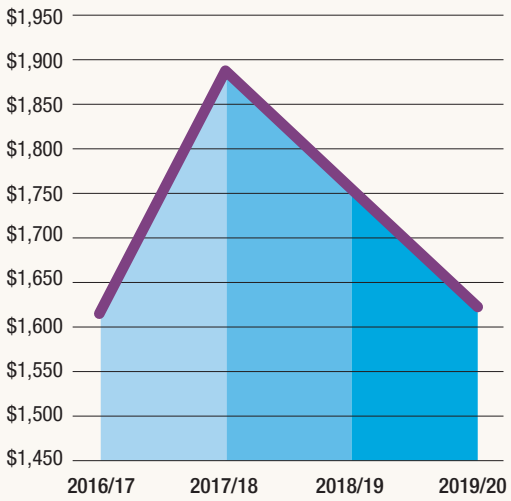
AUSTRALIAN ENERGY MARKET COMMISSION

ELECTRICITY PRICE TRENDS REPORT 18 DEC 2017

This report looks at factors driving residential power prices in South Australia over the next two years July 2018-2020

WHAT'S DRIVING THE ANNUAL BILL FOR A TYPICAL HOUSEHOLD IN SOUTH AUSTRALIA

$ Annual electricity bill for a typical residential consumer

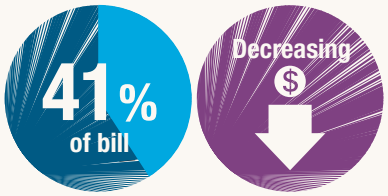


Market offer prices increased by 17% this year, and are estimated to decrease by an average 7.3% over the next two years driven mainly by changes in wholesale electricity costs.

7.3%

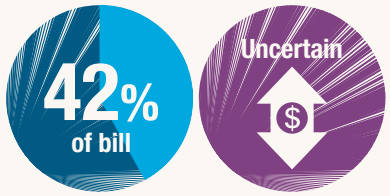
THE COMPONENTS MAKING UP ELECTRICITY BILLS TODAY

WHOLESALE COSTS



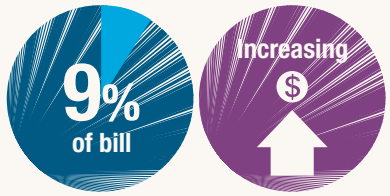
2017 TREND FOR 2018-2020

REGULATED NETWORKS COSTS



2017 TREND FOR 2018-2020

ENVIRONMENTAL & SYSTEM SECURITY COSTS



2017 TREND FOR 2018-2020

COSTS AT A GLANCE

WHOLESALE

The cost of generating electricity

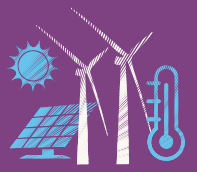
- Increased by 35.9% this year due to the exit of Northern and Hazelwood coal generators, and higher gas prices which increase the cost of operating gas-fired power stations.
- Estimated to decrease by an average 22.9% each year as new wind and solar generation enters the market and the Swanbank E gas generator in Queensland returns to service.

Wholesale costs are higher in South Australia in part due to its greater reliance on gas-fired generators.

NETWORKS

Poles and wires costs depend on regulator revenue determinations

Transmission and distribution costs are expected to increase by an average 2% each year. But this is uncertain due to ongoing judicial review of the SA distribution revenue determination.



ENVIRONMENTAL & SECURITY COSTS

Direct costs of government schemes like the renewable energy target

Estimated to increase by an average 21.8% a year. Costs include RET certificates, the state's solar feed in scheme, and the energy security target.

RESIDUAL

The residual component reflects costs and risks incurred by retailers, and their profit or loss. It also includes calculation errors in the costs of other supply chain components. It does not represent retail margins.

AEMC

NEWS

South Australia residential electricity price trends

2017 Residential electricity price trends report

Households in South Australia will see prices drop by an estimated 7.3% each year over the next two years from 1 July 2018 as more variable wind and solar generation comes online.

But over time, without investment in replacement dispatchable capacity, wholesale costs will start to rise again as older generators exit. Uncertainty is stopping investment and will put upward pressure on prices in the medium term.

The AEMC's annual report on price trends provides an overall picture of factors driving electricity prices for households in each state and territory. While the report is not a forecast of prices, it analyses cost trends across the electricity supply chain including generation, the regulated networks sector; and price impacts resulting from government environmental and system security policies.

The report found South Australian residential electricity prices rose by around 17% this year, largely due to a 36% increase in wholesale energy costs following the closure of Northern and Hazelwood coal power stations, and higher gas prices which increase the cost of operating gas-fired generators.

But these price rises are expected to reverse over the next two years as more wind and solar generation comes online and a Queensland gas generator returns to service. More supply means downward pressure on prices.

While welcoming the expected price falls, AEMC Chairman John Pierce cautioned that without investment in replacement dispatchable generation, wholesale costs will start to rise again in the medium term.

"Older, unprofitable thermal generators are exiting the market – reducing the supply of dispatchable energy," said Mr Pierce.

"Without new investment, wholesale prices will go up again and remain volatile, and the rollercoaster will be repeated."

This is of even greater relevance to South Australia, where wholesale costs are higher than in other parts of the national electricity market due in part to the state's greater reliance on gas-fired generation.

To this end, the AEMC is working with other market bodies on the Energy Security Board on the national energy guarantee design.

"We have a window right now for the COAG Energy Council to continue its work on mechanisms that can work in the long term interests of consumers and keep the lights on as the energy sector continues to restructure," Mr Pierce said.

Network costs, which make up around 40% of the typical residential electricity bill in South Australia, are estimated to increase slightly, although there is some uncertainty due to the ongoing judicial review of the AER's revenue determination for the South Australian distribution business, SA Power Networks.

Environmental and system security costs, which make up around 9% of the bill, are estimated to increase by around 22% each year over the next two years. The main drivers for the increase are the rising cost of certificates under the large-scale renewable energy target, and also the cost of the state government's Energy Security Target.

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"Without new investment, wholesale prices will go up again and remain volatile, and the rollercoaster will be repeated."

The Energy Security Target provides a subsidy to gas-fired generators and other sources of system security services such as large-scale batteries. Direct costs are likely to be passed through to consumers from 2019-2020.

The cost of South Australia's feed-in tariff schemes should decrease by around 30% this year then remain stable for the next two years.

Background

Price trends identified in the report are not a forecast of actual prices. They are a guide to factors which may drive prices up or down. Actual prices will be influenced by how retailers compete in the market, the outcomes of network regulatory processes, and changes in government legislation.

Actual consumer bills will be affected by all these drivers as well as customers' individual consumption choices, and local factors like the weather, the availability of mains gas, and the prevalence of solar PV systems.

Modelling for price trends in South Australia

The report estimates electricity prices for the most common type of residential electricity consumer in South Australia (the 'representative consumer').

The representative consumer is defined by their electricity consumption characteristics including:

- total annual electricity consumption
- quarterly electricity consumption, to reflect seasonal changes in power use
- use of off-peak tariffs
- gas use
- the number of people in the household.

For South Australia, the report uses a figure of 5,000 kWh for annual electricity consumption based on data provided by the South Australian government. The quarterly consumption profile for South Australia is based on AER bill benchmarking data, which is drawn from a survey of around 8,000 households (across all jurisdictions except Western Australia) where participants are asked about their homes and the way they use electricity.

To develop representative retail prices for South Australia, the AEMC collected standing and market offers from the AER's Energy Made Easy website for 2016-2017 and 2017-2018.

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18 December 2017

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INFORMATION

South Australia – 18 December 2017

2017 residential electricity price trends: report 2017

The 2017 residential electricity price trends report identifies cost drivers across the entire electricity supply chain from 2016-17 to 2019-20.

The AEMC provides detailed analysis of forces of changes in Australia's energy markets. We provide government and stakeholders with the data they need to make market transformation work in the long term interests of consumers. This report provides an overall picture of factors driving electricity prices for households in each state and territory.

Key findings for South Australia

The report examines wholesale electricity purchase costs, regulated network costs and environmental policy costs.

Annual electricity prices for the representative consumer on a market offer in South Australia:

- increased by 17.0 per cent from 2016-17 to 2017-18 due to higher wholesale electricity costs, driven by the retirement of Northern and Hazelwood generators and increasing gas prices
- are expected to decrease by an annual average of 7.3 per cent in 2018-19 and 2019-20. The expected decreases are largely attributable to decreases in wholesale electricity costs driven by expected new generation (approximately 4,100 MW across the NEM) and the return to service of the Swanbank E generator (385 MW in Queensland).

Background

The report presents expected movements in electricity prices for a representative consumer in South Australia. In South Australia the annual consumption amount for the representative consumer is provided by the South Australian government

The annual consumption of the representative consumer in South Australia is 5,000 kWh per year.

Average electricity prices in this report are specific to the representative consumer in South Australia and may not reflect pricing outcomes for all residential consumers.

Price trends identified in this report are not a forecast of actual prices. They are a guide to factors which may drive prices up or down. Actual prices will be influenced by how retailers compete in the market, the outcomes of network regulatory process and changes in government legislation. Actual consumer bills will be affected by all these drivers as well as customer's individual consumption choices, and local factors like the weather, and where they live.

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Trends in residential electricity prices

Residential electricity market offers for the representative consumer in South Australia increased by 17.0 per cent from 2016-17 to 2017-18. However, prices are expected to:

- decrease by 6.9 per cent in 2018-19
- decrease by 7.8 per cent in 2019-20.

This is equivalent to an average annual decrease of 7.3 per cent from 2017-18 to 2019-20.

The key driver of the trend in annual electricity bills is wholesale electricity purchase costs.

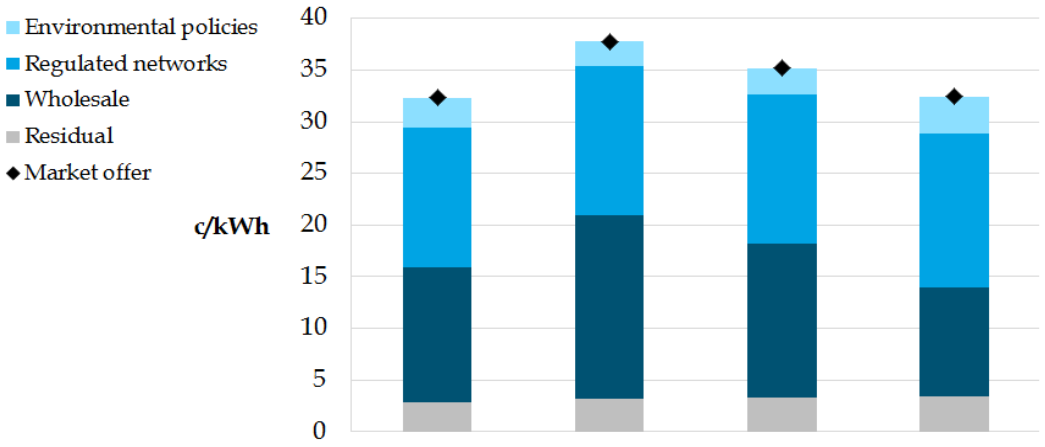
In South Australia, consumers can choose between a market offer and a retail standing offer. Approximately 87 per cent of small customers in South Australia are on a market offer (small customers includes residential and small business customers).

The table below provides information on the total annual bill for a representative consumer in South Australia on a market offer and a standing offer.

South Australia	2016-17
Standing offer total annual bill	$1,895
Market offer total annual bill	$1,615

Trends in supply chain cost components

The below figure shows the expected movements in the supply chain cost components for the representative consumer on a market offer in South Australia.



	2016/17 Base Year		2017/18 Current Year		2018/19		2019/20	
	c/kWh	$/yr	c/kWh	$/yr	c/kWh	$/yr	c/kWh	$/yr
Environmental policies	**2.83**	**$141**	**2.43**	**$122**	**2.58**	**$129**	**3.61**	**$180**
LRET - LGC cost	0.66	$33	0.78	$39	0.92	$46	1.06	$53
SRES - STC cost	0.37	$18	0.33	$17	0.35	$17	0.33	$17
Solar FiT	1.55	$78	1.06	$53	1.06	$53	1.06	$53
REES	0.25	$13	0.25	$13	0.25	$13	0.25	$13
Energy Security Target	0.00	$0	0.00	$0	0.00	$0	0.90	$45
Regulated networks	**13.52**	**$676**	**14.34**	**$717**	**14.40**	**$720**	**14.92**	**$746**
Transmission	2.80	$140	2.89	$145	2.51	$126	2.59	$129
Distribution	10.72	$536	11.45	$573	11.88	$594	12.33	$617
Wholesale	**13.10**	**$655**	**17.80**	**$890**	**14.94**	**$747**	**10.57**	**$529**
Residual	2.86	$143	3.21	$160	3.29	$164	3.37	$168
Market offer	**32.31**	**$1,615**	**37.79**	**$1,889**	**35.20**	**$1,760**	**32.47**	**$1,623**

The expected movements in each of the electricity supply chain cost components for South Australia from 2017-18 to 2019-20 are summarised below:

Wholesale electricity purchase costs: these costs include purchases from the spot market and financial contracts, ancillary services, market fees and energy losses from transmission and distribution networks.

Regulated network costs comprised approximately 41.8 per cent of the representative market offer in 2016-17. However, there is uncertainty given the current judicial review application.

In South Australia, wholesale market costs comprised approximately 40.6 per cent of the representative market offer in 2016-17. Wholesale market costs are expected to:

- increase by 35.9 per cent in 2017-18
- decrease by 16.1 per cent in 2018-19
- decrease by 29.2 per cent in 2019-20.

This is equivalent to an average annual decrease of 22.9 per cent from 2017-18 to 2019-20.

The drivers of wholesale market costs are set out in key findings above.

Regulated network costs: these costs include transmission and distribution network service providers' costs associated with providing the necessary infrastructure to enable the power system to operate as a connected system.

The regulated network costs comprised approximately 41.8 per cent of the representative market offer in 2016-17.

Transmission network costs are expected to decrease at an average annual rate of 5.4 per cent from 2017-18 to 2019-20. The trend in regulated transmission charges in these years reflects the transmission use of system charges in SA Power Networks' approved annual pricing proposal for 2017-18, and the revenue growth in the AER's draft decision for ElectraNet for the 2018–23 regulatory period for 2018-19 and 2019-20.

Distribution network costs are expected to increase at an average annual rate of 3.8 per cent from 2017-18 to 2019-20. Distribution trends in 2017-18 are based on SA Power Networks' approved annual pricing proposas, while 2018-19 and 2019-20 are estimated based on the revenue growth rate in AER's 2015–20 final determination for SA Power Networks.

Future network prices are subject to uncertainty. In November 2016, SA Power Networks lodged an application for judicial review in the Federal Court of Australia in respect of the Australian Competition Tribunal's decision for its 2015–20 regulatory determination. The matter was heard in May 2017 and judgement is reserved at the time of writing this report.

Environmental policy and system security costs: these costs are related to policies introduced by the Commonwealth and South Australia governments including the Renewable Energy Target and energy efficiency schemes. It also includes costs related to the Energy Security Target which is a system security scheme.

In 2016-17, environmental and system security schemes comprised 8.8 per cent of the representative market offer and are expected to comprise an increasing proportion from 2017-18 to 2019-20.

The costs associated with the large-scale generation certificate scheme under the large-scale renewable energy target are expected to increase at an average annual rate of 16.3 per cent from 2017-18 to 2019-20.

The small-scale technology certificate costs under the small-scale renewable energy scheme are expected to decrease at an average annual rate of 0.1 per cent from 2017-18 to 2019-20.

South Australia's Retailer Energy Efficiency Scheme costs remain unchanged over the reporting period. The Energy Security Target commences in January 2020.

The national picture

The underlying supply chain cost components and the impact of those trends vary across jurisdictions as a result of population, climate, consumption patterns, government policy and other factors. Against this background, residential prices nationally follow the same general trend as that seen for South Australia. This is as a result of the trend in wholesale electricity purchase costs which is the key driver of the price trends during the reporting period.

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