



## National household electricity prices

Residential electricity price trends report 21 December 2018

**Our 2018 residential electricity price trends report identifies what's driving household prices and consumer bills over the next few years from 2017-2018 to 2020-2021 in all states and territories, and nationally.**

### Key findings for National average electricity bill

In 2017-2018, the national weighted average electricity bill for the representative residential consumer was approximately \$1,384 exclusive of GST.

The electricity bill for the national representative residential consumer:

- decreased by 1.3 per cent from 2017-2018 to 2018-2019
- is expected to decrease by an annual average of 1.1 per cent from 2018-2019 to 2020-2021, based on a decrease of 3.9 per cent in 2019-2020; and an increase the following year of 3.2 per cent in 2020-2021.

The expected decrease in the representative residential electricity bill from 2018-2019 to 2020-2021 is primarily due to decreasing wholesale costs, driven by new generation supply entering the national electricity market (NEM).

### About this report

Trends in the underlying supply chain cost components and drivers of trends will vary across jurisdictions and over time. This reflects differences in population, climate, consumption patterns, government policy and other factors across the states and territories. The way these trends affect an individual consumer will depend on how that consumer uses electricity. This is particularly relevant as the consumption profiles of consumers become increasingly diverse.

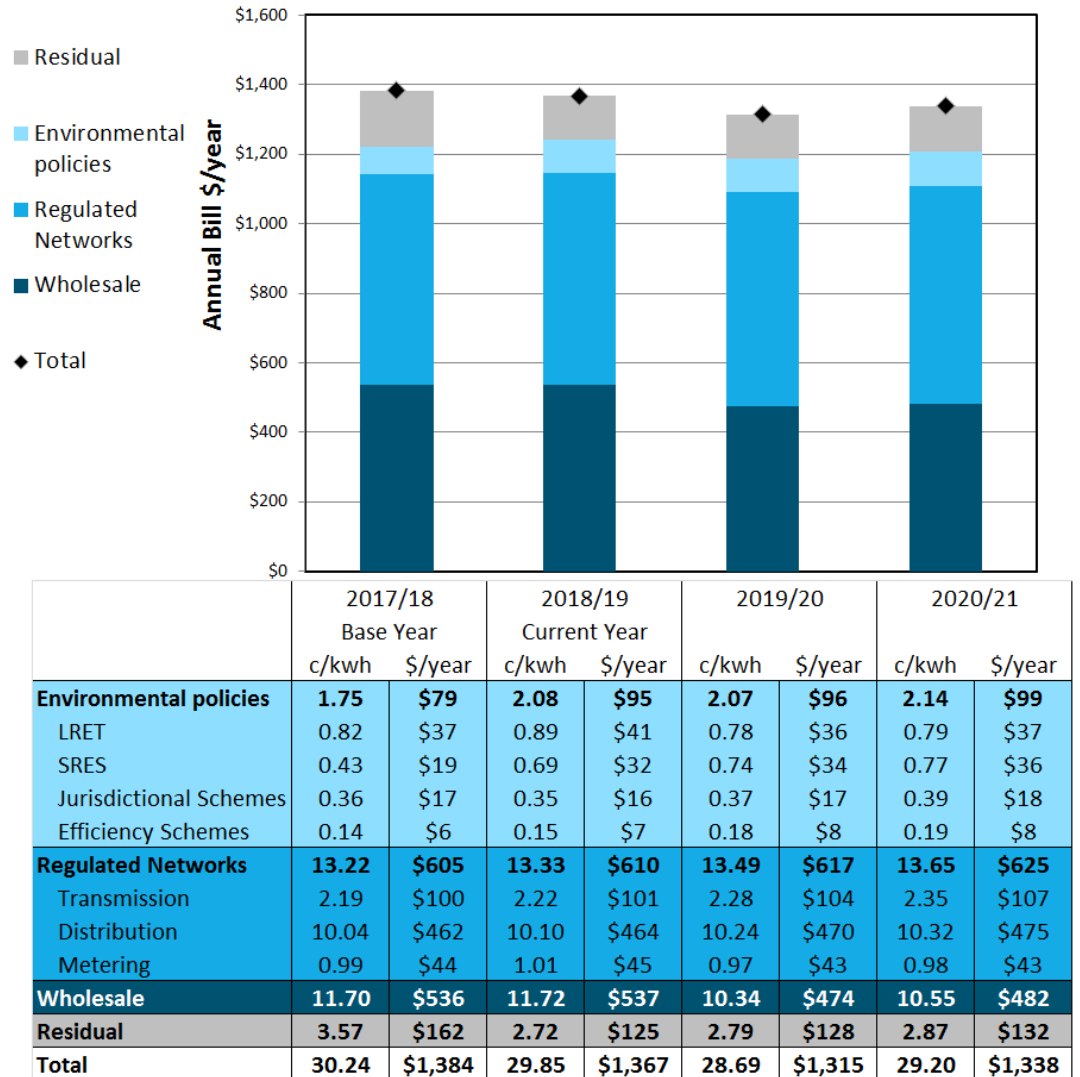
Price trends identified in this report are not a forecast of actual prices, but rather are a guide to pricing and bill directions based on current expectations, policy and legislation. Actual price movements will be influenced by how retailers compete, the dynamics of the wholesale spot and contract markets, the outcomes of network regulatory decisions, and changes in policy and regulation.

The price trends report is a core document used to inform a range of stakeholders including the Australian Energy Market Operator, the International Energy Agency and the Reserve Bank of Australia. It helps consumers understand costs included in their electricity bill. It also provides governments with information they need to understand changes in electricity prices and provides context for long-term decision making on energy policy.

In 2017-2018, the national weighted average electricity bill for the representative consumer was \$1,384.

## Trends in National electricity supply chain components

Figure: Expected trends in supply chain components from 2017-18 to 2020-21 for the national average representative consumer.



**Wholesale electricity costs:** these costs are associated with the wholesale electricity sector in the National Electricity Market (NEM), Western Energy Market (WEM) in Western Australia and the Darwin-Katherine power system in the Northern Territory.

On a national basis, wholesale market costs comprised approximately 39 per cent of the representative national average electricity bill in 2017-2018 and are expected to account for a decreasing proportion of the representative consumer's bill from 2017-2018 to 2020-2021.

Wholesale electricity costs:

- increased by 0.1 per cent from 2017-2018 to 2018-2019
- are expected to decrease by an annual average of 5.1 per cent from 2018-2019 to 2020-2021, based on a decrease of 11.8 per cent in 2019-2020 and an increase of 2.0 per cent the following year in 2020-2021

As noted, the main driver of this trend is increased generation supply entering the market.

The expected decrease in national weighted average representative residential electricity prices from 2018-19 to 2020-21 is mainly due to falling wholesale costs, driven by new generation supply entering the market

**Regulated network costs:** these costs relate to transmission network services, distribution network services and regulated metering services.

Regulated network costs comprised approximately 44 per cent of the representative national average electricity bill in 2017-2018, and are expected to account for an increasing proportion of a residential electricity consumer's bill from 2017-2018 to 2020-2021, based on the latest available network pricing decisions by regulators.

Regulated network costs:

- increased by 0.9 per cent from 2017-2018 to 2018-2019
- are expected to increase by an annual average 1.2 per cent from 2018-2019 to 2020-2021, based on an increase of 1.2 per cent in 2019-2020 and a following increase of 1.2 per cent in 2020-2021.

The increase in network costs is driven by increasing distribution and transmission costs.

**Environmental policy costs:** these costs relate to environmental schemes which have a direct cost that can be included on a customer's retail bill. This includes costs associated with the:

- Commonwealth Government's renewable energy target (RET), which applies on a national basis and consists of the large-scale renewable energy target (LRET) and the small-scale renewable energy scheme (SRES)
- jurisdictional feed-in tariff (FIT) schemes and energy efficiency schemes.

In 2017-2018, environmental policy costs comprised 6 per cent of the representative national average electricity bill, and are expected to comprise an increasing proportion of the representative consumer's electricity bill from 2017-2018 to 2020-2021.

On a national basis, environmental policy costs:

- increased by 19.0 per cent from 2017-2018 to 2018-2019
- are expected to increase by an annual average of 1.4 per cent from 2018-19 to 2020-21, based on an decrease of 0.7 per cent in 2019-2020 and an increase of 3.5 per cent in 2020-2021.

This trend is primarily driven by the increase in the Commonwealth Government's SRES, due to increased uptake of small-scale renewable energy technologies, such as rooftop solar.

### New approach to modelling wholesale costs

This year's report has changed the method used to calculate wholesale costs. Previous price trends reports modelled future spot prices and added a contract premium to estimate retailers' wholesale electricity purchase costs. This approach effectively assumes that a retailer buys all of its electricity and hedging contracts at a single point in time.

However, it became apparent in the past two years that with high volatility in forward prices after generator retirements, short-term estimates made through this method were largely inconsistent with market outcomes. For this reason, the report estimates wholesale costs using a blended method. Where possible, the analysis uses observable market contract prices that retailers use to build up their hedge contract book over time. Where there is limited forward contract data available, a spot price estimate and contract premium is used. This method more closely resembles how retailers actually hedge their loads, and is therefore considered a more realistic basis for estimating forward prices.

### Background

The COAG Energy Council's terms of reference for this report require the AEMC to estimate future retail electricity price outcomes for representative residential consumers in each Australian state and territory along with national electricity prices based on a weighted average of jurisdictional results.

**We are focussed on cutting costs in the power system by addressing the drivers of those costs through our work program**

In addition, the AEMC also reports on the trend in customers' annual electricity bills.

As the national numbers are an average of jurisdictional results that are, in some cases, already averages of multiple different network regions, the electricity prices and bills are indicative only and do not reflect actual price and bill outcomes for each individual residential consumer.

In order to calculate the national weighted average consumption level and national weighted average prices, the representative consumption level and the estimate of prices used for each jurisdiction has been weighted by the number of residential connections in each jurisdiction. As a result, the trends in national results most closely reflect the cost trends in the most populous jurisdictions.

The national weighted average consumption is 4,596 kWh of electricity per year.

### **AEMC's work program**

The AEMC is cutting costs in the power system by addressing the drivers of those costs through its work program. Our focus on price impacts drives everything we do through the reliability and security frameworks; consumer choice, control and protection; the networks of the future and the continuing importance of integrating energy and environmental policies. We completed or are undertaking a number of rule changes and reviews with the potential to directly or indirectly impact consumer prices and bills, including:

- new obligations on retailers to give advance notice of price changes and providing advance warnings to shop around before discounts end
- stopping energy discounts that can leave people worse off, allowing electricity and gas customers to have energy bills based on their own meter reading
- raising the standard for better hardship programs and keeping new retail businesses out of the market until they have approved hardship policies in place.

At the same time we are reviewing what's needed to support adequate investment in generation as the power system evolves to include more variable, intermittent generation and demand-side innovation. Our package of reforms in this area includes:

- new technical performance standards for generators
- setting up a national register of distributed energy like small-scale battery systems and rooftop solar to help AEMO better manage the power system
- requiring generators to give at least three years' notice of closure
- reviews to improve the coordination of generation and transmission investment and to look at ways to integrate new technologies and demand response to help keep the power system secure
- requiring the AER to calculate and update values of customer reliability, used to develop reliability standards
- enabling AEMO to contract for electricity reserves up to nine months ahead of a projected shortfall under the RERT, the strategic reserve mechanism
- making networks provide minimum levels of inertia along with the services necessary to meet minimum levels of system strength.

We continue our analysis of market design changes which currently includes the market making obligations rule request, and advice on the impact of a default offer which has been requested by the COAG Energy Council.

We are fostering the efficiency of network investment and operations through major projects like the coordination of generation and transmission investment review; introducing new transmission connection and planning arrangements; introducing competition in metering; and establishing the value of customer reliability.

For information contact:

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

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

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