



ICRC

independent competition and regulatory commission

Final decision

Retail electricity price
recalibration 2019–20

**Standing offer prices for the supply of
electricity to small customers**

Report 6 of 2019, June 2019

The Independent Competition and Regulatory Commission is a Territory Authority established under the *Independent Competition and Regulatory Commission Act 1997* (the ICRC Act). The Commission is constituted under the ICRC Act by one or more standing commissioners and any associated commissioners appointed for particular purposes. Commissioners are statutory appointments. Joe Dimasi is the current Senior Commissioner who constitutes the Commission and takes direct responsibility for delivery of the outcomes of the Commission.

We have responsibilities for a broad range of regulatory and utility administrative matters. We have responsibility under the ICRC Act for regulating and advising government about pricing and other matters for monopoly, near-monopoly and ministerially declared regulated industries, and providing advice on competitive neutrality complaints and government-regulated activities. We also have responsibility for arbitrating infrastructure access disputes under the ICRC Act. In discharging our objectives and functions, we provide independent robust analysis and advice.

Our objectives are set out in section 7 and 19L of the ICRC Act and section 3 of the *Utilities Act 2000*.

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Executive summary

The Independent Competition and Regulatory Commission (the Commission) is responsible for setting regulated retail prices for the supply of electricity to small customers on ActewAGL Retail (AAR)'s regulated tariffs. The prices are determined as per the price direction for standing offer prices for the supply of electricity to small customers 1 July 2017 to 30 June 2020 (the price direction).

The price direction requires the Commission to undertake an annual price recalibration to update the maximum average percentage by which AAR can increase its regulated retail tariffs for the period commencing 1 July 2019. This report sets out the Commission's decision on the annual price adjustment for 2019–20.

Commission's decision

The Commission's decision sets an average nominal increase in AAR's basket of regulated tariffs for 2019–20 of 0.85 per cent. This is a real decrease (excluding inflation) in the regulated retail price of 0.90 per cent.

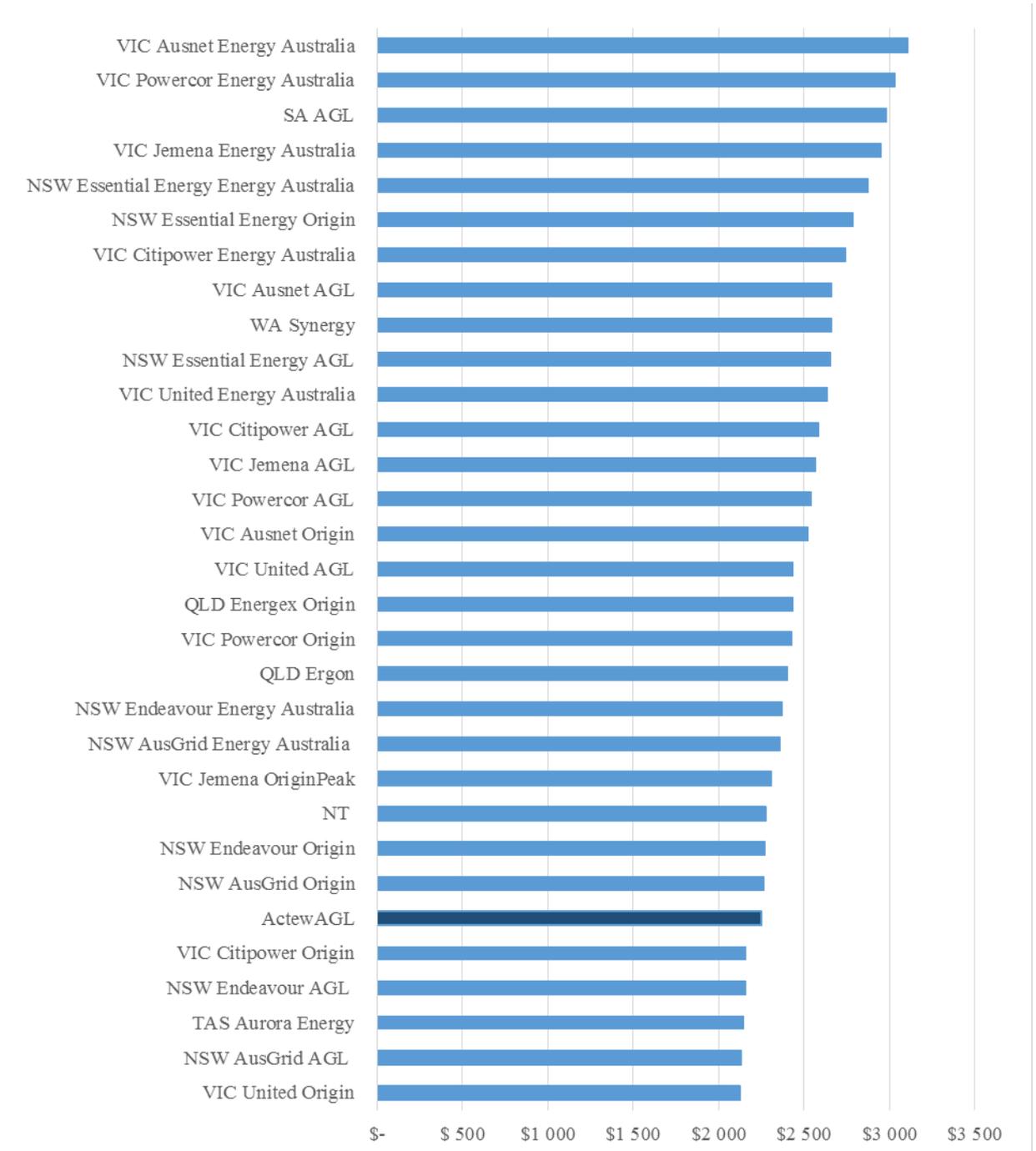
Impact on customers

If AAR increases prices by no more than 0.85 per cent, this would translate to an annual bill increase of \$20 for an average residential customer consuming 8,000 kWh. For an average non-residential customer consuming 25,000 kWh, the increase in the annual bill will be \$70.

Recent reports comparing retail electricity prices across Australian jurisdictions suggest that ACT customers pay less for their electricity than consumers in most other jurisdictions. The Office of the Tasmanian Economic Regulator (OTTER)'s 2019 report comparing electricity prices across jurisdictions found that annual electricity bills for residential customers in the ACT were amongst the lowest in Australia in 2018. Based on the Commission's update of prices across jurisdictions, ACT consumers' bills for residential standing offer contracts are likely to remain amongst the lowest in Australia (Figure ES.1).

In addition to standing offer rates, there are a range of market offers available in the ACT. These provide an opportunity for consumers to find a better electricity plan with prices and conditions that are right for their circumstances. In the ACT around 40 per cent of customers are on market offer contracts.

Figure ES.1 Annual residential standing offer electricity bills in 2018–19 and the AAR’s standing offer for 2019–20 based on annual consumption of 8,000 kWh



Notes: Based on annual consumption of 8,000 kWh. Refer to OTTER (2019) for further information on the calculation methods. The average AAR 2019–20 bill is based on the Commission’s assumption that all retail prices in the regulated basket of tariffs are increased by 0.85 per cent.

Source: Commission’s calculations based on OTTER (2019).

Pricing methodology

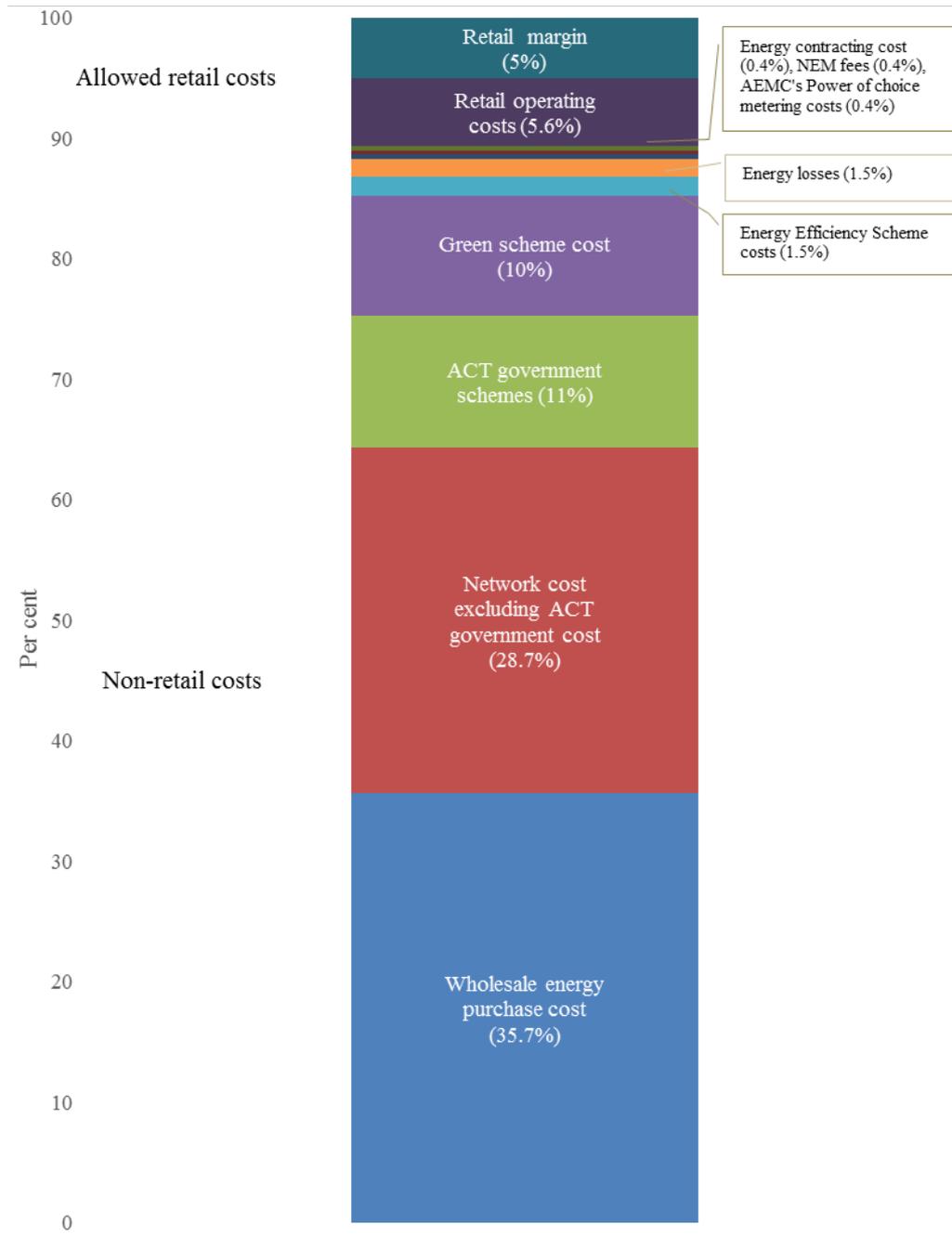
The Commission's pricing model calculates the maximum average percentage change that AAR can apply to its suite of regulated retail tariffs on an annual basis. It does so by estimating three main cost categories:

- The first category is wholesale electricity costs, which comprise energy purchase costs, green scheme costs (including the costs of the Large-scale Renewable Energy Target (LRET) and the Small-scale Renewable Energy Scheme (SRES), energy losses, energy contracting costs and National Electricity Market (NEM) fees. These costs comprise 47.8 per cent of AAR's total costs for 2019–20.
- The second category is network costs, which include transmission and distribution costs and the costs of ACT government schemes. These costs are regulated by the Australian Energy Regulator (AER) and are passed through to the retailer and in turn to consumers. They make up 39.6 per cent of the total costs for 2019–20.
- The third category is retail costs, which comprise retail operating costs, Energy Efficiency Improvement Scheme (EEIS) costs and a retail margin. These costs make up 12.6 per cent of the total costs for 2019–20.

The main costs over which the retailer has control relate to hedging, retail operating costs and retail margin; these are the main cost components over which the Commission has control. Retail operating costs and the retail margin allowance account for around 11.0 per cent of the total costs for 2019–20.

Figure ES.2 shows the proportion of each cost component in total costs for 2019–20. It shows that the majority of the total costs are related to wholesale electricity costs and network costs, including ACT Government schemes, that are determined outside the control of the retailer or the Commission.

Figure ES.2 Cost components as a share of total cost in 2019–20



Source: Commission's calculations.

Factors affecting the price increase

Table ES.1 sets out the nominal dollar amounts for the cost components used to calculate the maximum allowed change in average regulated retail electricity prices for 2019–20.

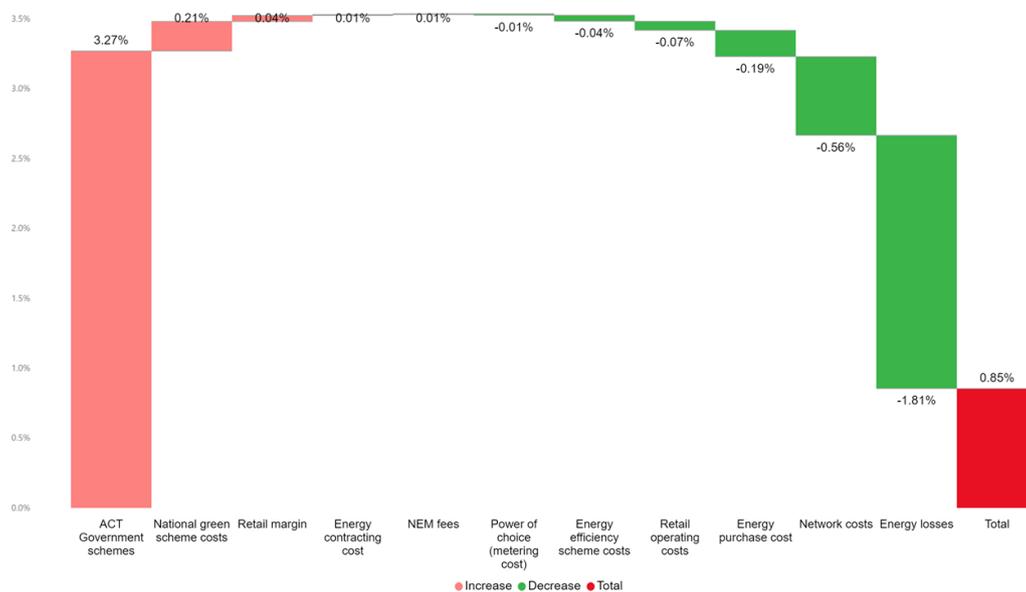
Table ES.1 Update of cost elements 2019–20 (with 2018–19 costs for comparison)

	2018–19 (\$/MWh)	2019–20 (\$/MWh)	Per cent change
Energy purchase cost	92.49	92.01	-0.52%
National green scheme costs	25.19	25.73	2.14%
Energy losses	8.44	3.81	-54.91%
Energy contracting cost	0.90	0.92	1.77%
NEM fees	0.90	0.92	1.77%
Total energy purchase cost	127.93	123.39	-3.55%
Network costs (excluding ACT Government scheme costs)	75.40	73.96	-1.91%
ACT Government scheme costs	19.91	28.28	42.0%
Total network costs	95.32	102.24	7.26%
Retail operating costs	14.58	14.41	-1.14%
Energy Efficiency Scheme costs	4.11	4.00	-2.72%
AEMC's Power of Choice (metering) costs	1.04	1.02	-2.50%
Total retail costs	19.73	19.43	-1.54%
Total energy + retail + network costs	242.98	245.06	0.85%
Retail margin	12.88	12.99	0.85%
Total cost and maximum average price change	255.86	258.05	0.85%

Source: Commission's calculations.

Figure ES.3 shows the contribution of the various cost components to the total percentage change in nominal average regulated prices from 2018–19 to 2019–20. The key drivers of the price change are a material increase in ACT Government scheme costs and the costs of complying with the Australian Government's green schemes, somewhat offset by decreases in network costs and energy losses.

Figure ES.3 Components of the change in regulated retail electricity prices between 2018–19 and 2019–20



Source: Commission's calculations.

ACT Government scheme costs

The ACT Government scheme costs are part of the network cost component. They include the Energy Industry Levy, the Utilities Network Facilities Tax and Feed-in-Tariff (FiT) for small, medium and large schemes and account for nearly 11 per cent of the total cost base. The ACT Government's scheme costs applicable for regulated customers have increased by 42 per cent from 2018–19. They contribute 3.27 percentage points to the 2019–20 price increase.

These costs increased in 2019–20 reflecting the cost of FiT for electricity generated at large scale renewable generation sites. The number of sites under the scheme has increased over the past 12 months.

National green scheme costs

The national green scheme costs account for 10 per cent of the total cost base and contribute 0.21 percentage points to the total increase in retail prices of 0.85 per cent.

In order to calculate the cost of complying with the national renewable energy schemes, the Commission uses renewable energy targets set by the Clean Energy Regulator (CER) and spot market data. While the Renewable Power Percentages and Small-scale Technology Percentages, as published by the CER, that apply for 2019–20 are higher than those that applied for 2018–19, the certificate prices, particularly for the LRET, are lower for 2019–20 than they were during 2018–19. The overall result is a slight increase in the costs of the LRET and SRES.

Energy losses

The cost allowance for energy losses, which accounts for 1.5 per cent of the total costs for 2019–20, has decreased by 55 per cent between 2018–19 to 2019–20. The costs reduce the 2019–20 price increase by 1.81 percentage points. The marginal loss factor for 2019–20 has fallen materially compared to the marginal loss factor for 2018–19, resulting in a reduction in the cost of energy losses. The loss factors are determined by the Australian Energy Market Operator (AEMO).

The AEMO notes that the loss factor has declined because of new renewable generation connections combined with a reduction in projected interconnector flow from Queensland as well as from New South Wales to Victoria.

Energy contracting costs and National Electricity Market fees

These costs have increased by the change in the consumer price index of 1.77 per cent. These costs together account for 0.8 per cent of the total cost base.

Wholesale electricity purchase costs

The wholesale electricity purchase cost accounts for 35.7 per cent of the total cost base for 2019–20 and contributes -0.19 percentage points to the change in retail prices.

The Commission’s methodology uses forward contract price data from Australian Stock Exchange (ASX) Energy to calculate energy purchase costs. The Commission’s methodology uses a 23-month averaging period of ASX Energy forward contract prices to calculate the wholesale energy purchase cost component. This approach reflects retailer behaviour in buying wholesale electricity forward contracts over a two year period leading up to the time of supply. It also smooths out larger changes in regulated retail prices. This means that regulated retail prices increase more slowly than wholesale prices when wholesale prices are increasing rapidly. But it also means that retail prices will take longer to stabilise (or fall) when wholesale prices stabilise (or fall).

Figure ES.4 shows the 23 months of data for ASX Energy forward contracts for 2018–19 (which were used to determine regulated tariffs for 2018–19) and the 23 months of data for ASX Energy forward contracts for 2019–20 (which are used to determine regulated tariffs for 2019–20). The daily price series for both 2018–19 contracts and 2019–20 contracts have been quite volatile over time, driven by changing electricity market conditions such as the closure of Hazelwood power station, investment in new renewable plant and changes in fuel prices. However, the average prices over the 23 month periods for 2018–19 contracts and 2019–20 contracts have ended up being quite similar, with the average price for 2019–20 contracts being slightly lower than the average price for 2018–19 contracts. This means that there is a slight reduction in the energy purchase cost allowance in 2019–20.

The Commission’s approach of using a 23-month averaging period for forward electricity prices smooths out changes in the wholesale cost component. This means that regulated retail prices increase more slowly than wholesale prices when wholesale prices are increasing rapidly. But it also means that retail prices will take longer to

stabilise (or fall) when wholesale prices stabilise (or fall). This approach means that ACT consumers have not experienced the same large price spikes that were experienced by consumers in other states and territories. Over time, the total cost of the wholesale energy purchase costs will be the same, regardless of the averaging period adopted.

Figure ES.4 ASX futures market data for wholesale electricity



Source: ASX data.

Network costs, excluding ACT Government costs

Network costs, excluding ACT Government costs, account for 28.7 per cent of the total cost base. These costs have declined between 2018-19 and 2019-20, contributing -0.56 percentage points to the change in retail prices. The main driver of the fall was a decrease in transmission costs.

Retail costs

In regard to retail costs, which are the main cost components over which the Commission has some control, two aspects of the Commission's 2017-20 retail electricity price decision have continued to result in a lower increase in prices for 2019-20. In its price determination, the Commission did not include a competition allowance or a Customer Acquisition and Retention Cost (CARC) allowance, which would have increased retail operating costs. The Commission also reduced AAR's retail margin – how much profit they can make – from 6.04 to 5.3 per cent.

Retail operating costs account for 5.6 per cent of the total costs. Retail operating costs have declined by 1.14 per cent between 2018–19 and 2019–20, primarily driven by a fall in customer numbers and energy usage.

The Commission’s decision incorporates an allowance of \$1.02 per MWh in 2019–20 to account for costs associated with implementing the national ‘Power of Choice’ (PoC) regulatory changes (down from \$1.04 per MWh in 2018–19). These changes were initiated by the AEMO to encourage competition in the provision of metering services. The PoC changes required retailers to make a number of changes to the existing billing systems and procedures for small customers.

1 Introduction

1.1 Background

The Independent Competition and Regulatory Commission (the Commission) is responsible for setting regulated retail prices for the supply of electricity to small customers on ActewAGL Retail (AAR)'s regulated tariffs.

On 22 June 2016, the Treasurer gave the Commission Terms of Reference for a price direction for the supply of electricity by AAR to customers on its regulated retail tariffs for the period 1 July 2017 to 30 June 2020 (DI2016–138). On 7 June 2017, the Commission released its final report and price direction. The price direction requires the Commission to undertake an annual price recalibration to update the maximum prices that AAR can charge for its regulated retail tariffs for each year of the regulatory period.

This report sets out the Commission's decision on the annual price recalibration for 2019–20.

1.2 Structure of the report

The remainder of this report is structured as follows:

- Chapter 2 sets out the Commission's decision on the maximum allowed change in AAR's regulated retail electricity prices for 2019–20. It also analyses the impact of the price change on customer bills.
- Chapter 3 compares residential electricity prices across Australian jurisdictions.
- Chapter 4 describes the annual recalibration process set out in the 2017–20 price direction.
- Chapter 5 calculates the efficient costs of supplying electricity to customers on AAR's regulated tariff in accordance with the Commission's methodology and the updated inputs for 2019–20.
- Appendix 1 provides further statistical information.

2 Commission’s decision for 2019–20 and impact on customers

This chapter presents the Commission’s decision on the maximum allowable average percentage change that AAR can apply to its suite of regulated tariffs for 2019–20.

2.1 Commission’s decision for 2019–20

The Commission’s decision is that the average nominal change in AAR’s basket of regulated tariffs for 2019–20 will be an increase of 0.85 per cent. This is equivalent to a real decrease in the regulated retail price of 0.90 per cent.¹

Table 2.1 sets out the Commission’s decision on updating the cost components used to calculate the maximum allowable average percentage change in the regulated retail electricity price for 2019–20.

Table 2.1 Commission’s decision on cost elements, 2019–20

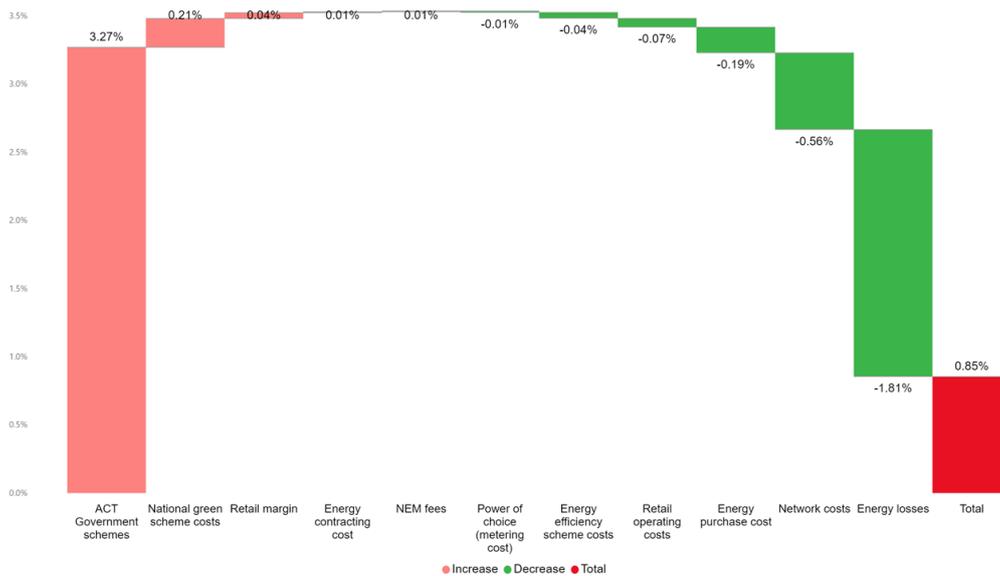
	2018–19 (\$/MWh)	2019–20 (\$/MWh)	Per cent change
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Total retail costs	19.73	19.43	-1.54%
Total energy + retail + network costs	242.98	245.06	0.85%
Retail margin	12.88	12.99	0.85%
Total cost and maximum average price change	255.86	258.05	0.85%

Source: Commission’s calculations.

¹ As per the price direction, the inflation rate used in the price reset is not a forecast of inflation, but rather is based on historical changes in the CPI up to March 2019 from June 2017 based on quarterly figures using the ‘four quarter on four quarter’ approach. Using this method the rate of inflation over the four quarters was 1.77 per cent.

Figure 2.1 shows the contribution of the various cost components to the total percentage change in prices from 2018–19 to 2019–20. The key drivers of the price change are a material increase in ACT government schemes, partly offset by decreases in network costs and energy losses.

Figure 2.1 Components of the change in regulated retail electricity prices 2018–19 to 2019–20²



Source: Commission's calculations.

Figure 2.2 shows the proportion of each cost component in total costs. Most of these costs are substantially outside the control of the retailer and the Commission. These costs include:

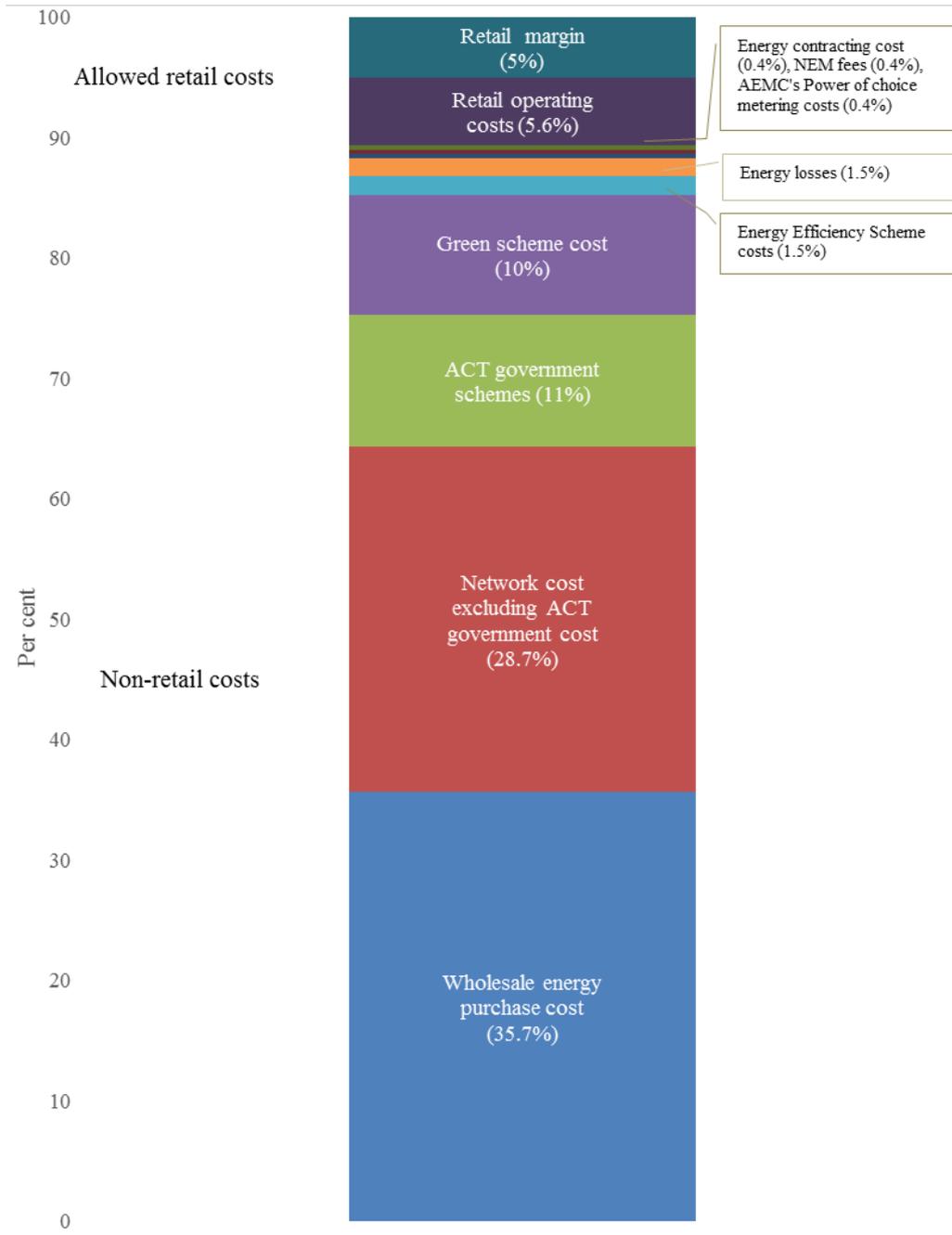
- the direct cost of purchasing electricity from the National Electricity Market (NEM) (excluding the implementation of hedging strategies);
- the direct cost of complying with Australian and Territory government environmental obligations;
- direct costs associated with energy losses in transmission and distribution;
- NEM fees payable to the Australian Energy Market Operator (AEMO) for operating the wholesale market;
- energy contracting costs (except for the ability to implement different contracting strategies); and

² This chart shows the cumulative effect of the contribution of each of the components of the cost-index model in calculating the total change in AAR's regulated average retail prices of 0.72 per cent from 2018–19 to 2019–20.

- network costs including ACT Government scheme costs.

The main costs over which the retailer has control relate to hedging, retail operating costs and retail margin; these are the main cost components over which the Commission has control. Retail operating costs and the retail margin only account for 10.6 per cent of the total costs for 2019–20.

Figure 2.2 Cost components as a share of total cost 2019–20



Source: Commission's calculations.

2.2 Impact on customers

To assess the effects on residential and non-residential customers of the price recalibration for 2019–20, the Commission estimated the average annual bills payable by consumers with varying consumption levels. Table 2.2 presents estimated annual electricity bills for residential customers at different consumption levels. A small customer may be representative of a single person living in an apartment, an average customer may be representative of a small family in a townhouse, and a large customer may be representative of a large family in a detached house.

If AAR increases prices by 0.85 per cent, this would translate to annual bill increases ranging from \$12 for a small residential customer consuming 4,000 kWh up to an increase of \$29 for a large residential customer consuming 12,000 kWh. For an average residential household consuming 8,000 kWh per year, the annual bill would increase by \$20 in 2019–20.³

Table 2.2 Estimated annual bill changes for different residential customers, 2019–20

	Annual usage (kWh)	Estimated annual bill 2018–19 (\$)	Estimated annual bill 2019–20 (\$)	Change (\$)
Large	12,000	\$3,396	\$3,425	\$29
Average	8,000	\$2,395	\$2,415	\$20
Small	4,000	\$1,393	\$1,405	\$12

Source: Commission's calculations.

Table 2.3 presents estimates of annual electricity bill increases for a range of typical non-residential customers. In the case of non-residential customers, the annual increases range from \$31 for a small non-residential customer consuming 10,000 kWh to \$109 for a large non-residential customer consuming 40,000 kWh. The impact on an average non-residential customer consuming 25,000 kWh would be an increase of \$70 in its annual bill.

Table 2.3 Estimated annual bill changes for different non-residential customers, 2019–20

	Annual usage (kWh)	Estimated annual bill 2018–19 (\$)	Estimated annual bill 2019–20 (\$)	Change (\$)
Large	40,000	\$12,760	\$12,869	\$109
Average	25,000	\$8,176	\$8,246	\$70
Small	10,000	\$3,592	\$3,623	\$31

Source: Commission's calculations.

³ The AER use an annual average electricity consumption of 7,010 kWh for residential customers in the ACT (AER, 2018). The Commission intends to adopt this average usage amount for the next price direction in 2020.

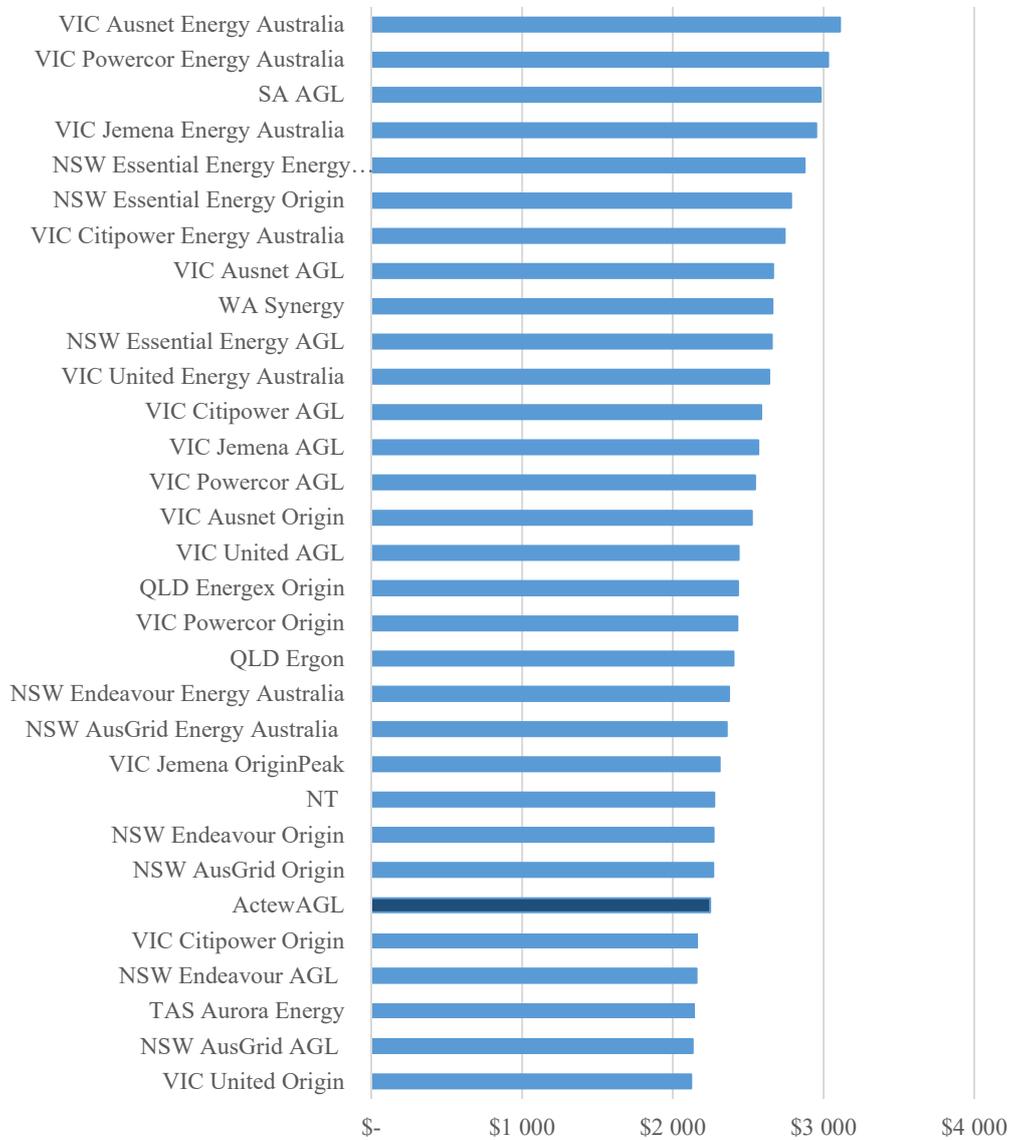
3 Comparison of residential electricity prices

3.1 Electricity prices in the ACT are amongst the lowest in Australia despite recent price increases

The Commission is responsible for setting regulated retail prices for the supply of electricity to small customers of AAR's regulated standing offer tariffs (as described in Chapter 1). These regulated standing offer rates influence the level of market offer rates. In the ACT around 60 per cent of consumers are on standing offer rates.

The ACT has amongst the lowest standing offer and market offer prices in Australia, despite recent price increases (discussed in section 3.2). Figure 3.1 shows the estimated annual bill for an average residential household consuming 8,000 kWh per year that is on a selection of residential standing offers across retailers in Australia in 2018–19. The figure also shows the indicative AAR standing offer bill for an average residential household in 2019–20 (assuming AAR increases prices by 0.85 per cent). It shows that AAR's standing offer prices will remain amongst the lowest standing offer prices in Australia in 2019–20.

Figure 3.1 Annual residential standing offer electricity bills for 2018–19 compared to the AAR’s standing offer for 2019–20 based on annual consumption of 8,000 kWh



Notes: Based on annual consumption of 8,000 kWh. Refer to OTTER (2019) for further information on the calculation methods. The average AAR 2019-20 bill is based on the Commission’s assumption that all retail prices in the regulated basket of tariffs are increased by 0.85 per cent.

Source: OTTER (2019) and the Commission’s calculations.

The Commission collected information from the Energy Made Easy website and the Victorian Energy Compare website in February 2019 to compare a range of standing offer and market offer bills for an average residential household consuming 8,000 kWh per year. It should be noted that these price comparisons are based on data as at 19 February 2019; the prices presented in the table may have since changed.

The comparisons are consistent with the comparison in Figure 3.1, which shows that standing offer prices in the ACT are amongst the lowest standing offer prices in

Australia. The comparisons also show that average annual market offer prices in the ACT are among the lowest in Australia, when compared with five state capital cities.

Table 3.1 shows the estimated annual bills (including all discounts) for a range of standing offers available to residential customers in Canberra, Sydney, Brisbane, Adelaide, Melbourne and Hobart as at 19 February 2019. It shows that the average annual standing offer bill in the ACT was the lowest across the six selected capital cities (for both single rate offers and time-of-use offers). The price spread (the difference between the minimum and maximum standing offer bill) was also lowest in the ACT for both single rate offer and time-of-use offers.

Table 3.1 Comparison of retail electricity standing offers and annual bills as at 19 February 2019

Capital city	Single rate offers				Time-of-use offers			
	Number	Average price, \$	Price range (min-max), \$	Price spread, \$	Number	Average price, \$	Price range (min-max), \$	Price spread, \$
Canberra**	12	\$2,371	\$2,146 - \$2,522	\$377	5	\$2,228	\$2,077 - \$2,397	\$320
Sydney	21	\$3,327	\$2,511 - \$4,964	\$2,454	24	\$3,378	\$2,670 - \$4,964	\$2,294
Brisbane	18	\$2,799	\$2,454 - \$3,561	\$1,107	16	\$2,935	\$2,534 - \$3,686	\$1,153
Adelaide*	19	\$4,292	\$3,298 - \$6,060	\$2,762	0	N/A	N/A	N/A
Melbourne	26	\$3,148	\$2,625 - \$4,679	\$2,054	47	\$3,213	\$2,465 - \$4,827	\$2,362
Hobart**	1	\$2,476	N/A	N/A	1	\$2,397	N/A	N/A

* Retailers in South Australia do not offer time-of-use plans. All plans are single rate. Source: www.canstarblue.com.au

** Standing offers in Hobart and the ACT are regulated.

Note: all prices are inclusive of GST and discounts (if applicable) and are based on average annual consumption of 8,000 kWh.

Source: EME and Victorian Energy Compare websites

Table 3.2 shows the estimated annual bills (including all discounts) for a range of market offers available to residential customers in Canberra, Sydney, Brisbane, Adelaide, Melbourne and Hobart as at 19 February 2019. It shows that the average annual market offer bill in the ACT was the lowest across the six selected capital cities (for both single rate offers and time-of-use offers).

Table 3.2 Comparison of retail electricity market offers and prices as at 19 February 2019

Capital city	Single rate offers				Time-of-use offers			
	Number	Average price, \$	Price range (min-max), \$	Price spread, \$	Number	Average price, \$	Price range (min-max), \$	Price spread, \$
Canberra	42	\$2,071	\$1,837 - \$2,385	\$548	21	\$2,022	\$1,803 - \$2,305	\$502
Sydney	83	\$2,536	\$2,123 - \$3,777	\$1,655	129	\$2,587	\$2,146 - \$3,892	\$1,746
Brisbane	79	\$2,348	\$2,054 - \$2,899	\$845	75	\$2,487	\$2,123 - \$3,070	\$947
Adelaide*	75	\$3,408	\$2,807 - \$4,690	\$1,883	0	N/A	N/A	N/A
Melbourne	70	\$2,269	\$1,723 - \$2,910	\$1,187	137	\$2,334	\$1,792 - \$2,476	\$1,301
Hobart	2	\$2,457	\$2,397 - \$2,499	\$103	2	\$2,377	\$2,317 - \$2,419	\$103

* Retailers in South Australia do not offer time-of-use plans. All plans are single rate. Source: www.canstarblue.com.au

Note: all prices are inclusive of GST and discounts (if applicable) and are based on average annual consumption of 8,000 kWh.

Source: EME and Victorian Energy Compare websites

3.2 Electricity prices in the ACT are relatively lower despite recent falls in prices in some other jurisdictions

The relatively low electricity prices in the ACT compared to other jurisdictions is despite electricity prices decreasing in some other jurisdictions over the past year. For example, in 2017–18, the average annual electricity bill in metropolitan areas of NSW was unchanged from the previous year while for country NSW areas they declined by 13 per cent.⁴ Similarly, electricity prices were largely unchanged in NSW through calendar year 2018.⁵ In contrast, electricity prices increased by around 11 per cent in the ACT in 2017–18 and a further 14 per cent in 2018–19.⁶ The increase in electricity prices in the ACT compared to other jurisdictions reflects the Commission’s approach of smoothing estimated energy purchase costs over a 23-month period.

The Commission uses a 23-month averaging period for forward electricity prices (described in Chapter 4). This smooths out changes in the wholesale cost component used in determining the maximum percentage change in average regulated retail prices in the ACT. This means that regulated retail prices increase more slowly than wholesale prices when wholesale prices are increasing rapidly. But it also means that retail prices will take longer to stabilise (or fall) when wholesale prices stabilise (or fall).⁷

This has meant that ACT consumers have not experienced the same large price spikes that were experienced by consumers in other states and territories. Data provided by the St Vincent de Paul consumer group for 2009–18 showed that average electricity bills for ACT customers have been less than average bills for consumers in other jurisdictions for most of this period, although higher wholesale electricity costs over 2017 and 2018 are now flowed through to retail prices in the ACT. Figures 3.2 and 3.3 show the gap between electricity prices in the ACT and other cities narrowing in 2018. It is expected to narrow further in 2019 but ACT prices will remain among the lowest in Australia.

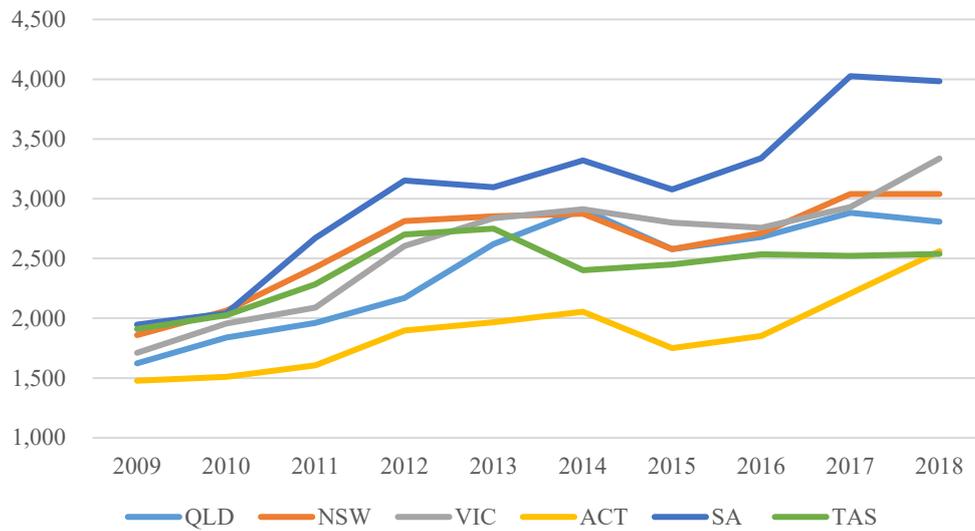
⁴ See <https://www.ipart.nsw.gov.au/Home/Industries/Energy/Reviews/Electricity/Monitoring-the-retail-energy-markets-during-201718>.

⁵ St Vincent de Paul Society and Alvis Consulting, 2018.

⁶ See https://www.icrc.act.gov.au/__data/assets/pdf_file/0007/1249954/Media-Release-Draft-Report-Electricity-2017-FINAL.pdf and https://www.icrc.act.gov.au/__data/assets/pdf_file/0006/1249899/Report-3-of-2018-Retail-electricity-price-recalibration-201819.pdf.

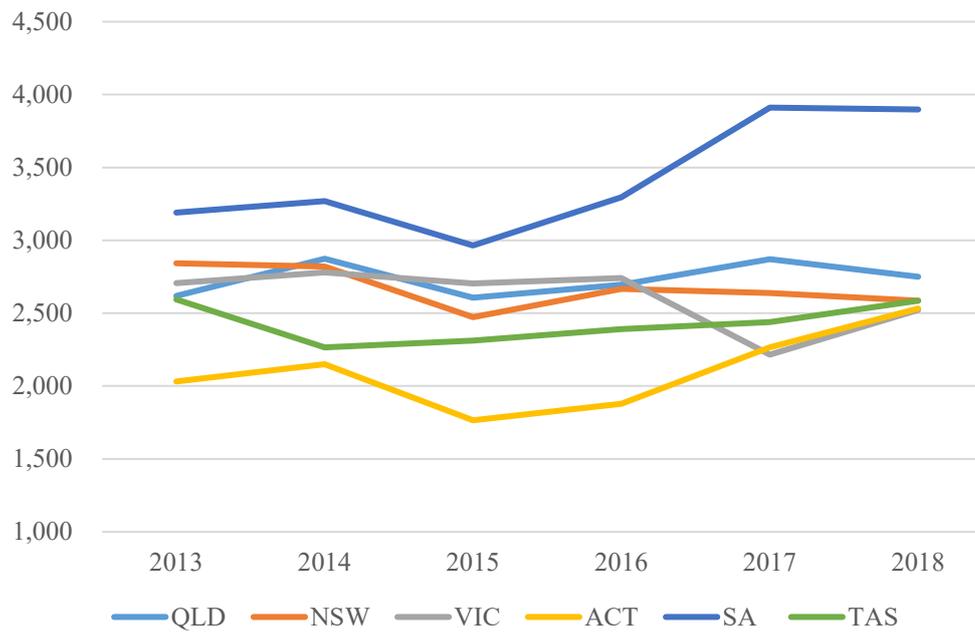
⁷ Further details on the Commission’s method of regulating retail prices in small customer contracts in the ACT is described in the Commission’s 2017–20 price determination.

Figure 3.2 Standing offer residential electricity bills consuming 8,000kWh per year, 2009–18 (\$)



Source: Commission's calculations based on data reported in St Vincent de Paul Society and Alvis Consulting (2018).

Figure 3.3 Market offer residential electricity bills consuming 8,000kWh per year, 2013–18 (\$)

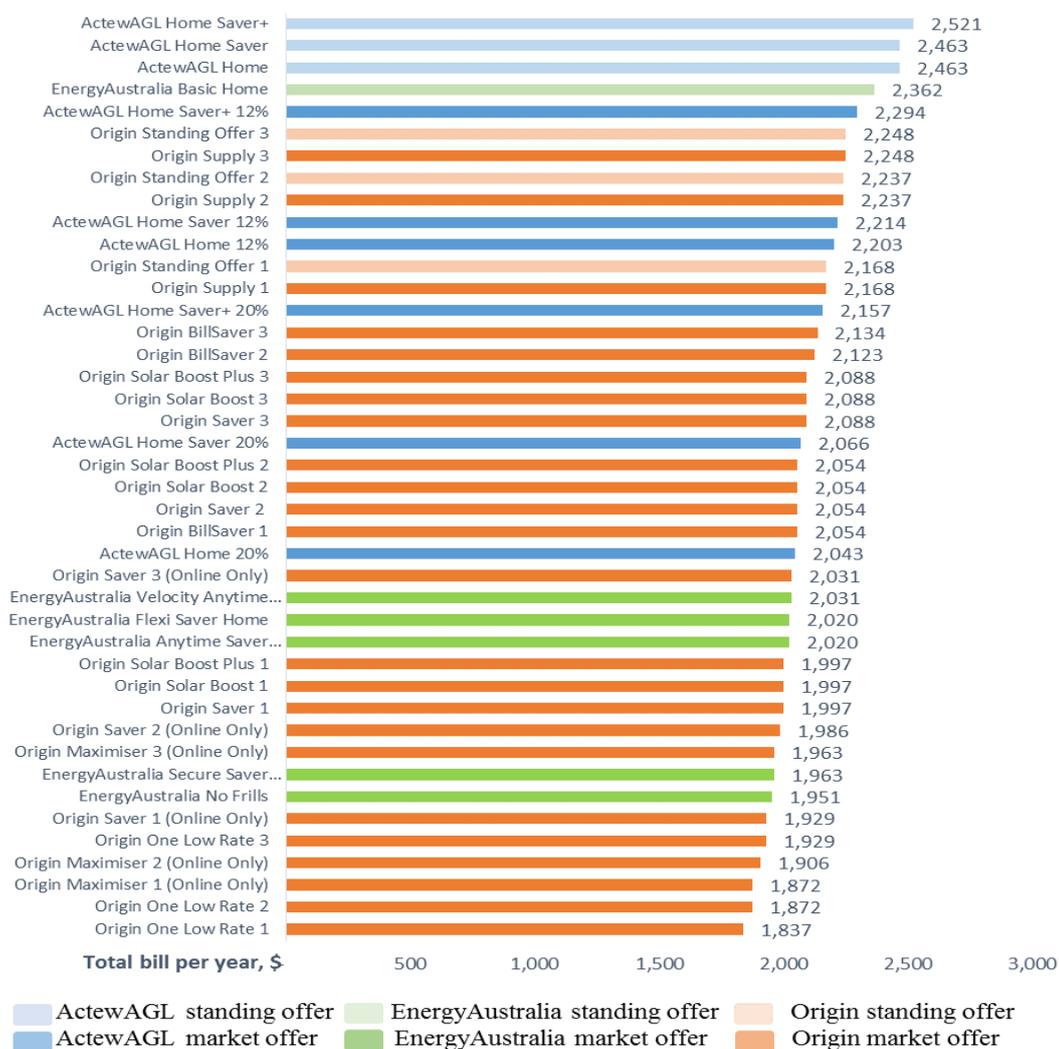


Source: Commission's calculations based on data reported in St Vincent de Paul Society and Alvis Consulting (2018).

3.3 Comparison of residential electricity bills within the ACT

Figures 3.4 and 3.5 show the estimated annual bills (including discounts) for the range of single rate and time-of-use plans offered by the three largest retailers in the ACT as at January 2019. The figures also show the indicative AAR offers for 2019–20 (assuming AAR increases prices by 0.85 per cent). The figures show that there are a range of market offers available in the ACT and that consumers may benefit from shopping around for a more competitive electricity price offer that better suits their demand pattern.

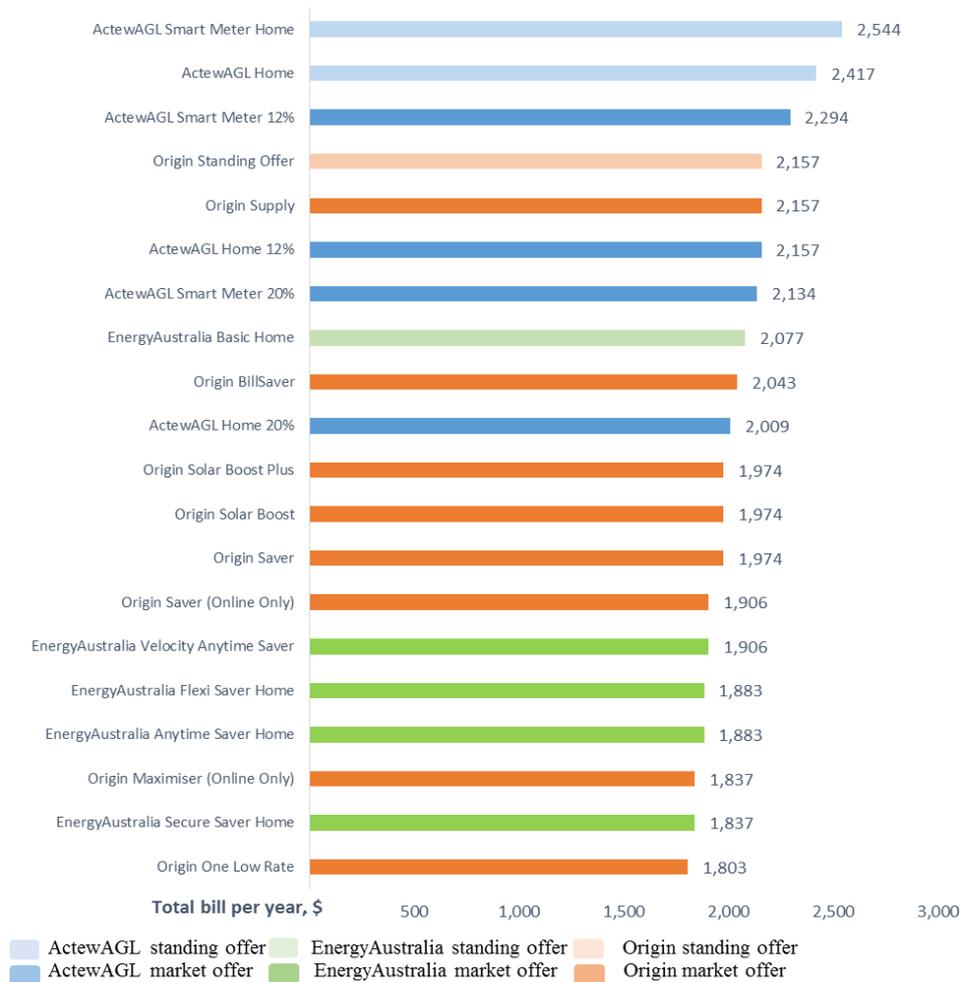
Figure 3.4 Single rate offers in the ACT as at 31 January 2019 and the indicative AAR standing offers for 2019–20 (assuming AAR increases prices by 0.85 per cent)



Notes: Based on an average annual household consumption of 8,000 kWh. Data as of 31 January 2019 for all plans except for ActewAGL Retail's standing offer prices. ActewAGL Retail's standing offer prices have been updated to reflect the latest Y factor of 0.85 per cent.

Source: Calculation based on data provided in Energy made easy website.

Figure 3.5 Time-of-use offers in the ACT as at 31 January 2019 and the indicative AAR standing offers for 2019–20 (assuming AAR increases prices by 0.85 per cent)



Notes: Based on an average annual household consumption of 8,000 kWh. Data as of 31 January 2019 for all plans except for ActewAGL Retail's standing offer prices. ActewAGL Retail's standing offer prices have been updated to reflect the latest Y factor of 0.85 per cent.

Source: Calculation based on data provided in Energy made easy website.

4 Annual price recalibration process

4.1 The assessment process

Clause 8.1 of the 2017–20 price direction sets out an annual recalibration process for the 2018–19 and 2019–20 regulatory years as follows:

- (a) On or before 10 May, AAR must submit to the Commission the following information:
 - (i) Calculation of costs associated with achieving environmental objectives for the year in question, including the Australian Government’s Large-scale Renewable Energy Target (LRET), Small-scale Renewable Energy Scheme (SRES) and the ACT Energy Efficiency Improvement Scheme (EEIS) costs, and any proposed adjustments.
 - (ii) Full accounting of all proposed pass-through event costs that may be claimed under clause 9 and its sub-clauses.
- (b) AAR must submit to the Commission for verification the updated network cost allowance for the regulated customer load as soon as Evoenergy’s (previously ActewAGL Distribution) network charges are approved by the Australian Energy Regulator (AER).
- (c) As per clause 8.4, the Commission will determine the energy purchase cost component based on data available up to 31 May.
- (d) As per clause 8.2, the Commission will determine the value of Y^t , which is the percentage by which the weighted average price cap may adjust. The Commission will provide its determination to AAR on or before 7 June, although this date may be extended if approved network charges have not been published by the AER in time for the Commission to adhere to this date.
- (e) ActewAGL Retail must provide the Commission with its proposed schedule(s) of standing offer prices including the associated weighted average price cap calculations.
- (f) Subsequent to clause 8.1(e) occurring, the Commission will – subject to an assessment that the proposals are consistent with the price direction – approve the proposed prices within two business days of receipt of the proposed schedule(s).

The price direction also provides for the maintenance of current prices into the new regulatory year in the event the AER does not approve network costs in time to allow the Commission to determine the maximum average percentage change in prices for the new prices to apply on 1 July.

4.2 Calculating the value of the Y factor

The Y factor (Y^t) is the maximum average percentage change the AAR can apply to its suite of regulated retail tariffs, where t refers to the relevant financial year. Clause 8.2 of the price direction requires the Commission to determine Y^t to be the percentage change in the cost-index calculated from the components listed in Table 4.1.

Table 4.1 Components of the cost-index model

Component	Method
Energy purchase cost (\$/MWh)	As determined by the Commission at the time of the recalibration using the energy purchase cost model
National green scheme costs (\$/MWh)	Estimates from AAR for 2019–20, which are verified and applied using the Commission's methodology
Energy Efficiency Improvement Scheme	Estimates from AAR for 2019–20, subject to a prudence and efficiency assessment, with costs determined using the Commission's methodology
Energy losses (per cent)	Based on AEMO's estimates for 2019–20
Energy contracting costs (\$/MWh)	Previous year's value adjusted by the change in the Consumer Price Index (CPI)
NEM fees (\$/MWh)	Previous year's value adjusted by the change in the CPI
Retail operating costs (\$/MWh)	Adjust the previous year's value by the change in the CPI, and convert this to a per MWh allowance based on customer numbers and energy usage at each annual price recalibration exercise
Network costs (\$/MWh)	As determined and approved by the AER and applied by AAR to the standard retail contract customer load, and subsequently verified by the Commission
Cost pass-through (\$/MWh)	Cost pass-through verified by the Commission in current dollars as adjusted by the change in the CPI
Retail margin (per cent)	Set the retail margin at 5.3 per cent for the 2017–2020 regulatory period

Note: Change in the CPI is calculated as per clause 8.3.

Source: ICRC (2017b).

4.3 Calculation of the change in the Consumer Price Index

Clause 8.3 of the price direction requires the Commission to calculate the percentage change in the CPI for any relevant year t using the following formula, using the Australian Bureau of Statistics all groups index for the weighted average of eight capital cities:

$$\Delta CPI_t = \frac{CPI_{June(t-2)} + CPI_{Sept(t-1)} + CPI_{Dec(t-1)} + CPI_{March(t-1)}}{CPI_{June(t-3)} + CPI_{Sept(t-2)} + CPI_{Dec(t-2)} + CPI_{March(t-2)}} - 1$$

The Commission has calculated the change in the consumer price index to be applied in 2019–20 as 1.77 per cent:

$$\Delta CPI_{2019-20} = \frac{113.0 + 113.5 + 114.1 + 114.1}{110.7 + 111.4 + 112.1 + 112.6} - 1 = 0.0177$$

4.4 Information provided by ActewAGL Retail

4.4.1 Submission

AAR provided the Commission with its submission on 10 May 2019 as required under Clause 8.1(a) of the price direction. The submission included information on the costs associated with the Australian and Territory Governments' environmental schemes.

4.4.2 Power of Choice cost pass-through for 2019–20

As per clause 9.1 of the price direction, AAR may make an application to the Commission for consideration of a pass-through event as part of the annual recalibration process. Pass-through applications may be made for regulatory change events.

On 23 April 2018, as part of the Commission's 2018–19 price reset, AAR submitted a confidential application to the Commission for consideration of a pass-through event for the costs arising from the PoC changes.⁸ The PoC changes came into force on 1 December 2017 and required retailers to make changes to their existing systems and procedures to allow competition in the provision of metering and related services. AAR proposed to recover a total of \$5.04 million as pass-through costs.

In its submission to the 2019–20 price reset, AAR has proposed to recover a proportion of the unrecovered capital costs associated with PoC changes in 2019–20.

4.4.3 Customer numbers and electricity usage

Customer numbers and energy usage estimates for 2019–20 were provided to the Commission by ActewAGL Retail on 3 June 2019. This data is required for calculating the retail operating cost allowance.

4.4.4 Network costs

The network cost allowance for 2019–20 is based on Evoenergy's annual pricing proposal approved by the AER on 3 June 2019.⁹

⁸ ActewAGL Retail, 2018, p.12.

⁹ Evoenergy, 2019.

5 Efficient costs for 2019–20

This chapter presents the Commission’s calculation of the efficient costs of supplying electricity to small customers on AAR’s regulated tariffs using the Commission’s pricing model and methodology set out in the price direction.

5.1 Pricing model¹⁰

The Commission’s pricing model determines the maximum average percentage change that AAR can apply to its suite of regulated retail tariffs on an annual basis.¹¹ It does so by estimating three main cost categories:

- Wholesale electricity costs, which comprise wholesale energy purchase costs, national green scheme costs (LRET and SRES costs), energy losses, energy contracting costs and NEM fees.
- Network costs, which include transmission, distribution and ACT Government scheme costs. These costs are regulated by the AER and are passed through to the retailer and in turn to consumers.
- Retail costs, which comprise retail operating costs, EEIS costs and retail margin.

The Commission’s estimation of each of these cost categories and their components are discussed below.

5.2 Estimation of major cost categories

5.2.1 Wholesale energy purchase cost

Energy purchase costs are the costs incurred by retailers in purchasing electricity from the wholesale electricity market. As prices in the wholesale electricity market are volatile, retailers hedge their cost exposure by forward purchasing electricity in the contract market, or by taking positions in the futures market.

The Commission’s wholesale energy purchase cost model determines a benchmark cost of purchasing electricity based on observed market outcomes and a conservative hedging strategy.¹² This requires estimates of the forward price of electricity in the wholesale electricity market, and a risk premium associated with the cost of hedging.

¹⁰ The Commission has undertaken a review of its electricity pricing model and methodology. The Commission intends to adopt the new methodology for the next price investigation commencing in 2020.

¹¹ The Commission’s pricing model is described in detail in its final report on standing offer prices for the supply of electricity to small customers from 1 July 2017 to 30 June 2020, which was released in June 2017. See for details ICRC, 2017c, pp. 7–36.

¹² Explained in detail in ICRC, 2017c; pp. 17–23.

Price direction requirements

Clause 8.4 of the price direction requires the Commission to calculate energy purchase costs for 2019–20 as follows:

$$EPC_s = FP_s \times [(1 - M_s) \times LS_s + M_s \times LR_s] \text{ and}$$

$$EPC = \sum_{i=1}^4 w_s \times EPC_s$$

where the following are defined for each quarter s :

EPC_s denotes the energy purchase cost.

FP_s denotes the forward price.

M_s denotes the forward price margin.

LS_s denotes the load shape.

LR_s denotes the load ratio.

w_s denotes the quarterly load weight.

EPC without the subscript denotes the annual energy purchase cost.

The Commission's wholesale energy purchase cost model has two key elements: the forward price FP and the uplift factor $[(1 - M_s) \times LS_s + M_s \times LR_s]$. The forward price represents the cost of pre-purchasing electricity to be delivered at a later date. The uplift factor is calculated using load shape, load ratio and forward price margin, and is applied to the forward price to reflect the retailer's hedging cost.

Forward price

The forward price of wholesale electricity in the Commission's model for 2019–20 is calculated using the Australian Stock Exchange (ASX) futures market price data averaged over a 23-month period from 1 July 2017 to 31 May 2019.

Figure 5.1 shows the 23 months of data for ASX Energy forward contracts for 2018–19 (which were used to determine regulated tariffs for 2018–19) and the 23 months of data for ASX Energy forward contracts for 2019–20 (which are used to determine regulated tariffs for 2019–20). The daily price series for both 2018–19 contracts and 2019–20 contracts have been quite volatile over time, driven by changing electricity market conditions such as the closure of Hazelwood power station, investment in new renewable plant and changes in fuel prices.

However, the average prices over the 23-month periods for 2018–19 contracts and 2019–20 contracts have ended up being quite similar, with the average price for 2019–20 contracts being slightly lower than the average price for 2018–19 contracts. Table 5.1 shows the 23-month average forward prices for each calendar year quarter for the 2018–19 and 2019–20 financial years. Reflecting the small reduction in the

23 month average forward prices, there is a small reduction in the energy purchase cost allowance in 2019–20.

Table 5.1 Quarterly forward wholesale electricity prices, 2018–19 and 2019–20 (dollars per MWh)

	Q3	Q4	Q1	Q2
2018–19	77.76	77.76	77.76	77.76
2019–20	77.54	77.54	77.54	77.54

Source: Commission's calculations.

Figure 5.1 ASX futures market data for wholesale electricity



Source: ASX data.

Uplift factor

A key element of the Commission's wholesale energy purchase cost model is the uplift factor, which is applied to the forward price. The uplift factor, which comprises the load shape, the load ratio and the forward price margin, represents the retailer's hedging cost.

Forward price margin

The forward price margin (M) captures the observation that forward prices generally exceed average spot prices. It is set at five per cent.

Load shape

The load shape reflects the extent to which the level of the load and the spot prices move together and is measured by the ratio of the load-weighted spot price to the

time-weighted spot price. The weight on the load shape ($1 - M$) reflects the general effect of load on prices.

The load shape is calculated using NSW spot prices and the net system load profile for Evoenergy, both reported by the AEMO.

The quarterly average load shapes for 2018–19 and 2019–20 are shown in Table 5.2.¹³

Table 5.2 Quarterly average load shape, 2018–19 and 2019–20

	Q3	Q4	Q1	Q2
2018-19 (average 2003–04 through 2017-18)	1.102	1.081	1.203	1.101
2019-20 (average 2003–04 through 2018-19)	1.100	1.080	1.193	1.102

Source: Commission's calculations.

Load ratio

The load ratio, also often described as the load profile, is measured by the ratio of peak load to average load. The load ratio component can be interpreted as a measure of peak demand.

Load ratio for each quarter is calculated as the maximum of the observed ratio of the quarterly maximum load to the quarterly average load using the AEMO data. To complete the calculation of the load ratio, the Commission adds 0.1 to the observed maximum to allow for the possibility of a higher peak. The load ratio for 2018–19 and 2019–20 are shown in Table 5.3.¹⁴

Table 5.3 Quarterly load ratio, 2018–19 and 2019–20

	Q3	Q4	Q1	Q2
Load ratio 2018-19	2.130	2.857	2.973	2.552
Load ratio 2019-20	2.130	2.857	2.973	2.552

Source: Commission's calculations using data from the AEMO load profiles.

Load weights

Quarterly load weights are required to calculate the annual average energy purchase cost. The load weight for each quarter is equal to the historical average load in that quarter divided by the sum of the historical average load for all four quarters. The historical average load for a quarter is the simple average of the loads for that quarter for the period 2003–04 through 2018–19. The load used is the net system load profile for Evoenergy as reported by the AEMO. The quarterly load weights for 2018–19 and 2019–20 are shown in Table 5.4.

¹³ The underlying quarterly load shape data from 2003–04 through 2017–18 is presented in Appendix 1.

¹⁴ The underlying data is presented in Appendix 1.

Table 5.4 Quarterly load weights, 2018–19 and 2019–20

Year	Q3	Q4	Q1	Q2
Load weights 2018-19	0.326	0.197	0.196	0.282
Load weights 2019-20	0.327	0.196	0.195	0.282

Source: Commission's calculations using data from the AEMO load profiles.

Uplift factor over time

Table 5.5 shows the annual load shape and ratio and the resulting uplift factor over the period 2009–10 to 2019–20. The uplift factor has trended down from 2012–13, (except in 2018–19 when a marginal increase occurred) reflecting a reduction in the load shape.

Table 5.5 Annual uplift factor, 2009–10 through 2019–20

Year	Load shape	Load ratio	Uplift factor
2009–10	1.158	2.128	1.207
2010–11	1.160	2.203	1.212
2011–12	1.153	2.215	1.207
2012–13	1.153	2.253	1.208
2013–14	1.141	2.316	1.200
2014–15	1.132	2.374	1.194
2015–16	1.125	2.474	1.192
2016–17	1.120	2.473	1.188
2017–18	1.119	2.510	1.188
2018–19	1.117	2.557	1.189
2019-20	1.115	2.556	1.187

Source: Commission's calculations.

Wholesale energy purchase costs for 2018–19 and 2019–20

Table 5.6 shows the wholesale energy purchase cost calculated for 2018–19 in the Commission's previous determination.

Table 5.6 Wholesale energy purchase cost, 2018–19

Component	Q3	Q4	Q1	Q2
Forward price (\$/MWh) (A)	77.76	77.76	77.76	77.76
Load shape (B)	1.10	1.08	1.20	1.10
Load ratio (C)	2.13	2.86	2.97	2.55
Forward price margin (D)	0.05	0.05	0.05	0.05
Uplift factor (E = (1 – D) × B + D × C)	1.15	1.17	1.29	1.17
Energy purchase cost (\$/MWh) (A × E)	89.67	91.00	100.42	91.29
Annualised load-weighted energy purchase cost				92.49

Source: ICRC (2017c).

Table 5.7 shows the calculated wholesale energy purchase cost for 2019–20. The quarterly load weights from Table 5.4 are multiplied by the quarterly cost estimates in Table 5.7 and summed to give the 2019–20 annualised energy purchase cost. The 2019–20 wholesale electricity purchase cost is 0.52 per cent lower than that for the previous year.

Table 5.7 Wholesale energy purchase cost, 2019–20

Component	Q3	Q4	Q1	Q2
Forward price (\$/MWh) (A)	77.54	77.54	77.54	77.54
Load shape (B)	1.10	1.08	1.19	1.10
Load ratio (C)	2.13	2.86	2.97	2.55
Forward price margin (D)	0.05	0.05	0.05	0.05
Uplift factor (E = (1 – D) × B + D × C)	1.15	1.17	1.28	1.17
Energy purchase cost (\$/MWh) (A × E)	89.29	90.60	99.38	91.03
Annualised load-weighted energy purchase cost				92.01

Source: Commission's calculations.

5.2.2 National green scheme costs (Large-scale Renewable Energy Target and Small-scale Renewable Energy Scheme costs)

The LRET and the SRES are national environmental obligations imposed by the Australian Government that create financial incentives for investment in renewable energy sources.¹⁵ The schemes require electricity retailers to purchase and surrender Large-scale Generation Certificates (LGC) and Small-scale Technology Certificates (STC) to the Clean Energy Regulator in percentages set by regulation each year.¹⁶ Renewable Power Percentage (RPP) and Small-scale Technology Percentage (STP) are those annual targets to achieve national LRET and SRES targets by 2030, respectively.¹⁷

The Commission applies a market-based approach¹⁸ for determining efficient LRET and SRES costs based on daily spot price data averaged over a 11-month period. The

¹⁵ These obligations are separate to the ACT Government's renewable energy target.

¹⁶ More information on the LRET and the SRES schemes can be found on the Clean Energy Regulator's website: <http://www.cleanenergyregulator.gov.au/About/Accountability-and-reporting/administrative-reports/tracking-towards-2020-encouraging-renewable-energy-in-australia>.

¹⁷ The RPP and STP represent the proportion of a retailer's total MWh of electricity purchased for which it is required to surrender LGCs. More information on the RPP can be found on the Clean Energy Regulator's website at <http://www.cleanenergyregulator.gov.au/RET/Pages/Scheme%20participants%20and%20industry/The-renewable-power-percentage.aspx>. Information on the STP can be found at <http://www.cleanenergyregulator.gov.au/RET/Pages/Scheme%20participants%20and%20industry/The-small-scale-technology-percentage.aspx>.

¹⁸ Full details of the Commission's approach can be found in the draft and final reports on standing offer prices for the supply of electricity to small customers from 1 July 2017: ICRC, 2017a: 50–53 and ICRC 2017c: 87–89.

Commission’s methodology includes a 10 per cent per year holding cost, a five per cent mark-up cost, and a cost adjustment to account for the difference between the estimated and the actual renewable percentages. Key data inputs into the Commission’s determination are provided in Table 5.8.

Table 5.8 LRET and SRES data, 2019 and 2020

	2019	2020
Renewable Power Percentage *	18.60%	20.15%
Average LGC spot price (\$/certificate)	84.19	55.34
Small-scale Technology Percentage	21.73%	14.56%
Average STC spot price (\$/certificate)	36.41	36.23

Notes: * A non-binding value is provided for 2020.

Sources: Clean Energy Regulator (2019) and ICAP price data.

LRET

The price for LGCs used to determine the cost of the LRET for 2019–20 are as follows:

- for calendar year 2019, the LGC price averaged over the 11-month period from 1 July 2017 to 31 May 2018, is \$84.19.
- for calendar year 2020, the LGC price averaged over the 11-month period from 1 July 2018 to 31 May 2019, is \$55.34.

These prices are lower than the equivalent prices used to determine the cost of the LRET in 2018–19, which were \$85.99 and \$84.19. This reflects a decline in LGC prices, especially over financial year 2018–19.

Using the Commission’s approach, the key data inputs in Table 5.8 produce a LRET allowance for 2019–20 of \$15.63 per MWh. This is before any adjustments to account for the differences between the actual and estimated RPP numbers used in the 2018–19 decision.

SRES

The price for STCs used to determine the cost of the SRES for 2019–20 are as follows:

- for calendar year 2019, the STC price averaged over the 11-month period from 1 July 2017 to 31 May 2018, is \$36.41.
- for calendar year 2020, the STC price averaged over the 11-month period from 1 July 2018 to 31 May 2019, is \$36.23.

These prices are lower than the equivalent prices used to determine the cost of the SRES in 2018–19, which were \$39.95 and \$36.41.

While STC prices have fallen slightly in 2019–20, the STP has increased materially, resulting in an overall increase in the cost of the SRES for 2019–20. For 2019–20, the

Commission’s approach produces a SRES allowance of \$7.70 per MWh before any cost adjustments to account for the differences between the actual and estimated STPs.¹⁹

Cost adjustment

The Commission’s approach allows for a cost adjustment for any differences between the actual and estimated STP and RPP numbers used in the 2018–19 decision. Due to the differences in actual and estimated renewable power percentages, there was an under recovery for both schemes in 2018–19. In other words, the LRET and SRES cost allowances in 2018–19 were \$0.50 and \$1.91 per MWh lower than what should have been recovered. The Commission has calculated adjustments of \$0.50 and \$1.91 per MWh to be included in the LRET and SRES cost allowances for 2019–20, respectively.

Total allowance

The LRET and SRES allowances for 2018–19 and 2019–20 are summarised in Table 5.9. The allowance for 2019–20 per MWh is 2.14 per cent more than the allowance for previous year.

Table 5.9 LRET and SRES allowances, 2018–19 and 2019–20 (\$/MWh)

	2018–19	2019–20
LRET	\$16.46	\$15.63
SRES	\$6.57	\$7.70
Cost adjustment from previous year	\$2.16	\$2.40
Total cost	\$25.19	\$25.73

Source: Commission’s calculations.

5.2.3 Energy losses

Some electricity is lost in transporting it from generators to customers via transmission and distribution networks. The energy loss factors are calculated by AEMO. They are used by all regulators to determine the energy loss allowances where regulated tariffs apply. The marginal loss factor and distribution loss factor, as reported by AEMO for the ACT in 2019–20, are 0.9815 and 1.0471 respectively.²⁰

The marginal loss factor for 2019–20 has fallen materially compared to the marginal loss factor for 2018–19, resulting in a reduction in the cost of energy losses. The

¹⁹ Full details of the Commission’s approach can be found in the 2017 draft and final reports on standing offer prices for the supply of electricity to small customers: ICRC, 2017a, pp. 23–26; ICRC 2017c, pp.45–47.

²⁰ AEMO, 2019: Distribution loss factors notionally describe the average electrical energy losses for electricity transmitted on a distribution network between a distribution network connection point and a transmission network connection point. Marginal loss factors represent electrical transmission losses.

AEMO notes that the loss factor has declined because of new renewable generation connections combined with a reduction in projected interconnector flow from Queensland as well as from New South Wales to Victoria.²¹ The Commission's methodology generates an energy loss cost component of \$3.81 per MWh for 2019–20.

5.2.4 Energy contracting costs

Energy contracting costs represent the costs incurred by the incumbent retailer in managing an electricity trading desk. The energy contracting cost allowance is adjusted by the annual change in the CPI for period.

The Commission has calculated an allowance of \$0.92 per MWh for energy trading and management costs for 2019–20. This is based on an adjustment of the 2018–19 cost allowance of \$0.90 per MWh for a change of 1.77 per cent in the CPI.²²

5.2.5 National Electricity Market fees

The NEM is managed by the AEMO, which is funded through user fees that are paid by customers. The cost allowance for NEM fees is adjusted by the annual change in the CPI.

The Commission has calculated an allowance of \$0.92 per MWh for NEM fees for 2019–20. This is based on an adjustment of the 2018–19 cost allowance of \$0.90 per MWh for a change of 1.77 per cent in the CPI.

5.2.6 Retail operating costs

Retail operating costs are the efficient costs incurred by the retailer in providing retail services to its customers.

The retail operating cost allowance for 2019–20 is calculated by adjusting the 2018–19 per customer allowance for the change in the CPI and converting it to an allowance for per MWh.

The CPI adjustment results in a per customer allowance of \$125.55 for 2019–20. This value is then converted into an allowance per MWh using customer numbers and energy usage estimates for 2019–20 as provided by AAR. This converts to an allowance of \$14.41 for 2019–20, which represents a 1.14 per cent decrease from 2018–19.

5.2.7 Energy Efficiency Improvement Scheme costs

The ACT Government's EEIS scheme places a mandatory obligation on all active retailers in the ACT to promote energy efficiency measures in households and small

²¹ AEMO, 2019, p 41.

²² The CPI change is calculated using the Australian Bureau of Statistics all group index for the weighted average of eight cities from June quarter to March quarter.

businesses. The Scheme was established under the *Energy Efficiency Improvement (Cost of living) Act 2012* (EEIS Act).

Under the EEIS Act, retailers must calculate their annual energy savings targets and emissions multipliers that apply to their electricity sales. To meet their obligations under the EEIS Act, retailers are required to implement eligible activities determined by the EEIS Administrator.

As per the price direction, the EEIS cost allowance is calculated using cost estimates provided by AAR subject to a prudence and efficiency assessment.²³ As the Commission’s methodology relies on forecast costs in advance of the actual cost being incurred, provision is made for an ex-post adjustment.

AAR provided the Commission with information on its EEIS compliance costs on 10 May 2019. Table 5.10 shows AAR’s forecast abatement costs for the EEIS. AAR expects to spend approximately \$9.40 million in 2019-20 to abate about 81,122 t CO₂-e at an average cost of \$115.93 per t CO₂-e.

Table 5.10 ActewAGL Retail EEIS abatement costs and targets, 2019–20

	Jul 2018–June 2019	July 2019–Jun 2020
Compliance costs (\$)	9,253,376	9,404,560
Energy Savings Obligation (t CO ₂)	79,400	81,122
Abatement cost (\$ per t CO₂-e)	\$116.54	\$115.93

Source: ActewAGL Retail (2019).

In its submission, AAR proposed a positive adjustment of \$0.01 for the difference between the forecast and actual costs.

Prudency and efficiency

Under the Commission’s methodology, the proposed expenditure will be deemed prudent if AAR can demonstrate that it is necessary to meet its legislative requirements under the EEIS Act. Expenditure will be deemed efficient if AAR has undertaken sufficiently robust decision-making processes to choose the lowest cost option. The latter will also be assessed by establishing a cost ceiling above which the forecast costs will be deemed inefficient.

In respect of the prudency of AAR’s proposed EEIS expenditure for 2019–20, the Commission assessed if it was necessary to meet its legislative requirements under the EEIS Act. The Commission determined that the decision to undertake expenditure was necessary as AAR is legally obligated to implement the scheme. The EEIS activities have been selected from a list of activities available for AAR to implement, as specified and accepted by the EEIS Administrator.

²³ The methodology is set out in ICRC, 2017a: 32–38 and ICRC, 2017c: 29–31.

For its efficiency analysis, the Commission, on 16 May and 24 May 2019, requested information from AAR on the processes and practices that AAR utilised in delivering its EEIS activities. Subsequently, AAR provided the Commission with information on the procurement and evaluation processes used to determine the most appropriate vendors to implement their abatement activities, and further information on the activities proposed to be delivered in 2019–20. The Commission assessed the information and determined that AAR undertook a sufficiently robust decision making process to meet its EEIS compliance requirements.

The Commission notes that the proposed costs were below the cost ceiling of \$10.32 per MWh determined by the Commission based on the schemes' penalty rate for non-compliance (\$300 per CO₂-e), the energy saving target (8.6 per cent) and the emissions intensity factor (0.4).

The process followed by AAR also included the submission of an annual compliance plan for the EEIS Administrator's approval. The EEIS Administrator's approval of AAR's 2019 compliance plan indicated that it followed a robust decision making process, which is consistent with the Commission's assessment of the efficiency of delivering EEIS activities.

Decision

Having reviewed AAR's proposed expenditure subject to a prudence and efficiency analysis, the Commission estimated an allowance of \$4.00 per MWh for 2019–20 accounting for a negative adjustment of \$0.01 for the previous year.

Table 5.11 Forecast EEIS cost, 2019–20

	Cost allowance per tonne (\$)	Emissions factor	Energy savings target (per cent)	Cost per MWh (\$)	Half-yearly load weights (per cent)
Jul–Dec 2019	\$115.93	0.4	8.6	\$3.99	52.8
Jan–Jun 2020	\$115.93	0.4	8.6	\$3.99	47.2
Adjustment 2018–19				\$0.01	
2018–19 (\$/MWh)				\$4.00	

Source: Commission's calculations using ActewAGL Retail (2019).

5.2.8 Network costs

Network costs

Network costs include transmission, distribution and ACT Government scheme costs. These costs are regulated by the AER. Consistent with the price direction, the Commission passes through the network charges determined by the AER.

As previously mentioned in section 4.4.4, Evoenergy submitted its revised annual pricing proposal for 2019–20 to the AER on 29 May 2019, and this proposal was approved by the AER on 3 June 2019.

Table 5.12 shows Evoenergy’s total network revenue for 2019–20, compared with the equivalent network revenue for 2018–19.

Table 5.12 Evoenergy network revenue components, 2018–19 and 2019–20 (\$)

	2018–19	2019–20
Distribution use of system	135,725,505*	138,972,964
Transmission use of system	46,786,000	40,441,909
ACT Government schemes	57,733,000	81,651,169
Total	240,244,505	261,066,042

Note: Based on Evoenergy (2018).

Source: Evoenergy (2019).

Based on Evoenergy’s approved network charges, AAR proposed a network cost allowance of \$102.24 per MWh for 2019–20. The Commission examined this proposal and determined an amount of \$102.24 per MWh as the network cost allowance for 2019–20. The amount for network costs excluding ACT Government scheme costs represents a 1.91 per cent decrease compared to 2018–19, reflecting a decrease in transmission costs. The amount for ACT Government schemes in 2019–20 represents a 42.0 per cent increase compared to 2018–19. The amount for ACT Government schemes is discussed further in the next section.

ACT Government schemes

As shown in Table 5.13, the estimated jurisdictional scheme costs for 2019–20 are \$81.65 million. Evoenergy has estimated total Feed-in-Tariffs (FiT) costs of \$67.52 million for 2019–20, which accounts for the majority of the increase in the ACT Government schemes.

These costs increased in 2019–20 reflecting the cost of FiT for electricity generated at large scale renewable generation sites. The number of sites under the scheme has increased over the past 12 months

Table 5.13 ACT Government schemes, 2018–19 and 2019–20 (\$million)

Components	2018–19 (\$) (Estimate)	2019–20 (\$) (Forecast)
FiT small, medium and large scale	46.86	67.52
Energy industry levy	1.28	1.50
Utilities Network Facilities Tax	8.22	8.77
Over (under) recovery for the financial year	1.37	3.86
Total	\$57.73	\$81.65

Source: Evoenergy (2019).

For ease of comparison with other components of the cost-index model, the FiT costs are presented on a per MWh basis in Table 5.14. This requires multiplying the network cost allowance by the proportion of total network costs that can be attributed to FiT costs. On this basis, using the final network cost allowance of \$102.24 the Commission

has calculated an implied FiT cost allowance of \$26.44 per MWh for 2019–20. On average for ACT customers, this translates to \$211.55 per year, of which the large-scale FiT contributes \$163.01.

Table 5.14 Evoenergy estimated FiT costs, 2019–20

	2019–20 costs (\$ million)	Per cent of total network revenue	\$/MWh
Feed-in tariff, small and medium-scale	15.49	5.94%	\$6.07
Feed-in tariff, large-scale	52.03	19.93%	\$20.37
Total	67.52	25.86%	\$26.44

Sources: Evoenergy (2019) and the Commission's calculations.

5.2.9 Retail margin

The retail margin is a profit margin that provides a return on the investment made by the incumbent retailer in providing retail electricity services.

The price direction requires the retail margin to be calculated at 5.3 per cent applied to all of the cost categories of the retail electricity cost-index model. This generates an allowance of \$12.99 per MWh for 2019–20.

5.3 Power of Choice pass-through costs

Background

On 23 April 2018, as part of the 2018–19 price reset, the Commission received a confidential submission from AAR for a pass-through event for the costs arising from the PoC regulatory changes. AAR proposed to recover the pass-through costs attributed to regulated customers of \$5.04 million²⁴ in the 2018–19 financial year.

As part of its 2018–19 decision, the Commission determined an amount of \$5.02 million as total pass-through costs to be recovered over five years.²⁵ In 2018–19 the Commission allowed for the recovery of one fifth of total capital costs and full operating expenditure. In the four subsequent years, the Commission allowed for the recovery of one fifth of capital expenditure.

Allowable pass-through amount for 2019–20 and price effects

In its submission to the 2019–20 price reset, AAR proposed to recover a proportion of the unrecovered capital costs associated with PoC changes in 2019–20.

²⁴The proposed amount was derived by converting the 2016–17 and 2017–18 values into 2018–19 dollars based on CPI of 1.28 and 1.95 per cent, respectively.

²⁵ ICRC, 2018, p. 20.

The Commission has determined that the approved pass-through amount for 2019–20 is \$0.99 million, consistent with its decision in 2018–19. This represents a cost of \$1.02 per MWh in 2019–20, which is a decline from \$1.04 per MWh in 2018–19.

Appendix 1 Statistical tables

Table A2.15 Quarterly load shape, 2003–04 through 2018–19

Year	Q3	Q4	Q1	Q2
2003–04	1.251	1.043	1.192	1.104
2004–05	1.148	1.164	1.207	1.082
2005–06	1.114	1.149	1.360	1.145
2006–07	1.161	1.080	1.207	1.387
2007–08	1.134	1.075	1.105	1.100
2008–09	1.123	1.096	1.294	1.119
2009–10	1.086	1.254	1.254	1.109
2010–11	1.067	1.024	1.561	1.036
2011–12	1.047	1.032	1.035	1.043
2012–13	1.065	1.040	1.032	1.048
2013–14	1.044	1.070	1.054	1.033
2014–15	1.050	1.039	1.065	1.052
2015–16	1.077	1.090	1.096	1.157
2016–17	1.113	1.034	1.378	1.005
2017–18	1.047	1.031	1.049	1.102
2018–19	1.074	1.052	1.043	1.040

Source: Commission's calculations using the AEMO load profiles and the AEMO aggregated price and demand data files.

Table A2.16 Quarterly load ratio, 2003–04 and 2018–19

Year	Q3	Q4	Q1	Q2
2003–04	1.786	2.156	1.702	2.013
2004–05	1.828	1.905	1.724	2.108
2005–06	1.808	1.960	1.888	2.063
2006–07	1.768	1.801	1.885	2.148
2007–08	1.927	1.708	1.891	1.863
2008–09	1.746	1.821	2.250	2.061
2009–10	1.764	2.172	2.236	2.196
2010–11	1.754	1.975	2.440	2.115
2011–12	1.868	2.137	2.039	2.001
2012–13	1.815	2.489	2.469	2.261
2013–14	2.030	2.193	2.621	2.322
2014–15	1.939	2.757	2.236	2.153
2015–16	1.996	2.505	2.625	2.452
2016–17	1.965	2.568	2.873	2.090
2017–18	1.972	2.509	2.787	2.351
2018–19	2.024	2.346	1.715	1.574
Maximum 2003–04 through Q4 2017–18	2.030	2.757	2.873	2.452
Maximum 2003 through Q4 2018–19	2.030	2.757	2.873	2.452

Source: Commission's calculations using data from the AEMO load profiles.

Table A2.17 Quarterly load weights, 2003–04 to 2018–19

Year	Q3	Q4	Q1	Q2
2003–04	109.621	71.384	64.911	93.947
2004–05	108.849	68.535	65.910	90.063
2005–06	110.759	70.952	70.791	104.097
2006–07	109.656	70.494	70.773	95.027
2007–08	110.995	68.837	68.338	94.735
2008–09	114.401	67.694	70.945	96.657
2009–10	109.033	73.936	68.545	94.249
2010–11	111.748	66.593	63.059	94.546
2011–12	102.113	62.356	59.446	94.205
2012–13	101.811	59.272	58.250	85.369
2013–14	95.348	59.536	60.486	84.287
2014–15	96.815	53.697	52.247	85.559
2015–16	100.400	53.046	58.531	81.687
2016–17	103.304	61.256	59.899	90.041
2017–18	107.831	55.745	57.221	85.388
2018–19	102.728	54.025	103.966	113.264
Average 2003–04 through Q4 2017–18	106.179	64.222	63.724	91.748
Average 2003 through Q4 2018–19	105.963	63.585	63.290	91.324

Source: Commission's calculations using data from the AEMO load profiles.

Abbreviations and acronyms

AAR	ActewAGL Retail
ACN	Australian Company Number
ACT	Australian Capital Territory
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ASX	Australian Stock Exchange
CER	Clean Energy Regulator
Commission	Independent Competition and Regulatory Commission
CPI	Consumer Price Index
ICRC EEIS	Energy Efficiency Improvement Scheme
EPC	Energy purchase cost
FiT	Feed-in-Tariffs
ICRC	Independent Competition and Regulatory Commission
ICRC Act	<i>Independent Competition and Regulatory Commission Act 1997 (ACT)</i>
kWh	kilowatt hour
LGC	Large-scale Generation Certificate
LRET	Large-scale Renewable Energy Target
MWh	megawatt hour
NEM	National Electricity Market
OTTER	Office of the Tasmanian Economic Regulator
PoC	Power of Choice
RPP	Renewable Power Percentage

SRES	Small-scale Renewable Energy Scheme
STC	Small-scale Technology Certificate
STP	Small-scale Technology Percentage

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