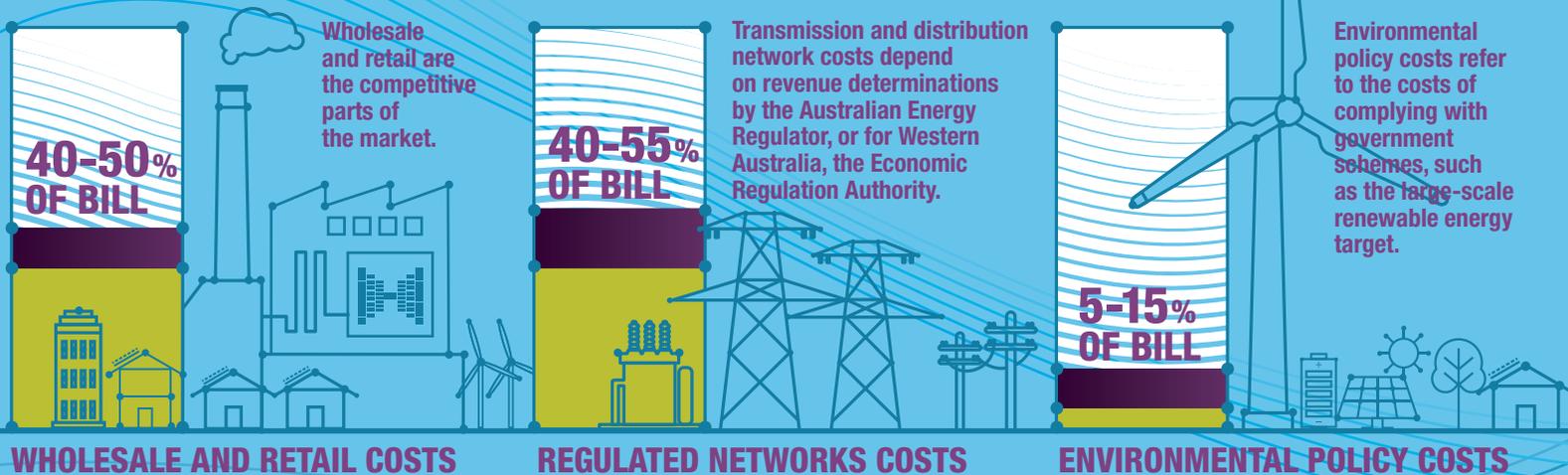


# AEMC 2016 RESIDENTIAL ELECTRICITY PRICE TRENDS REPORT

## PRICES RISING WITH VARIATION BETWEEN REGIONS

Average residential electricity prices are expected to rise, driven by significant increases in wholesale costs following retirement of two large generators. The generation mix is changing as more wind and solar enters the market and coal-fired generators retire. Electricity flows across regions are changing too, leading to greater price variations.

### THE COMPONENTS THAT MAKE UP YOUR ELECTRICITY BILL



### PRICE DRIVERS IN OUR EVOLVING MARKET

Across most states average wholesale costs are estimated to increase by between 5% and 15% each year over 2015/16 to 2018/2019, largely driven by the closure of Hazelwood and Northern power stations, while electricity consumption remains flat.

Wholesale electricity costs are a key driver in customer bills and are increasingly connected with:

**Emissions policy** – the large-scale renewable energy target has led to substantial investment in wind generation – contributing to closure of coal-fired plant and recent increases in wholesale and retail prices.

**The wholesale gas market** – the price for gas affects electricity prices through gas-fired power stations, which are expected to play a larger role in the market.

**System security** – the increased reliance on renewable non-synchronous generation affects the technical characteristics of the system and the ability to supply reliable, secure energy. There is likely to be a need for additional services to manage system security, potentially impacting retail prices over the longer term.

The AEMC is responding to the interconnected nature of this market transformation in strategic ways

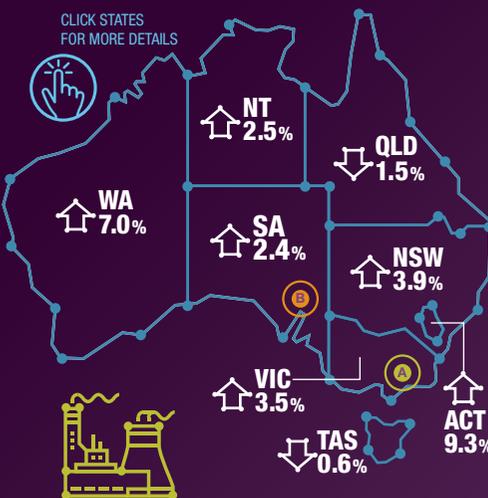
Well designed and integrated emissions reduction and energy policies can reduce emissions while delivering reliable, secure energy at the best price for consumers. The AEMC is advising energy ministers on the mechanism to achieve emissions reductions at the lowest cost to consumers.

A more efficient gas market lowers the wholesale cost of electricity by decreasing the costs of operating gas-fired generators. In 2016, following the AEMC's gas market review, governments committed to implementing a gas market reform package to enable faster and more efficient gas trading along the east coast.

The AEMC's power system security review is developing and implementing new market frameworks to support the entry of new technologies and participants in a way that delivers secure energy at the least cost for consumers.

### AVERAGE ANNUAL PRICE TRENDS BETWEEN 2016/17 and 2018/19\*

Trends in the underlying cost components of residential electricity bills vary across the country and over time as a result of differences in population, climate, consumption patterns, government policy and other factors.



- Ⓐ Hazelwood power station – to close March 2017
- Ⓑ Northern power station – closed May 2016

\* From 2016/17 to 2018/19 annual average change in bill

### PRICE IMPACTS OF HAZELWOOD POWER STATION CLOSURE

The owners of Hazelwood power station, which provides around 20% of Victoria's electricity, made a commercial decision to close in 2017. This will lead to large changes in electricity flows across regions and wholesale costs.

Increase in annual typical bill in 2018/19\*



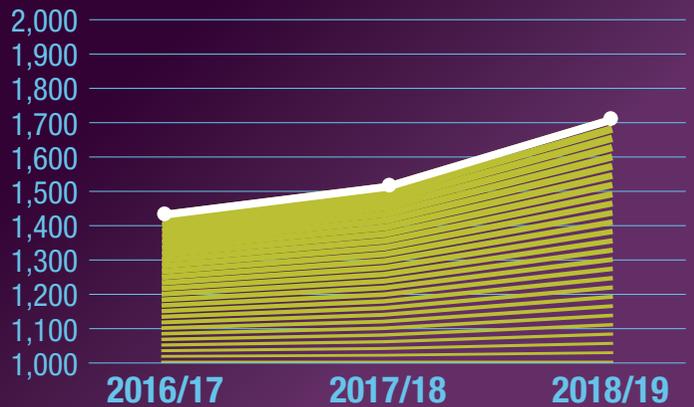
\*Compared to a scenario where Hazelwood power station did not retire

# 2016 RESIDENTIAL ELECTRICITY PRICE TRENDS REPORT

Higher costs are expected across all bill components – wholesale and retail, network and environmental policies – with environmental policy costs having the largest increase mainly due to the increased costs of Feed-In Tariff schemes. Network costs are uncertain due to ongoing legal proceedings.

# ACT

\$ Average annual residential electricity bill



From 2016/17 to 2018/19 annual average change in bill

UP **9.3%**



**WHOLESALE AND RETAIL COSTS INCREASING**

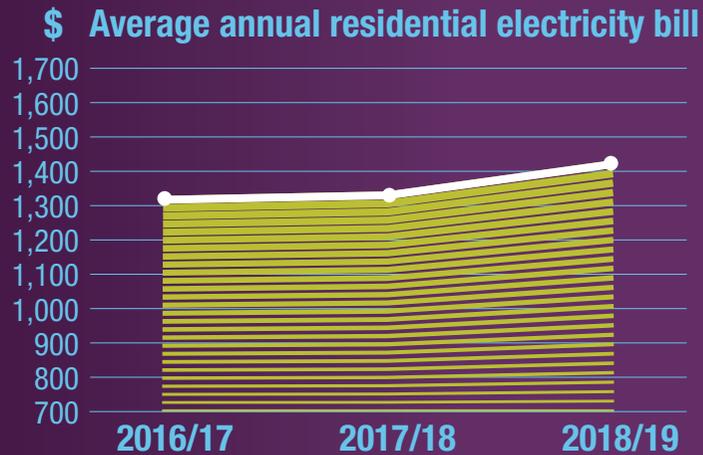
**REGULATED NETWORKS COSTS UNCERTAIN**

**ENVIRONMENTAL POLICY COSTS INCREASING**

# 2016 RESIDENTIAL ELECTRICITY PRICE TRENDS REPORT

Wholesale costs are expected to rise, largely driven by the closure of Hazelwood power station. The effect of the Hazelwood exit is mostly seen in 2018/19. Network costs may rise, although this is uncertain due to ongoing legal proceedings.

# NSW



From 2016/17 to 2018/19 annual average change in bill **UP 3.9%**



**WHOLESALE AND RETAIL COSTS INCREASING**

**REGULATED NETWORKS COSTS UNCERTAIN**

**ENVIRONMENTAL POLICY COSTS STABLE**

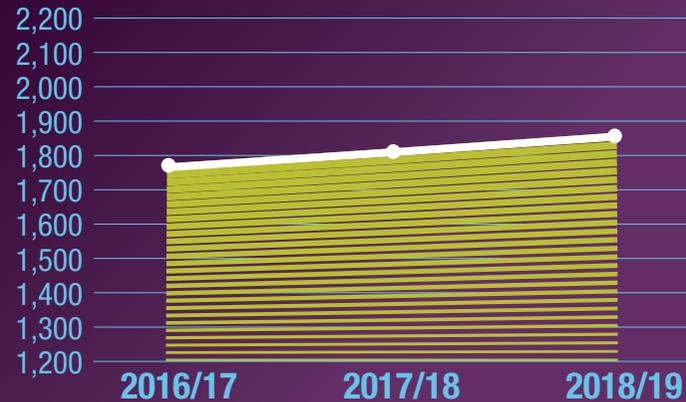
# 2016 RESIDENTIAL ELECTRICITY PRICE TRENDS REPORT

Residential electricity prices in the NT are set by the territory government. The prices paid by consumers are less than the cost of supply.

# NT



\$ Average annual residential electricity bill



From 2016/17 to 2018/19 annual average change in bill

 **UP 2.5%**



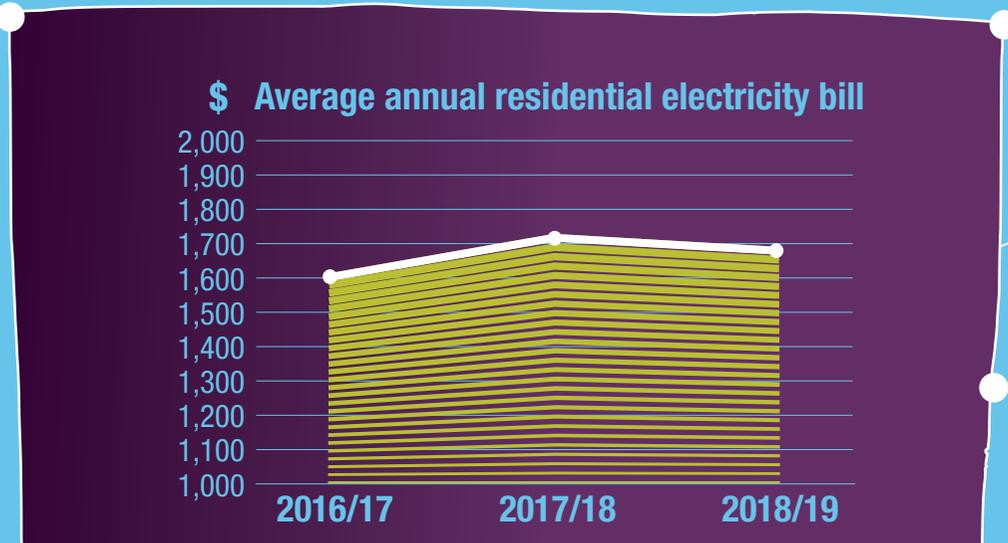
WHOLESALE AND RETAIL COSTS

REGULATED NETWORKS COSTS

ENVIRONMENTAL POLICY COSTS

# 2016 RESIDENTIAL ELECTRICITY PRICE TRENDS REPORT

Wholesale costs are expected to rise, largely due to the closure of Hazelwood power station, followed by a slight decrease in 2018/19 as more wind power comes on line. Network costs may increase slightly, although this is uncertain due to ongoing legal proceedings.



From 2016/17 to 2018/19 annual average change in bill **UP 2.4%**

# SA



**WHOLESALE AND RETAIL COSTS**  
**INCREASING**

**REGULATED NETWORKS COSTS**  
**UNCERTAIN**

**ENVIRONMENTAL POLICY COSTS**  
**STABLE**

# 2016 RESIDENTIAL ELECTRICITY PRICE TRENDS REPORT

Residential electricity prices in Tasmania are set by the Office of the Tasmanian Economic Regulator. Wholesale costs are expected to rise, largely driven by the closure of Hazelwood power station. This is offset by decreasing network costs.

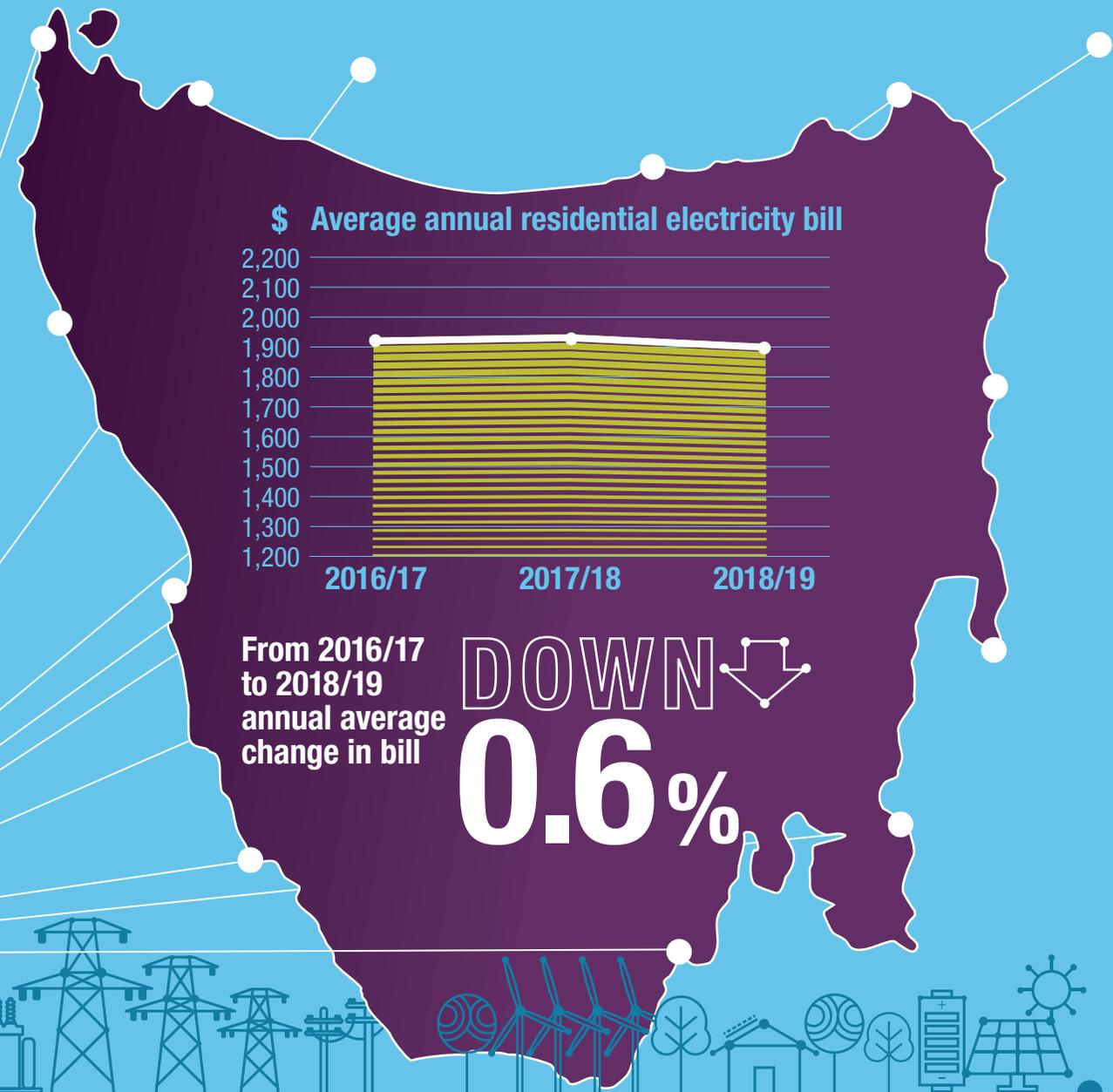
# TAS



**WHOLESALE AND RETAIL COSTS**  
INCREASING

**REGULATED NETWORKS COSTS**  
DECREASING

**ENVIRONMENTAL POLICY COSTS**  
STABLE



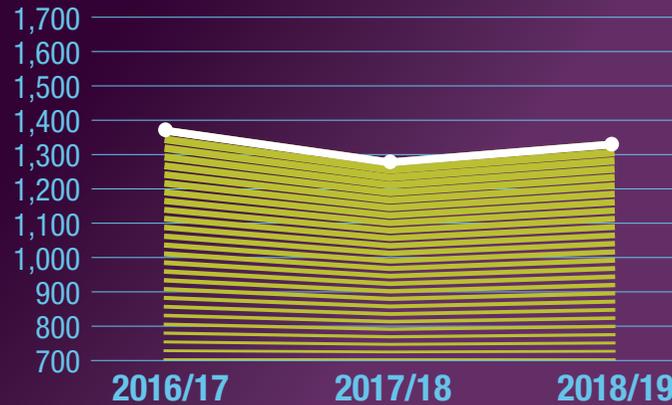
From 2016/17 to 2018/19 annual average change in bill  
**DOWN**  
**0.6%**

# 2016 RESIDENTIAL ELECTRICITY PRICE TRENDS REPORT

Increasing wholesale costs, largely driven by the closure of Hazelwood power station, are expected to be offset by decreases in QLD Solar Bonus Scheme costs.

# QLD

Average annual residential electricity bill



From 2016/17 to 2018/19 annual average change in bill

**DOWN**   
**1.5%**



 **WHOLESALE AND RETAIL COSTS INCREASING**

 **REGULATED NETWORKS COSTS STABLE**

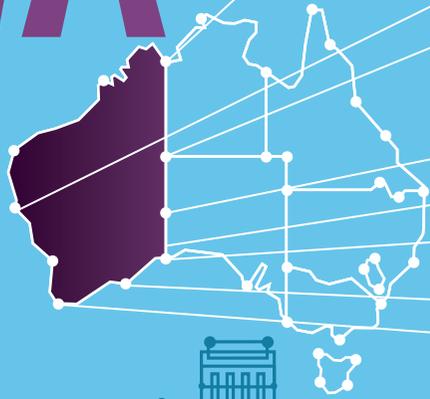
 **ENVIRONMENTAL POLICY COSTS DECREASING**

# 2016 RESIDENTIAL ELECTRICITY PRICE TRENDS REPORT

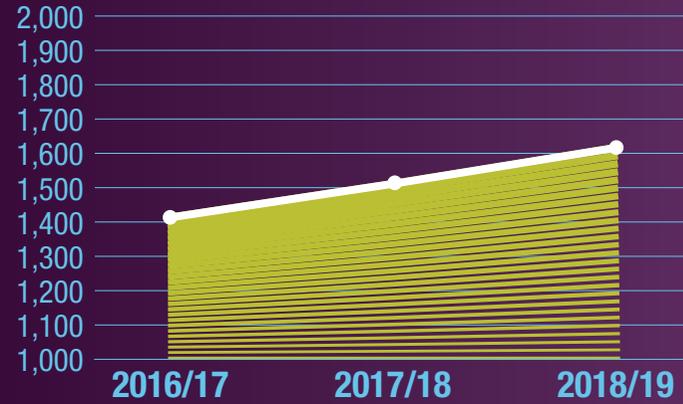
Residential electricity prices in WA are set by the state government.

The prices paid by consumers are currently less than the cost of supply. The expected increase in the cost of supply is mostly due to higher wholesale costs.

# WA



\$ Average annual residential electricity bill



From 2016/17 to 2018/19 annual average change in bill



# UP 7.0%



 **WHOLESALE AND RETAIL COSTS INCREASING**

 **REGULATED NETWORKS COSTS STABLE**

 **ENVIRONMENTAL POLICY COSTS STABLE**

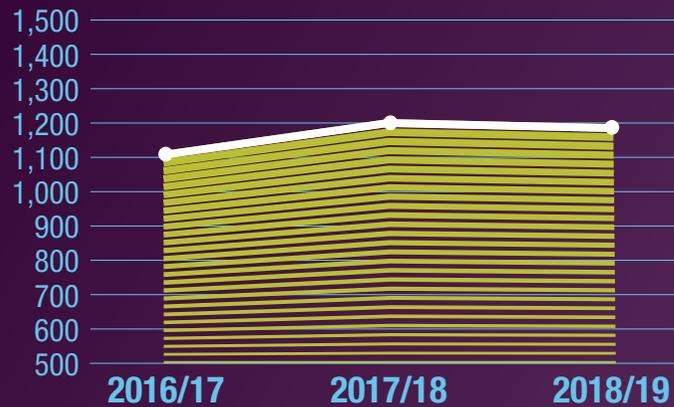
# 2016 RESIDENTIAL ELECTRICITY PRICE TRENDS REPORT

Wholesale costs are expected to rise, largely due to the closure of Hazelwood power station, followed by a slight decrease in 2018/19 as more wind power comes on line. Network costs may decrease, although this is uncertain due to ongoing legal proceedings.

# VIC



\$ Average annual residential electricity bill



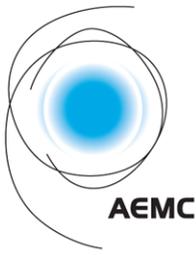
From 2016/17 to 2018/19 annual average change in bill

**UP 3.5%**

**WHOLESALE AND RETAIL COSTS**  
INCREASING

**REGULATED NETWORKS COSTS**  
UNCERTAIN

**ENVIRONMENTAL POLICY COSTS**  
STABLE



## Northern Territory electricity price trends

### 2016 Residential Electricity Price Trends report

**Average residential electricity prices in the Northern Territory are expected to increase over the next two years, but will remain less than the cost of supply.**

The AEMC's annual report on household price trends looks at what is driving changes in the underlying cost components of household electricity bills. It analyses the competitive market sectors of wholesale generation and retail; the regulated networks sector; and price implications from government environmental policies.

AEMC Chairman John Pierce said although electricity prices in the Northern Territory are set by the Northern Territory Government, an analysis of underlying drivers found that slight increases in network costs and the cost of environmental policies are likely.

"Residential electricity prices in the Northern Territory are expected to rise by 2.5 per cent on average for each of the next two years, based on an assumed rate of inflation. However the Northern Territory government will set future electricity prices," said Mr Pierce.

The extent to which this trend is realised depends on decisions taken by the Northern Territory Government. This is because it is currently implementing an electricity industry reform covering all parts of the Northern Territory's supply chain.

"Wholesale electricity costs are expected to increase by 1.3 per cent up until 2018/19," Mr Pierce said. "This reflects Territory Generation's prices which are influenced by their contractual arrangements."

In 2016/17 a subsidy of \$77.9 million was provided to urban electricity consumers. Subsidies are greater in regions outside of the Darwin Katherine Interconnected System.

Network costs, which make up around half of a residential electricity bill, are expected to remain stable in the Northern Territory. This reflects a Ministerial Direction that requires Power and Water Corporation's increases in regulated revenue to be based on inflation.

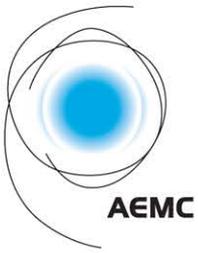
Mr Pierce said environmental policy costs are also likely to remain stable over the next two years. These are the costs associated with the Large-scale Renewable Energy Target and the Small-scale Renewable Energy Scheme that require retailers to source a proportion of their electricity from renewable sources.

Mr Pierce said price trends would affect individual households differently depending on how each consumer uses electricity.

"No two households use energy in the same way. Knowing how much power you use and when, will be the key tool in controlling electricity costs in the future," Mr Pierce said.

Media: Communications Director, Prudence Anderson 0404 821 935 or (02) 8296 7817.

14 December 2016



Northern Territory – 14 December 2016

# 2016 Residential Electricity Price Trends: Final Report

The 2016 Residential Electricity Price Trends report (the report) identifies drivers of movement in electricity prices from July 2016 to June 2019.

## Key findings

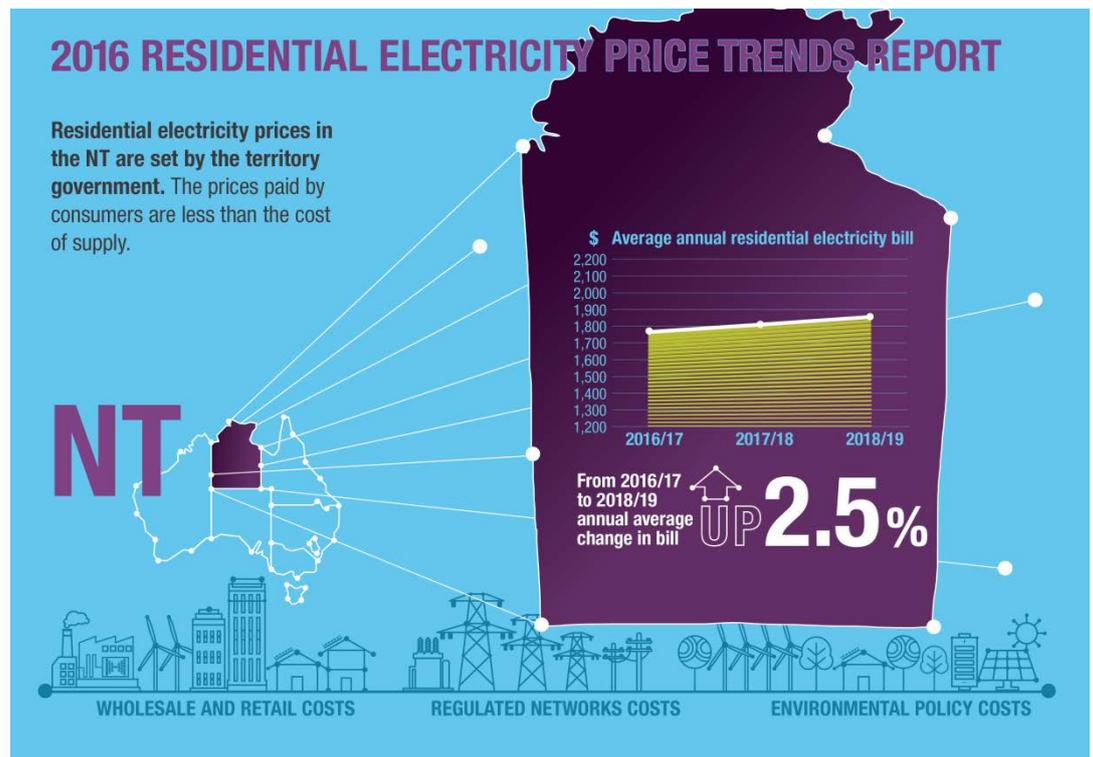
The key supply chain cost components under analysis are the wholesale cost component, regulated networks component and government environmental policy component.

Maximum residential electricity prices in the Northern Territory are set by the Northern Territory Government, which subsidises electricity prices such that the prices paid by consumers are less than the cost of supply. As a result, the retail price paid by consumers does not necessarily reflect the underlying costs of supplying electricity, nor follow cost trends.

Residential electricity prices in the Northern Territory are expected to have an average annual increase of 2.5 per cent over the two years to June 2019, for the representative consumer, based on an assumed rate of inflation.

The expected increases in the estimated residential electricity supply cost are driven by increases across all cost components with wholesale costs having the largest rise.

Ongoing reforms to the regulatory framework governing the Northern Territory's electricity industry have been underway since 2014. Any changes that occur as a result of these reforms may affect future residential retail prices within the period covered by this report.



## Background

The report presents expected movements in electricity prices for a representative consumer in the Northern Territory, using an annual consumption level that was calculated from benchmark values published by the Australian Energy Regulator (AER).

- The annual consumption of the representative consumer in the Northern Territory is 6,790 kilowatt hours (kWh) of electricity each year.
- Average electricity prices in this report are specific to the representative consumer and may not reflect the pricing outcomes for all residential consumers.

This report analyses trends in the wholesale component, the regulated networks sector of the electricity industry and the effect of government environmental policies.

Price trends identified in this report are not a forecast of actual prices, but rather a guide as to what may influence prices based on current expectations, assumptions and government legislation. Prices in 2017/18 and 2018/19 will be set by the Northern Territory Government.

## Trends in residential electricity prices

Retail prices are set by the Northern Territory Government. Residential electricity prices for the representative consumer in the Northern Territory decreased by 1.3 per cent in 2016/17. Prices are expected to increase by:

- 2.5 per cent in 2017/18; and
- 2.5 per cent in 2018/19.

Actual price outcomes will depend on decisions made by the Northern Territory Treasurer closer to when the prices apply, noting that the Northern Territory Government has indicated that any power price rises are capped at CPI for its first term in office.

In 2015/16, a representative consumer using 6,790 kWh per year paid the government set price and had a total annual bill of \$1,789 (exclusive of GST), as shown in the table below.

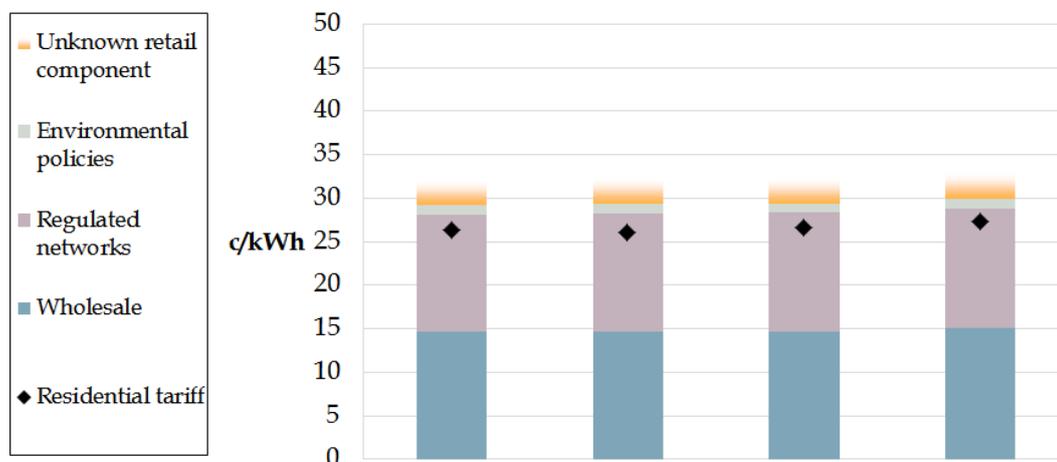
NT	2015/16
<b>Total annual bill for representative consumer paying government set price</b>	\$1,789

The figure on the next page shows that there is a “residual” of -\$192, which is the difference between the total annual bill and the aggregate of the supply chain costs. The residual is a contribution to the retail component. As the residual is negative, the aggregate of the supply chain costs, excluding the retail component, is higher than the residential price paid by the representative consumer.

## Trends in supply chain cost components

The figure shows the expected movements in the supply chain cost components for the representative consumer in the Northern Territory.

The expected increases in the estimated residential electricity supply cost are driven by increases across all cost components with wholesale costs having the largest rise.



	2015/16		2016/17		2017/18		2018/19	
	c/kWh	\$/yr	c/kWh	\$/yr	c/kWh	\$/yr	c/kWh	\$/yr
<b>Environmental policies</b>	1.02	\$69	1.12	\$76	1.03	\$70	1.14	\$77
LRET - LGC cost	0.59	\$40	0.75	\$51	0.69	\$47	0.80	\$55
SRES - STC cost	0.43	\$29	0.37	\$25	0.35	\$24	0.33	\$23
<b>Regulated networks</b>	13.47	\$915	13.58	\$922	13.65	\$927	13.73	\$932
<b>Wholesale</b>	14.69	\$997	14.69	\$997	14.69	\$997	15.06	\$1,023
<b>Residual</b>	-2.83	-\$192	-3.39	-\$230	-2.73	-\$185	-2.61	-\$177
<b>Residential tariff**</b>	26.35	\$1,789	26.00	\$1,765	26.65	\$1,810	27.32	\$1,855

In summary, the expected movements in each of the electricity supply chain components for the Northern Territory from 2016/17 to 2018/19 are:

**Wholesale costs** currently comprise approximately 57 per cent of the residential tariff in 2016/17, noting this tariff is below the total cost of supply in the Northern Territory. They are expected to increase at an average annual rate of 1.3 per cent over the two years to June 2019. It has not been possible to estimate the retail component in the Northern Territory.

The unchanged trend in wholesale electricity costs up until 2018/19 reflects Territory Generation's contractual arrangements entered into for the 2015-18 period. The increase in costs in 2018/19 is reflective of an increase in inflation and revision in Territory Generation's prices.

It has not been possible to calculate a proxy for **retail costs** in the Northern Territory using the residual method used for other jurisdictions. In the Northern Territory the residual is a value representing only part of the retail costs. The unknown retail component consists of a range of different costs, including: retailer operating costs; consumer acquisition and retention; and return on investment for the business.

**Regulated network costs** consist of transmission and distribution costs and comprise approximately 52 per cent of the residential tariff in 2016/17, noting this tariff is below the total cost of supply in the Northern Territory. In the Northern Territory there is no distinction between transmission and distribution prices when network prices are recovered from consumers. In April 2014, the Utilities Commission published a final determination on network prices for the 2014-19 regulatory period. However, the Treasurer has subsequently issued a Ministerial Direction for the network utility to apply an alternative revenue path of zero per cent plus inflation from 2016/17 to 2018/19. The revision includes a downwards adjustment of the regulated rate of return.

Residential prices are expected to increase across the reporting period for most jurisdictions, mostly driven by higher wholesale electricity costs

**Environmental policy** costs comprise approximately 3.9 per cent of the residential tariff, noting this tariff is below the total cost of supply in the Northern Territory. They are expected to increase at an average annual rate of 0.5 per cent over the two years to June 2019. These higher costs are driven by increased investment in wind generation to meet the requirements of the Large-scale Renewable Energy Target.

Environmental policies under consideration, such as the Northern Territory Government's roadmap to 50 per cent renewable energy generation by 2030, have not been included in the environmental policy cost component. These will affect future trends in residential electricity prices.

### The national picture

The underlying supply chain cost components and drivers of those trends vary across jurisdictions as a result of population, climate, consumption patterns, government policy and other factors. Against this background residential prices are expected to increase across the reporting period for most jurisdictions, driven to a greater or lesser degree by the same factors influencing the Northern Territory.

### Q&A

#### What will electricity prices be in the Northern Territory?

Maximum residential electricity prices in the Northern Territory are set by the Northern Territory Government, which subsidises electricity prices such that the prices paid by consumers are less than the cost of supply. Residential electricity prices in the Northern Territory are expected to have an average annual increase of 2.5 per cent over the two years to June 2019, for the representative consumer.

#### Why are costs going up?

The cost of electricity supply is made up of wholesale, retail, network and environmental policy costs. The retail prices paid by consumers do not necessarily reflect underlying costs, nor follow cost trends, as prices are set by the Northern Territory Government. Trends in the Northern Territory electricity costs will be driven by higher costs associated with regulated networks and the Large-scale Renewable Target.

#### How does the Northern Territory compare to other jurisdictions?

Trends in electricity costs and bill components vary across jurisdictions and over time. This reflects difference in population, climate, consumption patterns, government policy and other factors across states and territories. The way these trends affect an individual consumer will depend on how that consumer uses electricity.

Against this background, residential prices are expected to increase across the reporting period for most jurisdictions, driven mainly by rising wholesale electricity costs.

For information contact:

AEMC Chairman, **John Pierce** (02) 8296 7800

AEMC Chief Executive, **Anne Pearson** (02) 8296 7800

14 December 2016