AEMC

INFORMATION

Retail electricity price estimates

Final report for 2010-2011 to 2013-2014

This report sets out likely future trends in residential electricity price movements in Australia, and the drivers behind those trends.

It has been prepared for the Ministerial Council on Energy following a request from the Council of Australian Governments.

Scope of the report

For each jurisdiction and at a national level, this report adopts indicative prices for a base year 2010-11 and projects prices for the three financial years from 2011-12 to 2013-14.

To identify the trends, we have projected prices for one, flat rate, electricity tariff type. Accordingly, the projected residential electricity prices are not the same as the regulated retail tariffs set by jurisdictional regulators or Governments. They are not a definite forecast of future residential electricity prices.

Assumptions adopted in projecting residential retail electricity prices

The projected residential electricity prices in this report:

- are for standard supply arrangements only. We understand that in some jurisdiction more than 50 per cent of customers are supplied under market arrangements; and
- assume certain consumption levels for a residential customer in each distribution area.

However, it is expected that the trends identified in this report would also apply to those customers on other supply arrangements and with different consumption levels.

Data in this report has been sourced from existing retail pricing decisions by jurisdictional regulators and Governments where possible. The network (transmission and distribution) components have been provided by the Australian Energy Regulator based on existing network determinations and assumptions of the annual consumption of residential customers for each distribution and transmission network. Where data was not available it was estimated.

Table A: Approach to regulation in each jurisdiction

Component	Transmission	Distribution	Wholesale	Retail	Green/other
Relates to	High voltage transmission of power from generation source to distribution network	Distribution of power at low voltage from distribution network to premises	Cost to retailers of purchasing electricity (including carbon, spot market and hedging costs)	Retail operating, customer acquisition and retention costs plus retail margin	Costs of meeting greenhouse gas mitigation and other schemes (Commonwealth and jurisdictional)
Regulator	Australian Energy Regulator – NSW, ACT, QLD, TAS, SA, VIC / Economic Regulatory Authority - WA NT Utilities Commission - NT		Jurisdictional Regulator – NSW, ACT, QLD, SA, TAS Jurisdictional Government – WA and NT No regulation - VIC		
Form of regulation	Prices based on maximum allowed revenue or weighted average price cap for a regulatory period, determined in accordance with National Electricity Rules, WA electricity access code, NT access arrangements		Prices based on each jurisdiction's methodology for determining these components. Note, the methodolgy used by each jurisdictional regulator differs. In Victoria components set by market as there is no retail price regulation		

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Possible future retail electricity prices: 1 July 2011 to 30 June 2014

The report provides analysis of projected residential electricity prices. The analysis includes a price on carbon, as specified in the Clean Energy Future legislative package. The drivers behind the increases vary across jurisdictions. While increasing network investment expenditure, higher wholesale electricity prices, and government schemes are common factors, the relative proportions of these drivers differ across jurisdictions. The relative proportion of the wholesale electricity component to the total residential retail electricity price increases significantly with a carbon price. The impact of a carbon price at the national level is approximately six per cent in 2013-2014

Building on the first forecast (2009-10 to 2012-13); this analysis reinforces distribution costs as a key driver of retail electricity price increases.

Australia-wide

Nationally, residential electricity prices are projected to increase by 37 per cent in nominal terms. In real terms, this is an increase of 22 per cent.

National residential electricity price increases by composition including carbon price

Total price comparison:			Contribution of each component to price increases:	
2010/11 price (c/kWh)		22.41	Transmission	6.0%
2013/14 price (c/kWh)		30.75	Distribution	33.6%
Total c/kWh increase		8.34	Wholesale	40.2%
Total nominal % increase (2010/11 to 2013/14)		37.2%	Retail	12.1%
			Feed-in tariff	2.8%
Carbon impact:	c/kWh	Percentage	LRET	3.8%
2012/13	1.64	5.6%	SRES	-0.8%
2013/14	1.74	5.7%	Other state based schemes	2.3%

Transmission component – 6% contribution to national price increase

The transmission component is driven by increasing investment to meet growing maximum demand, and higher commodity prices (steel, copper, labour). Transmission investment is forecast to be $8.6 billion in the current regulatory control periods (in National Electricity Market jurisdictions and Western Australia), as reflected in current Australian Energy Regulator and Economic Regulation Authority of Western Australia determinations.

Distribution component – 34% contribution to national price increase

The distribution component is projected to increase in most jurisdictions due to increased levels of capital expenditure to meet peak demand and replace ageing assets, as well as, higher weighted average costs of capital as a result of the global financial crisis, as reflected in current Australian Energy Regulator and Economic Regulation Authority of Western Australia determinations. Distribution investment is projected to be $33 billion in current regulatory control periods (in National Electricity Market jurisdictions and WA).

Wholesale component – 40% contribution to national price increase

The wholesale component is projected to increase to allow for changes in sources of electricity generation, higher capital and operational costs for generation, and higher hedging costs. A price on carbon will also increase the wholesale electricity component.

Retail component – 12% contribution to national price increase

Jurisdictional regulators currently calculate the retail margin as a percentage of the total cost to supply residential customers. Therefore, the retail component is expected to grow as increases in other components place upward pressure on retail margins. Note that in Victoria retail prices are no longer regulated.

Renewable energy target (LRET and SRES) – 3% contribution to national price increase

The enhanced renewable energy target costs are driven by expansion in the amount of renewable energy required each year to meet the 20% target by 2020. Under a price on carbon the enhanced renewable energy target costs are projected to decrease. This is primarily due to a carbon price reducing the cost of the Large-scale Renewable Energy Target. The carbon price raises the wholesale price, reducing the certificate price needed to bridge the gap between revenue available through the wholesale market and revenue needed for project viability. On the other hand, the costs associated with the Small-scale Renewable Energy Scheme are projected to be slightly higher under a carbon price.

Feed-in tariff (3% contribution to national price increase) and other state based schemes (2% contribution to national price increase)

Feed-in tariff schemes nationally are predominantly closed to new connections; however, due to the design and cost of those schemes this component is projected to increase over

the projection period. Other state based schemes are not expected to make a large contribution to national price increases.

Queensland

- Queensland residential electricity prices are forecast to increase by 42 per cent in nominal terms between the base year and 2013-2014.

Drivers of Queensland price movements

- The main drivers here are the wholesale electricity component, estimated to increase by 44 per cent and the distribution component, forecast to increase by 40 per cent.
- Tightening of the supply/demand balance is expected to lead to an increase in wholesale market prices in Queensland, as surplus demand is met by new entrant capacity, predominantly in the form of open cycle gas generation, which will be developed in response to the expanded renewable energy target and the carbon price.

We have used published figures where available. Some components have been estimated as part of this quantitative assessment.

Consequently, this report is not a definitive forecast. It provides an indication of trends in future electricity price movements.

New South Wales

- New South Wales residential electricity prices are forecast to increase by 42 per cent in nominal terms between the base year and 2013-2014.

Drivers of New South Wales price movements

- 36 per cent of the increase is from the distribution component as a result of increasing maximum demand, the need to replace ageing assets, and additional capital expenditure over the current regulatory control period.
- In addition, 38 per cent of the estimated increase in retail electricity prices is from the wholesale component, as a result of the price on carbon and the expected increase in gas-fired generation capacity.

Australian Capital Territory

- Residential electricity prices are forecast to increase by 42 per cent in nominal terms between the base year and 2013-2014.

Drivers of Australian Capital Territory price movements

- The effect of a carbon price on the wholesale energy component is essentially the same for the Australian Capital Territory and New South Wales however, given that the regulators in both jurisdictions employ different methodologies in calculating the wholesale energy component of the standing offer tariff, the resulting projection appears markedly different. This results in an increase in the wholesale electricity component of 69 per cent in the ACT.

Victoria

- Victorian residential electricity prices are forecast to increase by 33 per cent in nominal terms between the base year and 2013-2014.

Drivers of Victorian price movements

- As retail price regulation has been removed in Victoria, the estimation of individual cost components is more difficult.
- The carbon pass-through for Victoria is projected to be lower than the average emissions intensity of Victorian generation, reflecting price competition from lower-emissions generation sources in the regions with which Victoria is connected (namely New South Wales, South Australia and Tasmania).
- 10 per cent of the forecast increase is related to the increase in advanced metering infrastructure costs of the Victorian smart meter roll-out.

Tasmania

- Tasmanian residential electricity prices are forecast to increase by 25 per cent in nominal terms between the base year and 2013-2014.

Drivers of Tasmanian price movements

- 50 per cent of the increase due to wholesale electricity component. While hydroelectricity is the main electricity generation type current utilised in Tasmania for electricity supply, there is little opportunity to construct large-scale hydroelectricity and there are few commercial coal reserves in Tasmania. Therefore, calculation of the long-rum marginal cost and expected generation mix, leads to mostly gas-fired generation with a minor wind component, which leads to higher wholesale electricity prices.

A price on carbon places upward pressure on the wholesale electricity component.

South Australia

- Residential electricity prices are forecast to increase by 36 per cent in nominal terms.

Drivers of South Australian price movements

- The distribution component is projected to increase as a result of increasing maximum demand and higher rates of return on capital in the current regulatory control period compared to the previous regulatory control period. The increase in the distribution component is expected to contribute 40 per cent of the increase.
- A number of unique factors appear to contribute to higher wholesale electricity prices in SA including: volatile demand; relatively small market; high dependence on gas-fired generation; and relatively low interconnection with neighbouring jurisdictions. The wholesale component is estimated to contribute 35 per cent of the projected increase.

Western Australia

- As retail prices in Western Australia are subsidised by the Government, this report estimates the expected movements in the price required to supply electricity to residential customers rather than movements in retail electricity prices.
- The price required to supply electricity to residential customers is forecast to increase by 30 per cent in nominal terms between the base year and 2013-2014.

Drivers of Western Australian price movements

- 44 per cent of the increase is related to the distribution component, while 38 per cent is related to the wholesale electricity component.
- Network cost increases are driven by increases in customer demand, higher capital expenditure, increases in the Tariff Equalisation Contribution, and higher rates of return.

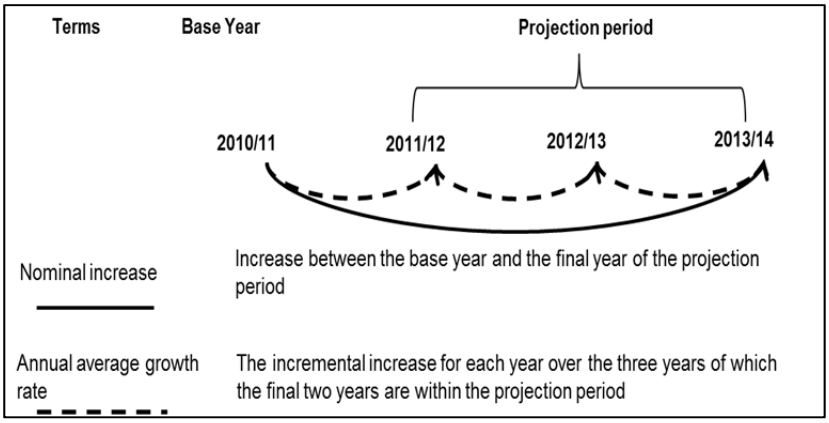
Northern Territory

- As retail prices in the Northern Territory are subsidised by the Government, this report estimates expected movements in the price required to supply electricity to residential customers rather than movements in retail electricity prices.
- Northern Territory residential electricity prices are forecast to increase by 16 per cent in nominal terms between the base year and 2013-2014.

Drivers of Northern Territory price movements

- 68 per cent of the increase is related to the wholesale electricity component, while 22 per cent is related to the distribution component.
- Wholesale and network costs are driven by increasing demand, high operational and maintenance costs due to ageing assets, and wages growth. Further distribution costs are likely as recommendations from the NT Government's Davies Enquiry are implemented to improve asset management and network reliability.

Glossary



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