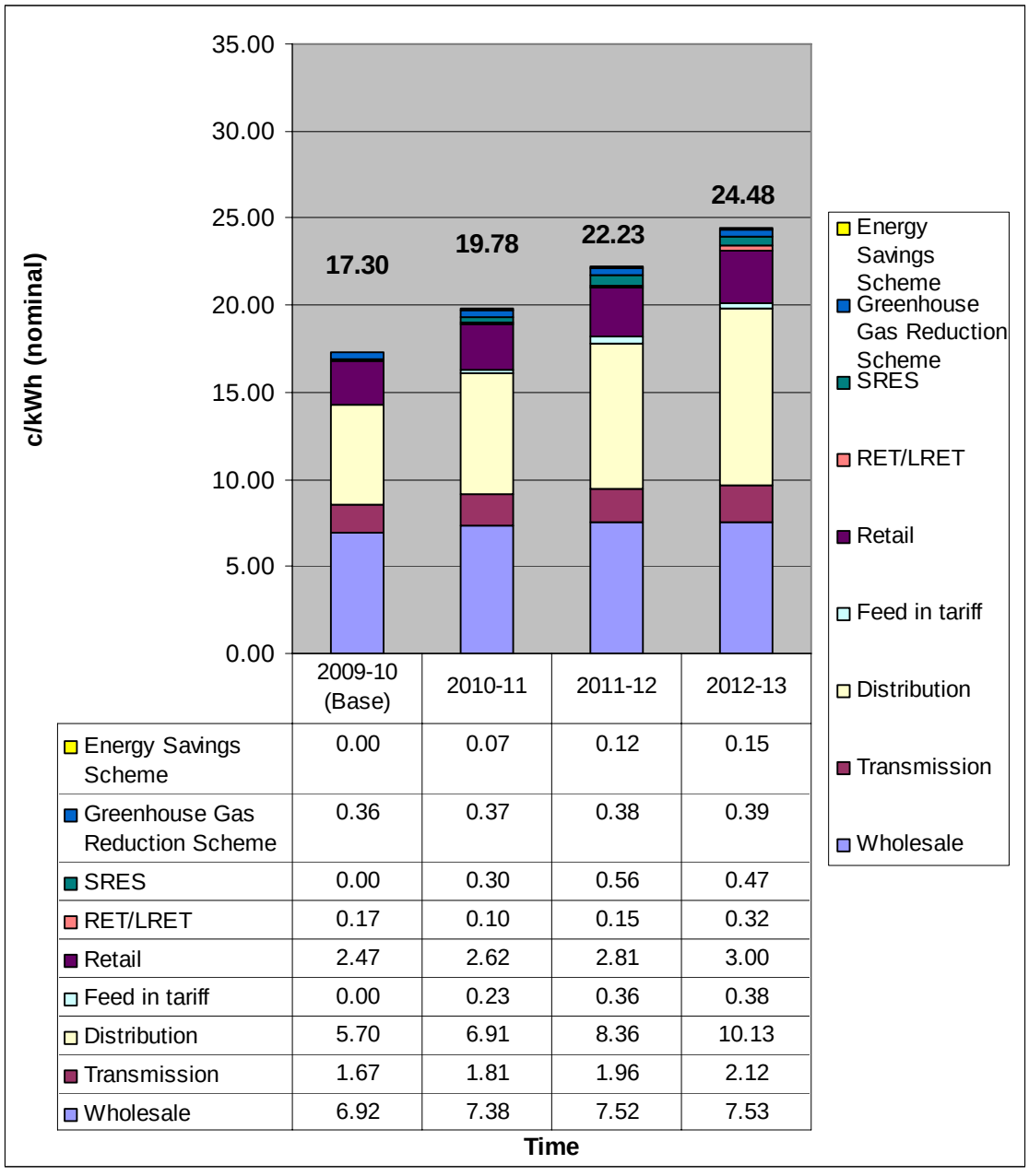
- Integral Energy, which has a distribution area which encompasses southern and western metropolitan Sydney and surrounds; and

- Country Energy, which has a distribution area which encompasses country and regional NSW and southern regional Queensland.

In regards to the allocation of residential electricity customer connections across NSW, EnergyAustralia has approximately 46% of NSW residential electricity customers connections; Integral Energy has 32%; and Country Energy has 22%.

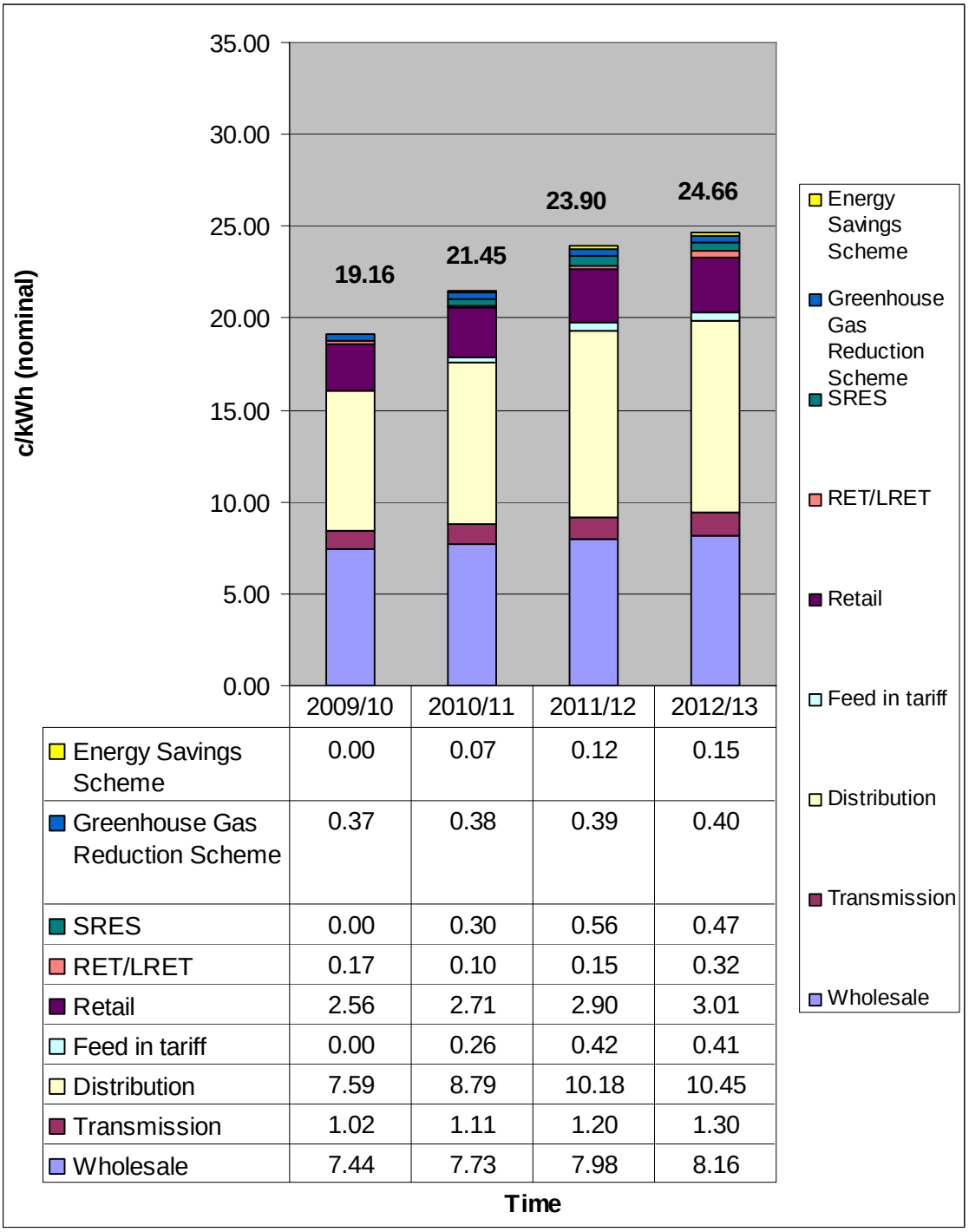
Figures B.4, B.5, and B.6 below set out future possible residential electricity prices over the 2009/10 to 2012/13 reporting period in each of the NSW distribution areas.

Figure B.4 EnergyAustralia - Future possible residential electricity prices 2009/10 to 2012/13



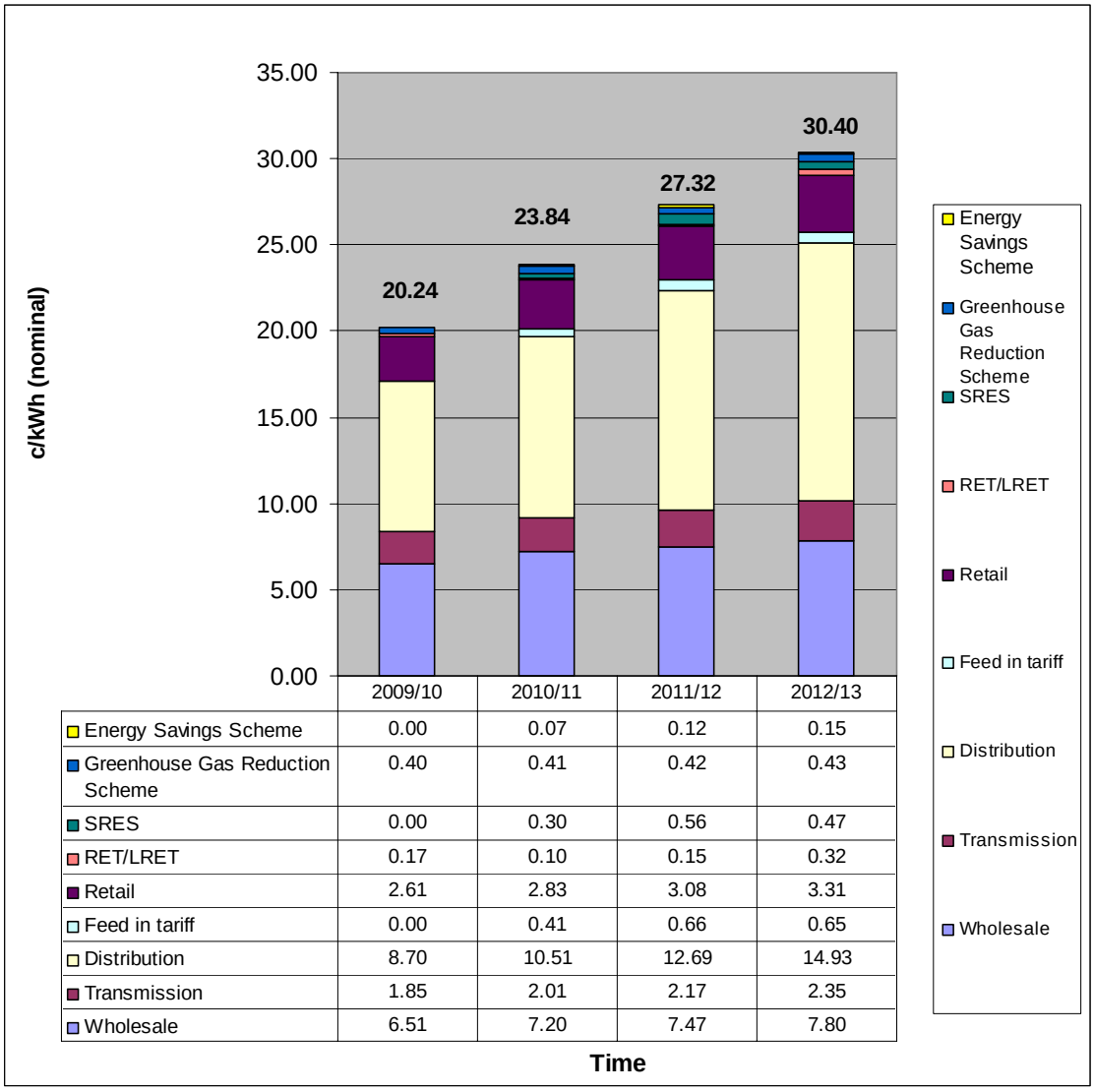
	2009-10 (Base)	2010-11	2011-12	2012-13
Energy Savings Scheme	0.00	0.07	0.12	0.15
Greenhouse Gas Reduction Scheme	0.36	0.37	0.38	0.39
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.17	0.10	0.15	0.32
Retail	2.47	2.62	2.81	3.00
Feed in tariff	0.00	0.23	0.36	0.38
Distribution	5.70	6.91	8.36	10.13
Transmission	1.67	1.81	1.96	2.12
Wholesale	6.92	7.38	7.52	7.53

Figure B.5 Integral Energy - Future possible residential electricity prices - 2009/10 to 2012/13



	2009/10	2010/11	2011/12	2012/13
Energy Savings Scheme	0.00	0.07	0.12	0.15
Greenhouse Gas Reduction Scheme	0.37	0.38	0.39	0.40
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.17	0.10	0.15	0.32
Retail	2.56	2.71	2.90	3.01
Feed in tariff	0.00	0.26	0.42	0.41
Distribution	7.59	8.79	10.18	10.45
Transmission	1.02	1.11	1.20	1.30
Wholesale	7.44	7.73	7.98	8.16

Figure B.6 Country Energy - Future possible residential electricity prices 2009/10 to 2012/13

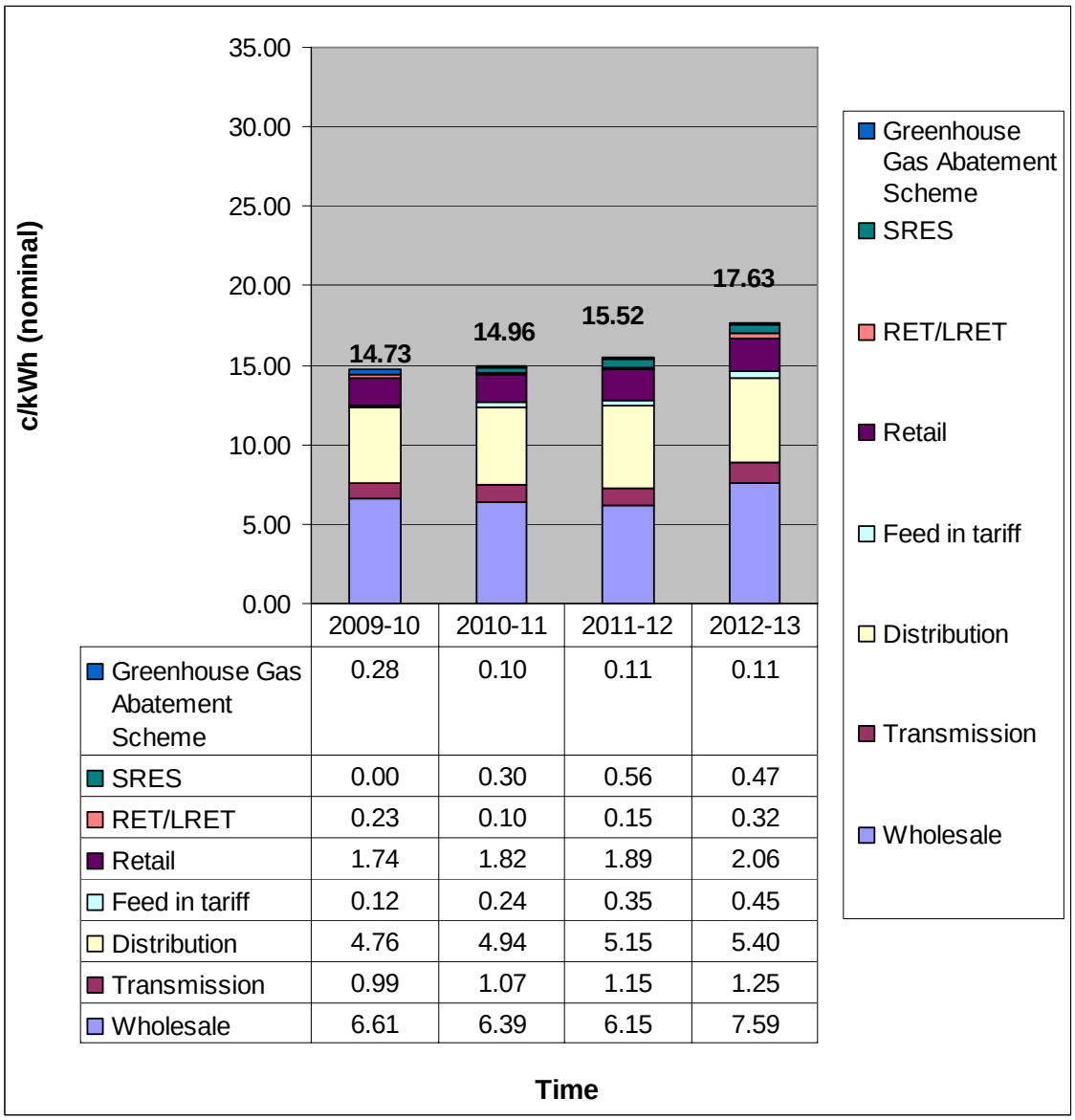


	2009/10	2010/11	2011/12	2012/13
Energy Savings Scheme	0.00	0.07	0.12	0.15
Greenhouse Gas Reduction Scheme	0.40	0.41	0.42	0.43
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.17	0.10	0.15	0.32
Retail	2.61	2.83	3.08	3.31
Feed in tariff	0.00	0.41	0.66	0.65
Distribution	8.70	10.51	12.69	14.93
Transmission	1.85	2.01	2.17	2.35
Wholesale	6.51	7.20	7.47	7.80

B.1.3 Australian Capital Territory

The ACT has one electricity distributor, ActewAGL, which services all of the ACT. As a result, the prices below are the same as the prices presented for the ACT in Chapter 3. Figure B.7 below sets out future possible residential electricity prices over the 2009/10 to 2012/13 reporting period in the ACT.

Figure B.7 ACT- Future possible residential electricity prices 2009/10 to 2012/13



	2009-10	2010-11	2011-12	2012-13
Greenhouse Gas Abatement Scheme	0.28	0.10	0.11	0.11
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.23	0.10	0.15	0.32
Retail	1.74	1.82	1.89	2.06
Feed in tariff	0.12	0.24	0.35	0.45
Distribution	4.76	4.94	5.15	5.40
Transmission	0.99	1.07	1.15	1.25
Wholesale	6.61	6.39	6.15	7.59

B.1.4 Victoria

Victoria has five electricity distributors:

- Citipower, which has a distribution area which encompasses inner metropolitan Melbourne;
- United Energy Distribution, which has a distribution area which encompasses south eastern metropolitan Melbourne;
- Jemena, which has a distribution area which encompasses western metropolitan Melbourne;

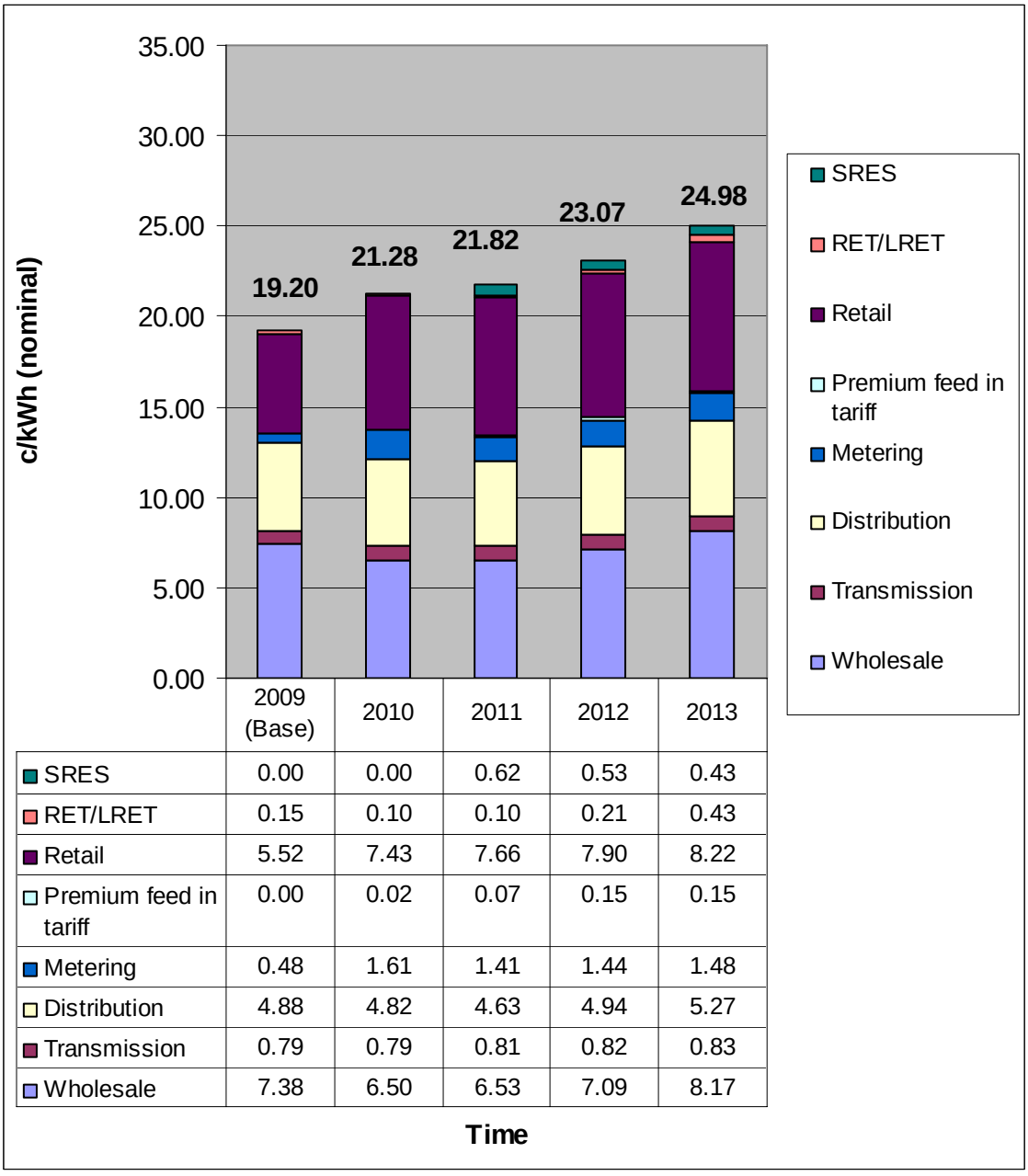
- SPI Electricity which has a distribution area which encompasses eastern Victoria; and

- Powercor, which has a distribution area which encompasses western Victoria.

In regards to the allocation of Victorian residential electricity customer connections between these five distributors: Citipower has approximately 10% of residential electricity customers in its distribution area; United Energy Distribution has approximately 28%; Jemena has approximately 14%; SPI Electricity has approximately 22%; and Powercor has approximately 26%.

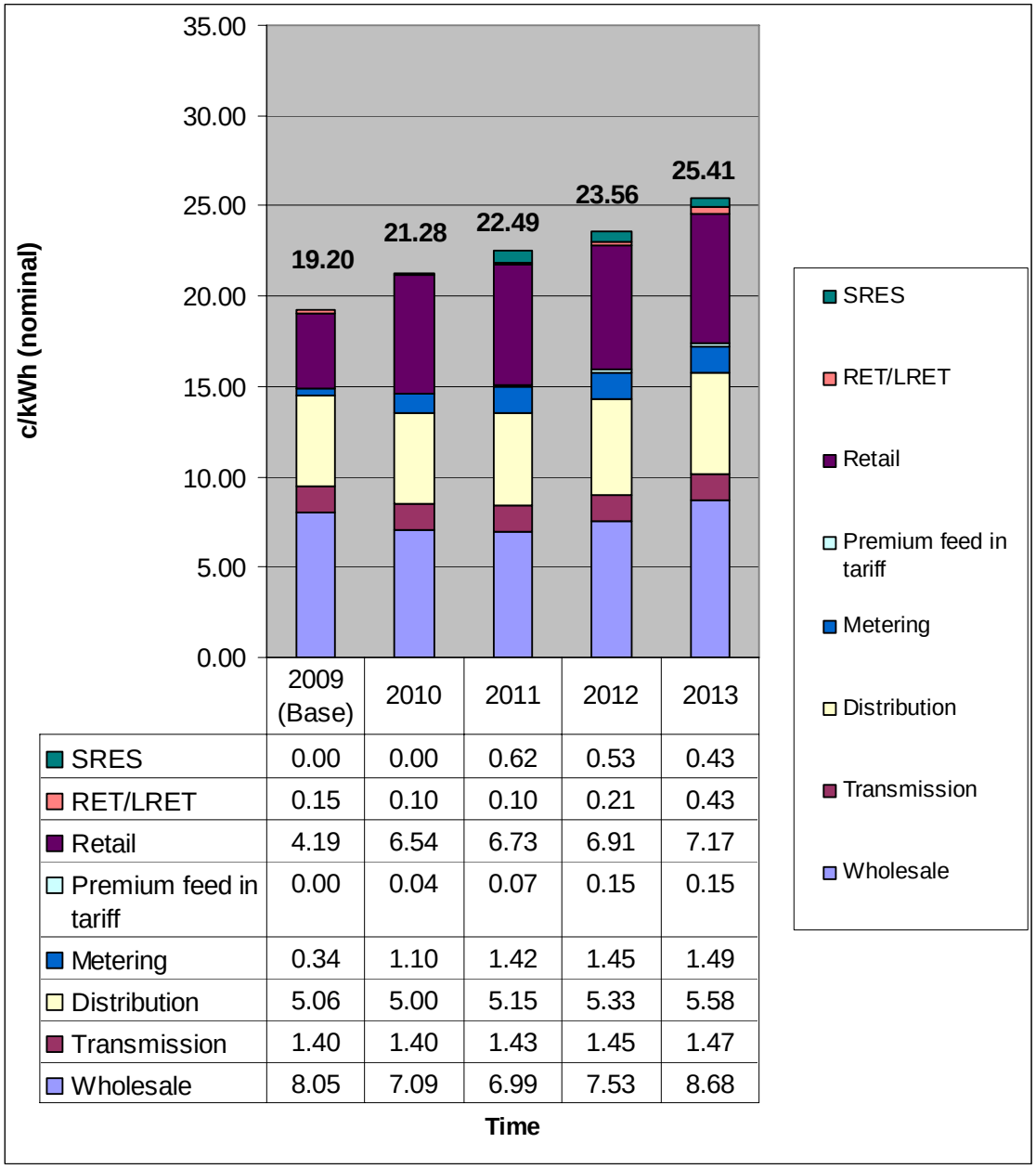
Figures B.8, B.9, B.10, B.11 and B.12 below set out future possible residential electricity prices over the 2009 to 2013 reporting period in each of the Victorian distribution areas.

Figure B.8 Citipower - Future possible residential electricity prices 2009 to 2012



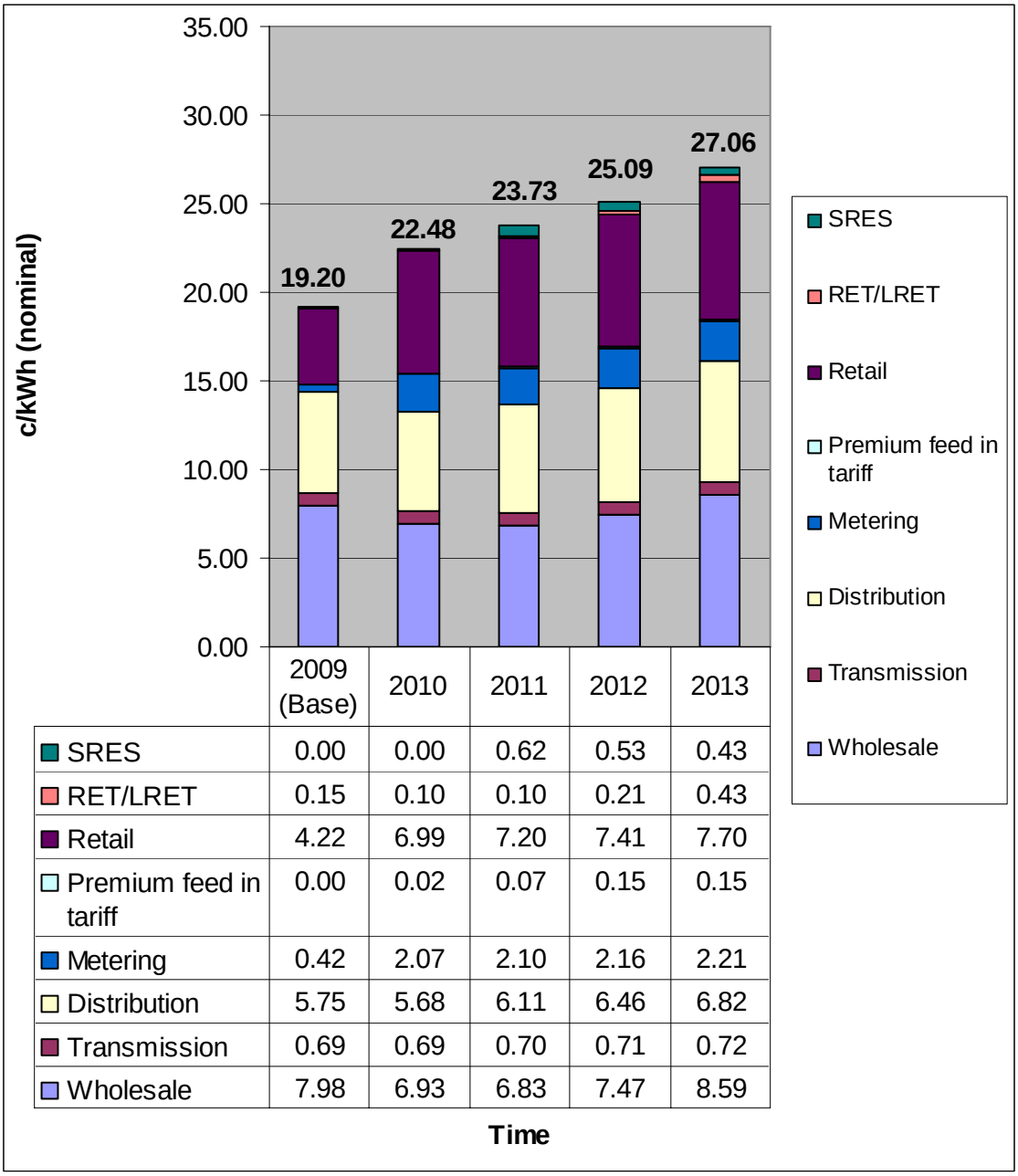
	2009 (Base)	2010	2011	2012	2013
SRES	0.00	0.00	0.62	0.53	0.43
RET/LRET	0.15	0.10	0.10	0.21	0.43
Retail	5.52	7.43	7.66	7.90	8.22
Premium feed in tariff	0.00	0.02	0.07	0.15	0.15
Metering	0.48	1.61	1.41	1.44	1.48
Distribution	4.88	4.82	4.63	4.94	5.27
Transmission	0.79	0.79	0.81	0.82	0.83
Wholesale	7.38	6.50	6.53	7.09	8.17

Figure B.9 United Energy Distribution - Future possible residential electricity prices 2009 to 2012



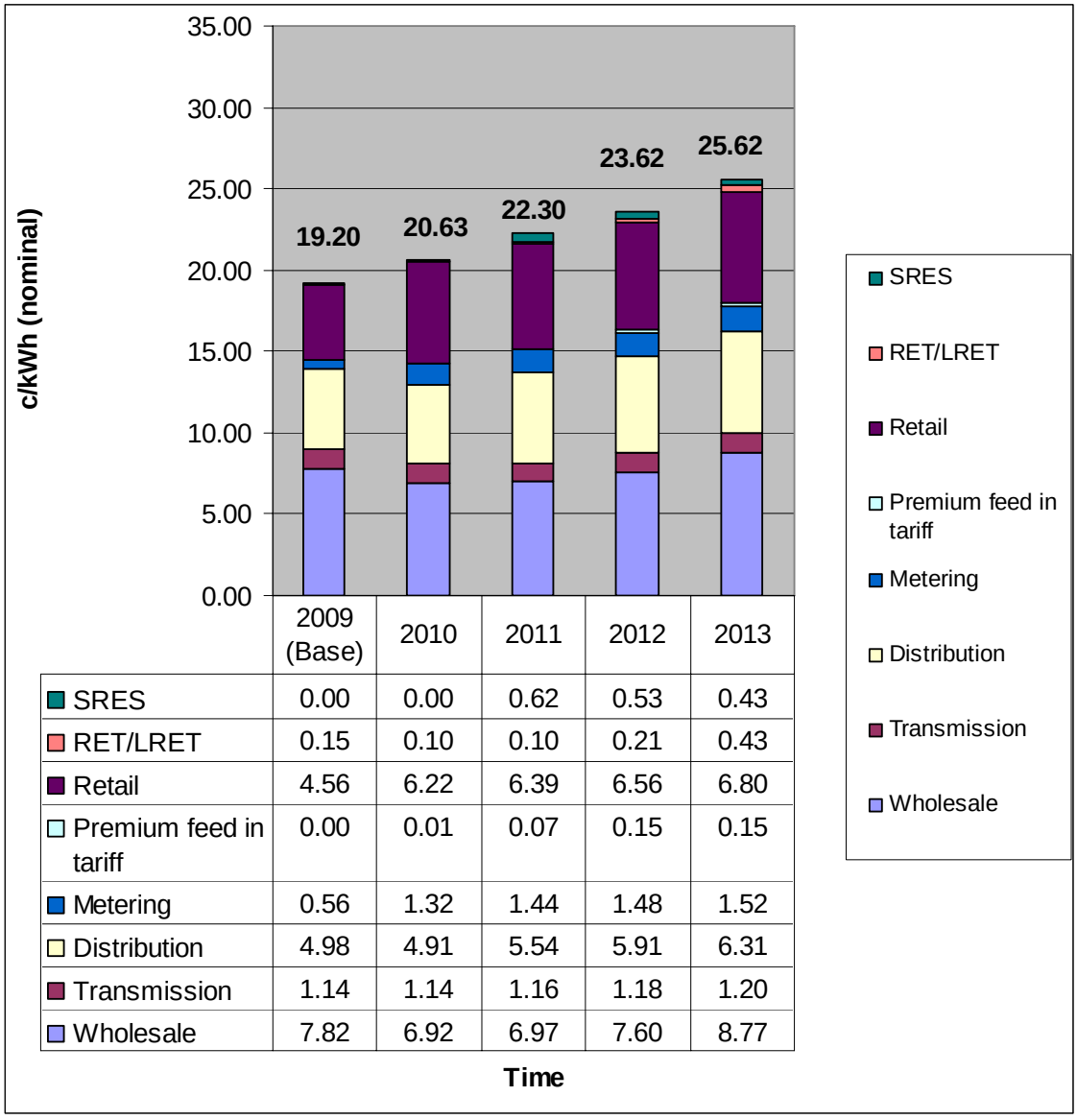
	2009 (Base)	2010	2011	2012	2013
SRES	0.00	0.00	0.62	0.53	0.43
RET/LRET	0.15	0.10	0.10	0.21	0.43
Retail	4.19	6.54	6.73	6.91	7.17
Premium feed in tariff	0.00	0.04	0.07	0.15	0.15
Metering	0.34	1.10	1.42	1.45	1.49
Distribution	5.06	5.00	5.15	5.33	5.58
Transmission	1.40	1.40	1.43	1.45	1.47
Wholesale	8.05	7.09	6.99	7.53	8.68

Figure B.10 Jemena - Future possible residential electricity prices 2009 to 2012



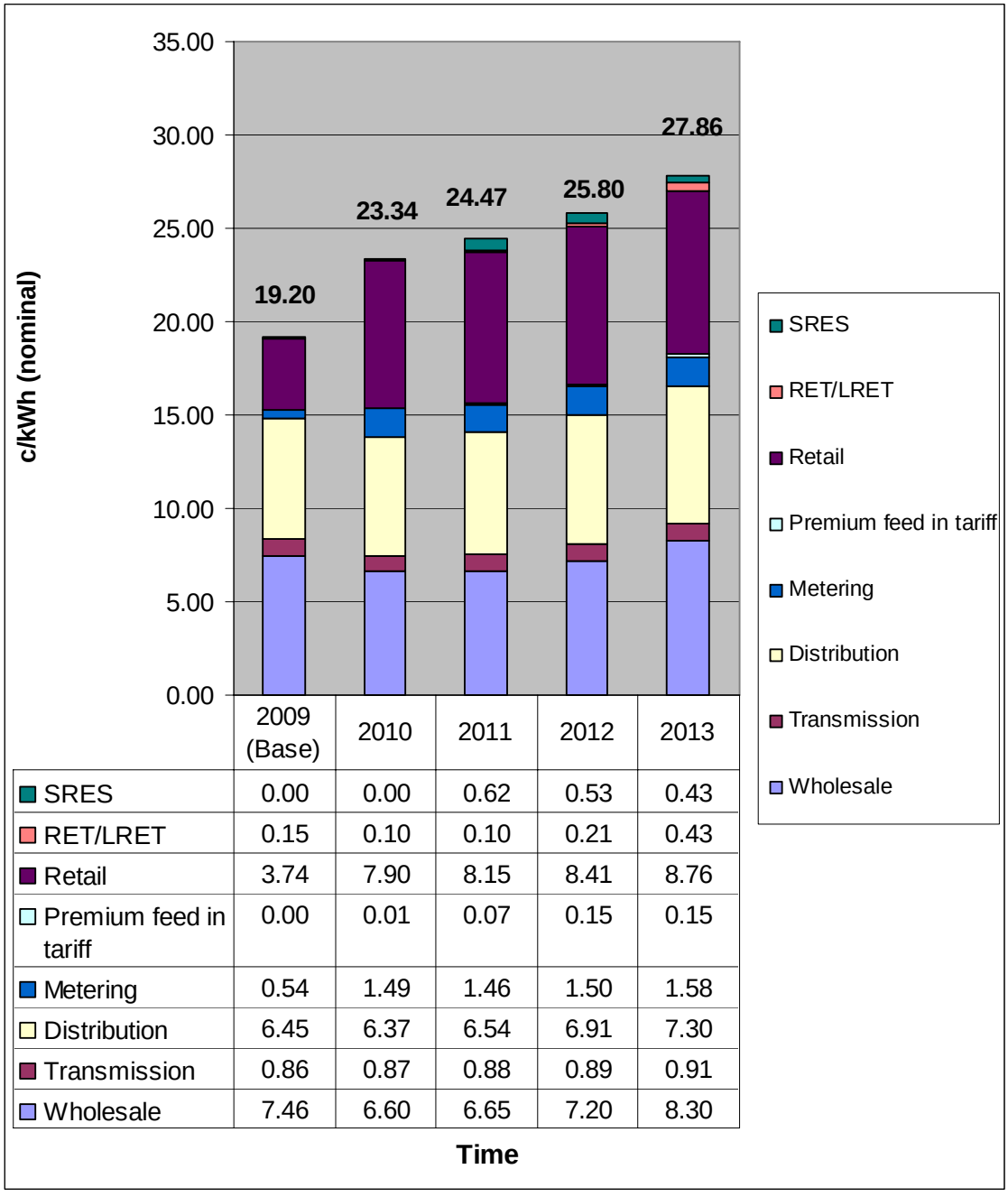
	2009 (Base)	2010	2011	2012	2013
SRES	0.00	0.00	0.62	0.53	0.43
RET/LRET	0.15	0.10	0.10	0.21	0.43
Retail	4.22	6.99	7.20	7.41	7.70
Premium feed in tariff	0.00	0.02	0.07	0.15	0.15
Metering	0.42	2.07	2.10	2.16	2.21
Distribution	5.75	5.68	6.11	6.46	6.82
Transmission	0.69	0.69	0.70	0.71	0.72
Wholesale	7.98	6.93	6.83	7.47	8.59

Figure B.11 SPI Electricity- Future possible residential electricity prices 2009 to 2012



	2009 (Base)	2010	2011	2012	2013
SRES	0.00	0.00	0.62	0.53	0.43
RET/LRET	0.15	0.10	0.10	0.21	0.43
Retail	4.56	6.22	6.39	6.56	6.80
Premium feed in tariff	0.00	0.01	0.07	0.15	0.15
Metering	0.56	1.32	1.44	1.48	1.52
Distribution	4.98	4.91	5.54	5.91	6.31
Transmission	1.14	1.14	1.16	1.18	1.20
Wholesale	7.82	6.92	6.97	7.60	8.77

Figure B.12 Powercor - Future possible residential electricity prices 2009 to 2012



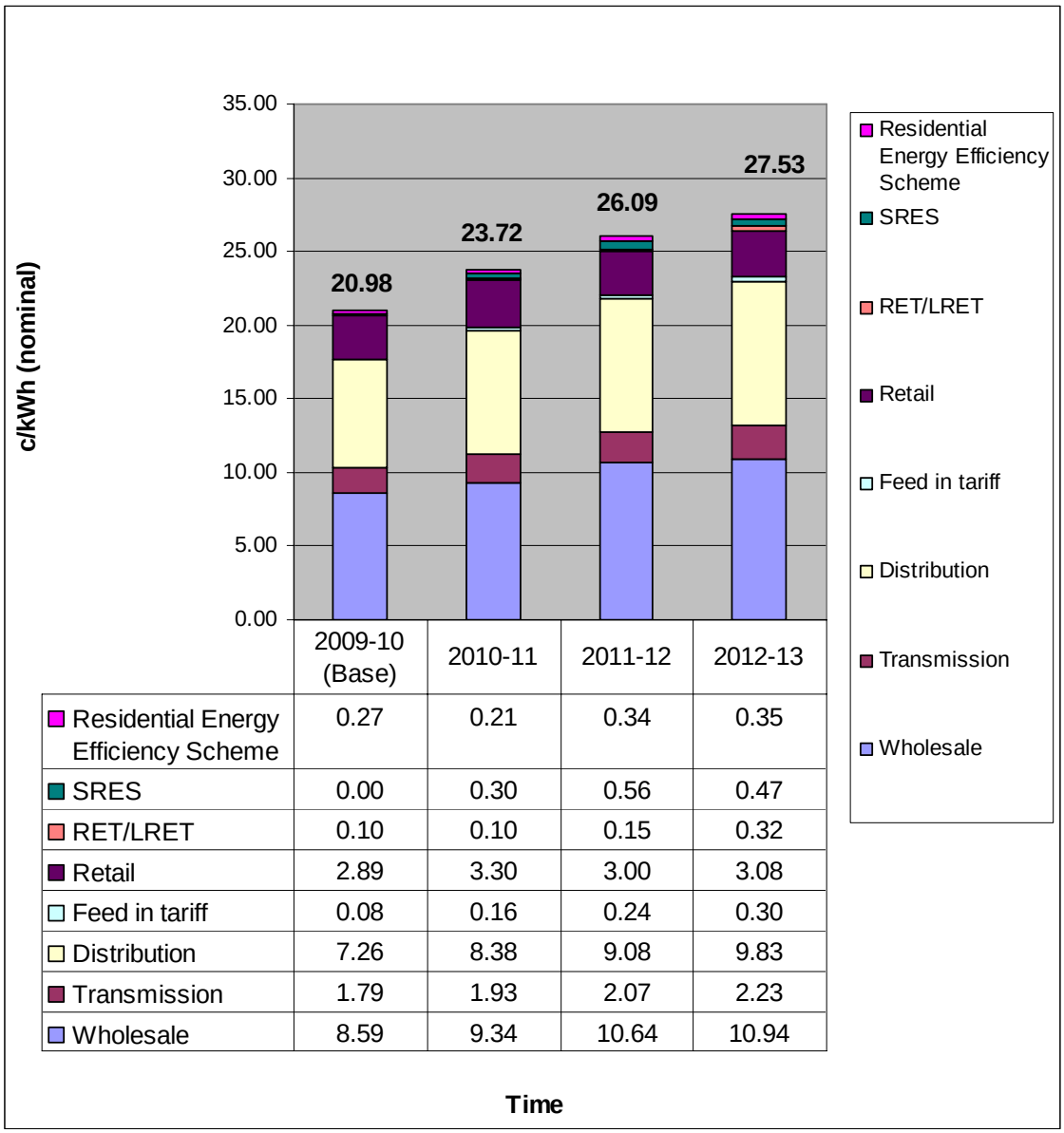
	2009 (Base)	2010	2011	2012	2013
SRES	0.00	0.00	0.62	0.53	0.43
RET/LRET	0.15	0.10	0.10	0.21	0.43
Retail	3.74	7.90	8.15	8.41	8.76
Premium feed in tariff	0.00	0.01	0.07	0.15	0.15
Metering	0.54	1.49	1.46	1.50	1.58
Distribution	6.45	6.37	6.54	6.91	7.30
Transmission	0.86	0.87	0.88	0.89	0.91
Wholesale	7.46	6.60	6.65	7.20	8.30

B.1.5 South Australia

South Australia has one electricity distributor, ETSA Utilities, which services all of South Australia. As a result, the prices below are the same as the prices presented for South Australia in Chapter 3.

Figure B.13 below sets out future possible residential electricity prices over the 2009/10 to 2012/13 reporting period in South Australia.

Figure B.13 South Australia - Future possible residential electricity prices 2009/10 to 2012/13



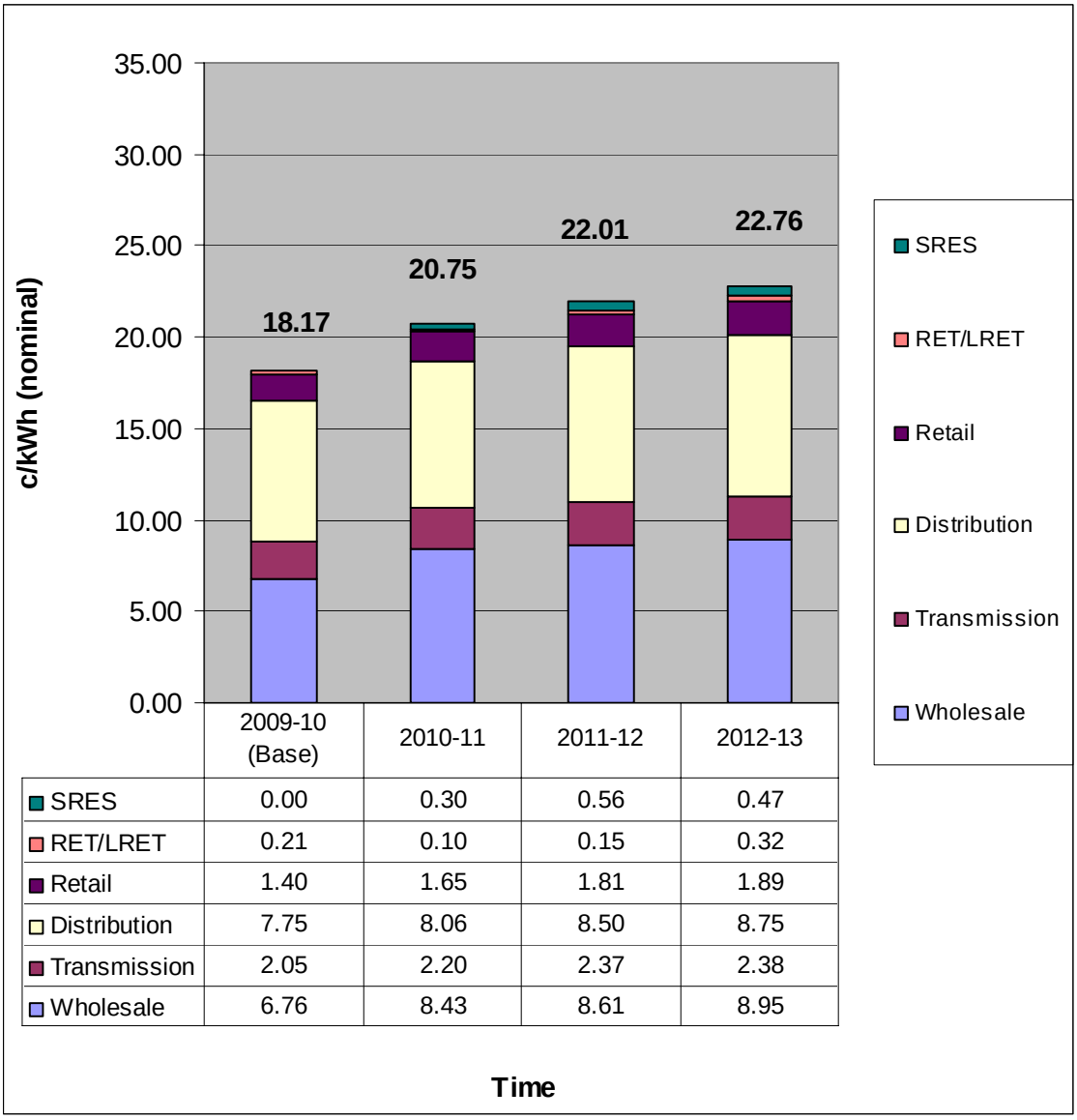
	2009-10 (Base)	2010-11	2011-12	2012-13
Residential Energy Efficiency Scheme	0.27	0.21	0.34	0.35
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.10	0.10	0.15	0.32
Retail	2.89	3.30	3.00	3.08
Feed in tariff	0.08	0.16	0.24	0.30
Distribution	7.26	8.38	9.08	9.83
Transmission	1.79	1.93	2.07	2.23
Wholesale	8.59	9.34	10.64	10.94

B.1.6 Tasmania

Tasmania has one electricity distributor, Aurora Energy which services all of Tasmania. As a result, the prices below are the same as the prices presented for Tasmania in Chapter 3.

Figure B.14 below sets out future possible residential electricity prices over the 2009/10 to 2012/13 reporting period in Tasmania.

Figure B.14 Tasmania - Future possible residential electricity prices 2009/10 to 2012/13



	2009-10 (Base)	2010-11	2011-12	2012-13
SRES	0.00	0.30	0.56	0.47
RET/LRET	0.21	0.10	0.15	0.32
Retail	1.40	1.65	1.81	1.89
Distribution	7.75	8.06	8.50	8.75
Transmission	2.05	2.20	2.37	2.38
Wholesale	6.76	8.43	8.61	8.95

B.1.7 Western Australia

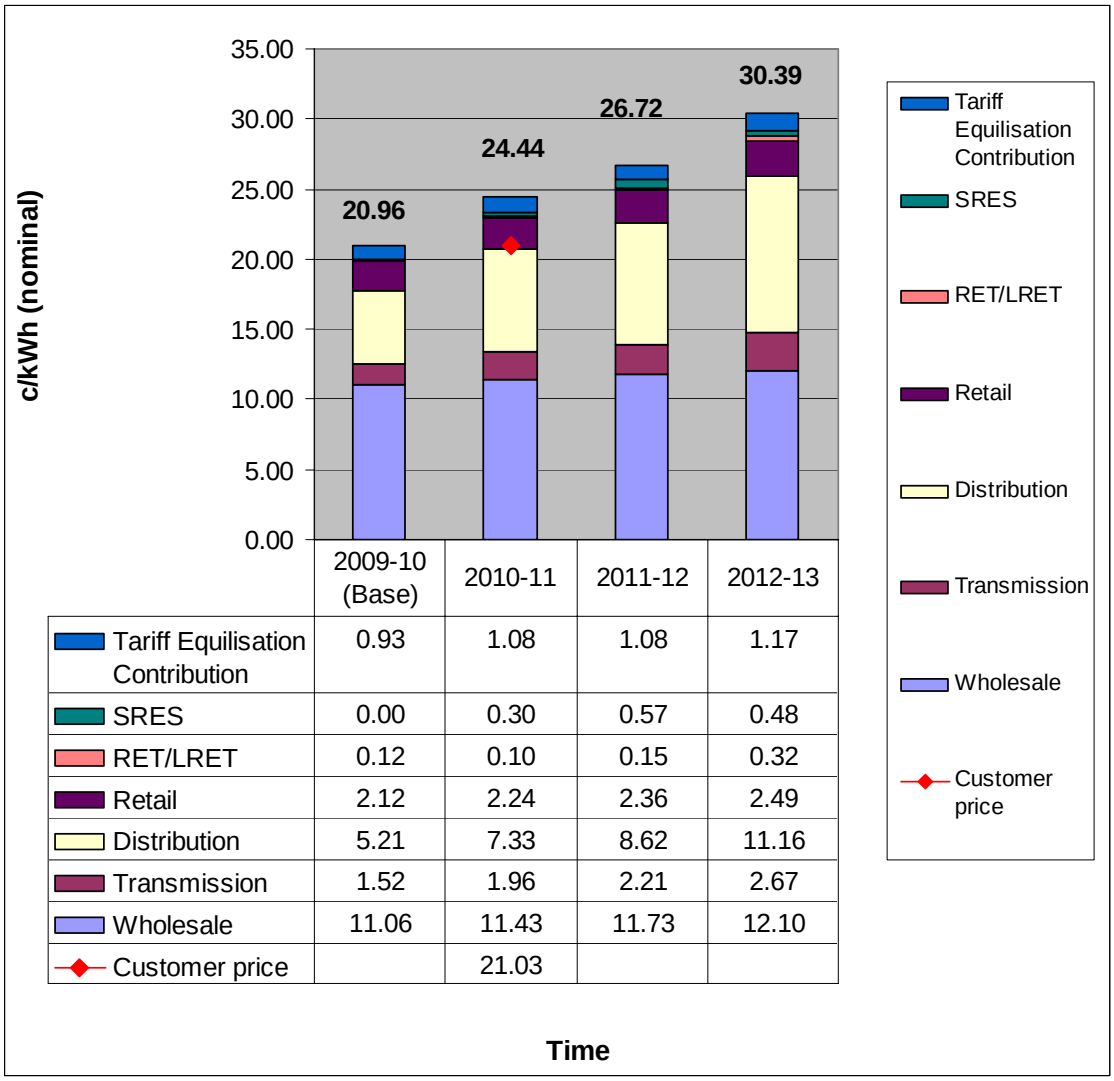
WA has two electricity distributors:

- Western Power, which has a distribution area which encompasses south western WA; and
- Horizon Power, which has a distribution area which encompasses north western WA.

However, as data was only available on the cost of providing residential electricity services in Western Power's distribution area, for the purposes of this report we have solely focused on Western Power's cost of supplying residential electricity customers only. As a result, the data below is the same as the data presented for WA in Chapter 3.

Figure B.15 below sets out future possible cost of providing residential electricity services over the 2009/10 to 2012/13 reporting period in WA.

Figure B.15 WA - Future possible cost of providing residential electricity services 2009/10 to 2012/13



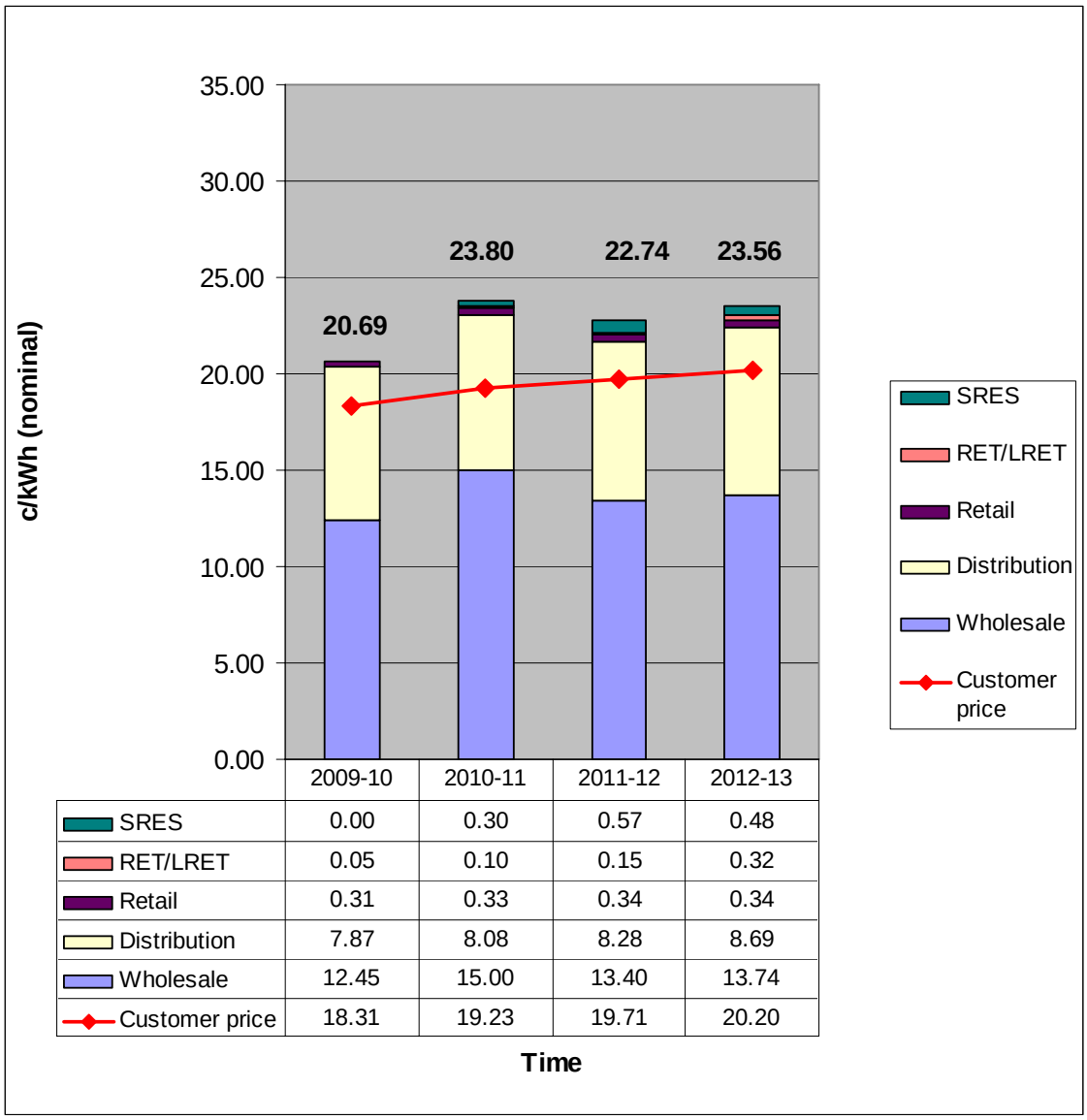
	2009-10 (Base)	2010-11	2011-12	2012-13
Tariff Equilisation Contribution	0.93	1.08	1.08	1.17
SRES	0.00	0.30	0.57	0.48
RET/LRET	0.12	0.10	0.15	0.32
Retail	2.12	2.24	2.36	2.49
Distribution	5.21	7.33	8.62	11.16
Transmission	1.52	1.96	2.21	2.67
Wholesale	11.06	11.43	11.73	12.10
Customer price		21.03		

B.1.8 Northern Territory

The NT has one electricity distributor, Power and Water, which services all of the NT. As a result, the prices below are the same as the prices presented for NT in Chapter 3.

Figure B.16 below sets out future possible cost of providing residential electricity services over the 2009/10 to 2012/13 reporting period in the NT.

Figure B.16 **NT - Future possible cost of providing residential electricity services 2009/10 to 2012/13**



	2009-10	2010-11	2011-12	2012-13
SRES	0.00	0.30	0.57	0.48
RET/LRET	0.05	0.10	0.15	0.32
Retail	0.31	0.33	0.34	0.34
Distribution	7.87	8.08	8.28	8.69
Wholesale	12.45	15.00	13.40	13.74
Customer price	18.31	19.23	19.71	20.20

B.2 Average annual bill impacts by state and territory

This section outlines the average annual bill impacts of future possible residential electricity prices by each state and territory (and, in the case of WA, future trends in the costs of supplying electricity) over the 2010/11 to 2012/13 reporting period, with 2009/10 as a base year. The prices in this section are nominal and GST exclusive and are based on the average annual residential consumption in each state and territory, which differs in each jurisdiction. Average annual consumption figures were provided by the AER for all jurisdictions, except for WA. For the NT, as no data was available on average annual consumption, we have used a consumption figure of 5000 kWh to provide an indication of potential bill impacts.

B.2.1 Queensland

Table B.1 Average annual bill impact in Queensland 2009/10 to 2012/13

Average annual consumption - 7000 kWh				
Cost category	**2009/10**	**20010/11**	**2011/12**	**2012/13**
Wholesale electricity costs	396.50	410.03	418.66	497.18
Transmission costs	108.41	117.29	130.96	138.09
Distribution costs	566.69	678.46	725.90	767.61
Feed in tariff costs	0.00	1.34	1.70	1.99
Retail costs	171.41	193.87	205.00	218.59
RET/LRET costs	17.14	6.92	10.76	22.07
SRES costs	0.00	20.75	39.47	33.11
Queensland Gas Scheme costs	18.05	19.64	11.77	12.82
TOTAL	1278.20	1448.30	1544.23	1691.46

B.2.2 New South Wales

Table B.2 Average annual bill impact in NSW 2009/10 to 2012/13

Average annual consumption - 7000 kWh				
Cost category	**2009/10**	**20010/11**	**2011/12**	**2012/13**
Wholesale electricity costs	489.77	521.61	535.89	545.50
Transmission costs	105.24	113.89	123.25	133.38
Distribution costs	488.44	582.00	693.79	790.75
Feed in tariff costs	0.00	19.62	31.32	31.53
Retail costs	177.20	188.72	202.99	215.06

Average annual consumption - 7000 kWh				
Cost category	**2009/10**	**20010/11**	**2011/12**	**2012/13**
RET/LRET costs	11.90	7.00	10.76	22.05
SRES costs	0.00	21.00	39.45	33.08
Greenhouse Gas Reduction Scheme costs	26.05	26.69	27.35	28.03
Energy Savings Scheme costs	0.00	5.02	8.09	10.54
TOTAL	1298.60	1485.56	1672.89	1809.92

B.2.3 Australian Capital Territory

Table B.3 Average annual bill impact in the ACT 2009/10 to 2012/13

Average annual consumption - 8420 kWh				
Cost category	**2009/10**	**20010/11**	**2011/12**	**2012/13**
Wholesale electricity costs	556.48	537.70	517.54	639.12
Transmission costs	82.94	89.75	97.13	105.11
Distribution costs	400.99	386.24	372.17	359.61
Feed in tariff costs	10.33	20.21	29.53	37.48
Retail costs	146.37	153.46	159.40	173.14
RET/LRET costs	19.35	8.42	12.94	26.52
SRES costs	0.00	25.26	47.45	39.78
Greenhouse Gas Abatement Scheme costs	23.78	8.76	8.97	9.19
TOTAL	1240.24	1229.81	1245.15	1389.97

B.2.4 Victoria

Table B.4 Average annual bill impact in Victoria 2009 to 2012

Average annual consumption - 6500 kWh				
Cost category	**2009**	**2010**	**2011**	**2012**
Wholesale electricity costs	504.86	444.86	443.81	481.55
Transmission costs	67.87	68.03	69.07	70.13
Distribution costs	356.35	351.82	369.03	389.08
Metering costs	30.24	93.30	99.20	101.75
Feed in tariff costs	0.00	1.52	4.55	9.75
Retail costs	278.94	453.70	467.01	480.61
RET/LRET costs	9.75	6.54	6.67	13.68
SRES costs	0.00	0.00	40.00	34.19
TOTAL	1248.00	1419.77	1499.35	1580.74

B.2.5 South Australia

Table B.5 Average annual bill impact in South Australia 2009/10 to 2012/13

Average annual consumption - 5000 kWh				
Cost category	**2009/10**	**20010/11**	**2011/12**	**2012/13**
Wholesale electricity costs	429.61	466.99	532.00	546.96
Transmission costs	89.55	96.37	103.71	111.61
Distribution costs	363.24	419.20	453.87	491.60
Feed in tariff costs	4.00	8.00	12.00	15.00
Retail costs	144.35	165.00	150.04	154.24
RET/LRET	5.00	5.00	7.69	15.77

Average annual consumption - 5000 kWh				
Cost category	**2009/10**	**20010/11**	**2011/12**	**2012/13**
costs				
SRES costs	0.00	15.00	28.19	23.65
Residential Energy Efficiency Scheme costs	13.46	10.30	17.01	17.44
TOTAL	1049.22	1185.86	1304.52	1376.27

B.2.6 Tasmania

Table B.6 Average annual bill impact in Tasmania 2009/10 to 2012/13

Average annual consumption - 7362 kWh				
Cost category	**2009/10**	**20010/11**	**2011/12**	**2012/13**
Wholesale electricity costs	497.60	620.62	633.87	659.00
Transmission costs	150.72	162.17	174.49	175.15
Distribution costs	570.56	593.58	625.92	644.18
Retail costs	102.85	121.47	133.57	139.22
RET costs	15.71	7.36	11.32	23.20
SRES costs	0.00	22.09	41.50	34.81
TOTAL	1337.43	1527.28	1620.66	1675.56

B.2.7 Western Australia

Table B.7 Average annual costs of providing residential electricity services in Western Australia 2009/10 to 2012/13

Average annual consumption – 6067 kWh				
Cost category	**2009/10**	**20010/11**	**2011/12**	**2012/13**
Wholesale electricity costs	671.01	693.46	711.66	734.01

Average annual consumption – 6067 kWh				
Cost category	**2009/10**	**20010/11**	**2011/12**	**2012/13**
Transmission costs	92.22	118.91	134.08	162.24
Distribution costs	316.09	444.71	522.98	677.25
Retail costs	128.62	135.90	143.18	151.31
RET costs	7.28	6.07	9.37	19.36
SRES costs	0.00	18.20	34.37	29.03
Tariff Equalisation Scheme costs	56.54	65.58	65.58	70.83
TOTAL COSTS	1271.76	1482.84	1621.22	1844.04
TOTAL CUSTOMER PRICE		1275.89		

B.2.8 Northern Territory

Table B.8 Average annual costs of providing residential electricity services in the Northern Territory 2009/10 to 2012/13

Based on an average annual consumption of 5000 kWh				
Cost category	**2009/10**	**20010/11**	**2011/12**	**2012/13**
Wholesale electricity costs	622.54	749.97	670.14	686.80
Distribution costs	393.67	403.83	413.91	434.30
Retail costs	15.56	16.35	16.75	17.17
RET/LRET costs	2.75	5.00	7.71	15.85
SRES costs	0.00	15.00	28.27	23.78
TOTAL COSTS	1034.52	1190.15	1136.78	1170.90
TOTAL CUSTOMER PRICE	915.50	961.50	985.50	1010.00