

## PRICE RECALIBRATION

# Retail electricity price recalibration 2023-24: standing offer prices for the supply of electricity to small customers

Report 4 of 2023, June 2023



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Our objectives are set out in section 7 and 19L of the ICRC Act and section 3 of the Utilities Act. In discharging our objectives and functions, we provide independent robust analysis and advice.

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# Executive summary

Each year, we are required under our *Price Direction for Standing Offer Prices for the Supply of Electricity to Small Customers 1 July 2020 to 30 June 2024* (the price direction) to update the maximum average percentage change by which ActewAGL can increase its regulated retail tariffs (ICRC 2020a).

This report sets out the annual price adjustment for 2023-24, in line with the price direction.

## Our price recalibration for 2023-24

The price recalibration (reset) will result in the price of ActewAGL's basket of standing offer tariffs increasing, on average, by 4.15% in 2023-24. This is equivalent to a real decrease of 2.72% after excluding inflation.

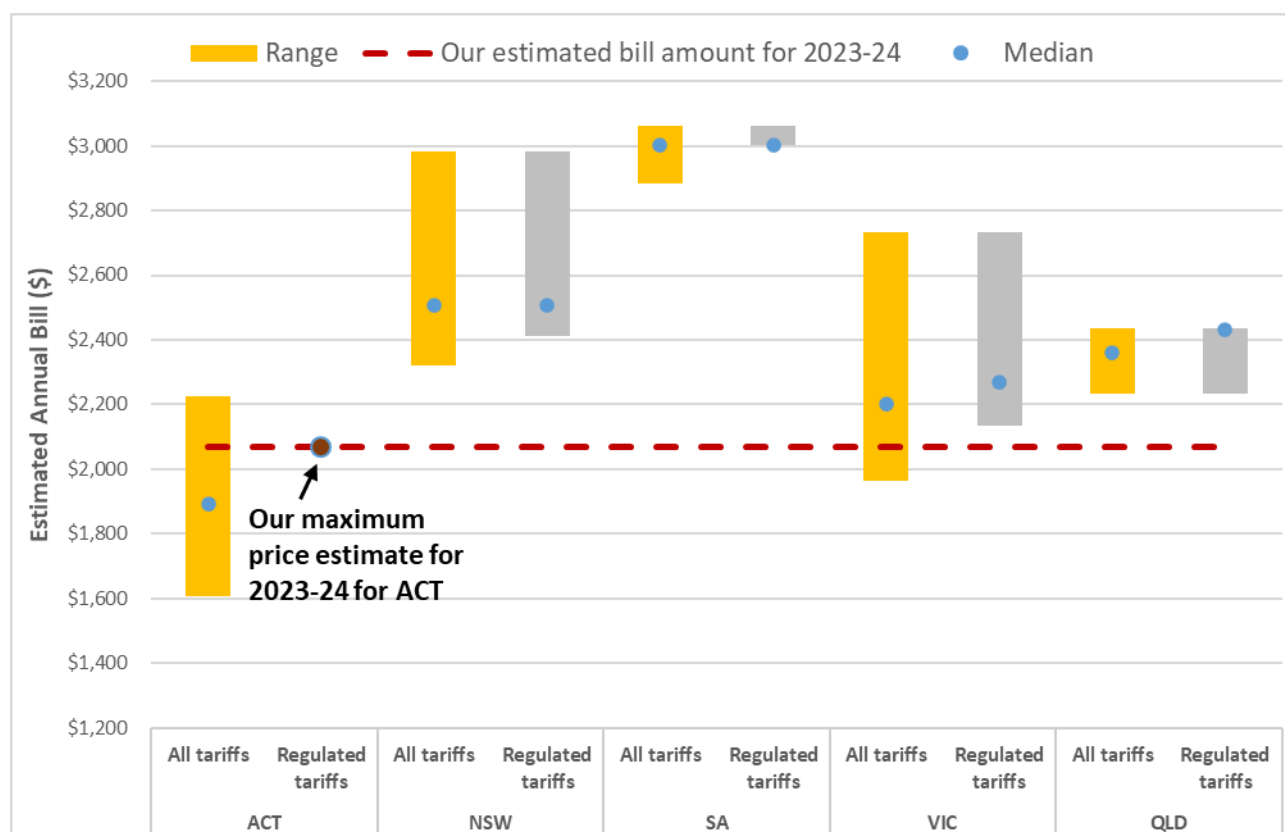
## Impact on customers

The maximum average increase of 4.15% will translate to an annual bill increase of \$75 for an average residential customer consuming 6,500kWh. For an average non-residential customer consuming 25,000kWh, the increase in the annual bill will be around \$289.

These price increases only apply to standing offers. We encourage consumers to regularly compare these tariffs to other offers that are in the market.

Figure ES0.1 shows that the average annual bill for Canberrans on standing offers will be the lowest compared to the average standing offer bills faced by customers in New South Wales, Victoria, Queensland and South Australia. The Tasmanian figures were not available.

**Figure ES0.1. Estimated annual bills based on estimated prices as at 1 July 2023 for interjurisdictional customers using 6,500 kWh**



Source: Our calculations using OTTER 2022, ESC 2023, AER 2023b and AER 2023c.

Note: Bill estimates include GST. ACT maximum price estimate for 2023-24 is based on our pricing model estimate of the cost of providing electricity (in \$/MWh)

## Costs that make up prices

Our pricing model determines the maximum average percentage change that ActewAGL can apply to its suite of regulated retail tariffs on an annual basis. This is done by estimating three main cost categories:

- Wholesale electricity costs, which comprise wholesale energy purchase costs, national green scheme costs (Large-scale Renewable Energy Target and Small-scale Renewable Energy Scheme costs), energy losses, volatility allowance and National Electricity Market (NEM) fees.
- Network costs, which include transmission, distribution, and ACT Government scheme costs. Transmission and distribution costs are regulated by the Australian Energy Regulator (AER) and ACT Government scheme costs are passed through in the network costs approved by the AER. For the first time, network costs also include a rebate for the negative reasonable cost determination made by the ACT Government for the Large-scale Feed-in Tariff (LFiT) scheme.
- Retail costs, which comprise retail operating costs, energy efficiency incentive scheme (EEIS) costs, smart meter costs, 5-minute settlement costs, Global Settlement costs, Customer Switching costs, Market intervention payments and the retail margin.

The main costs that the retailer has control over relate to hedging, retail operating costs and the retail margin; these are also the main components that we regulate. Retail operating costs and the retail margin account for around 10% of total costs for 2023–24.

## Causes of the price increase

Table ES0.1 sets out the nominal dollar amounts for the cost components used to calculate the maximum allowed change in average retail electricity prices for 2023–24.

**Table ES0.1. Update of electricity cost components for 2023–24 (with 2022–23 costs for comparison)**

Cost component	2022–23 (\$/MWh)	2023–24 (\$/MWh)	Dollar change (\$/MWh)	Contribution to the price increase (%)
Wholesale energy purchase cost	83.87	159.62	75.75	27.25%
Other energy purchase costs	20.97	16.94	-4.03	-1.45%
<b>Total energy purchase cost</b>	<b>104.83</b>	<b>176.56</b>	<b>71.73</b>	<b>25.81%</b>
Transmission and distribution costs	88.87	84.80	-4.07	-1.47%
ACT Govt scheme costs	45.27	-15.23	-60.49	-21.76%
<b>Total network costs</b>	<b>134.14</b>	<b>69.57</b>	<b>-64.57</b>	<b>-23.23%</b>
Retail operating cost	15.92	17.71	1.79	0.64%
Other retail costs	8.32	10.31	1.99	0.71%
<b>Total retail costs</b>	<b>24.24</b>	<b>28.02</b>	<b>3.78</b>	<b>1.36%</b>
<b>Total energy + retail + network costs</b>	<b>263.21</b>	<b>274.15</b>	<b>10.93</b>	<b>3.93%</b>
Retail margin	14.74	15.35	0.61	0.22%
<b>Total costs</b>	<b>277.95</b>	<b>289.50</b>	<b>11.55</b>	<b>4.15%</b>

Source: Our calculations.

Note: All numbers are rounded to two decimal places.

Figure ES0.2 shows the contribution of various cost components to the total percentage change in nominal average regulated prices from 2022–23 to 2023–24.

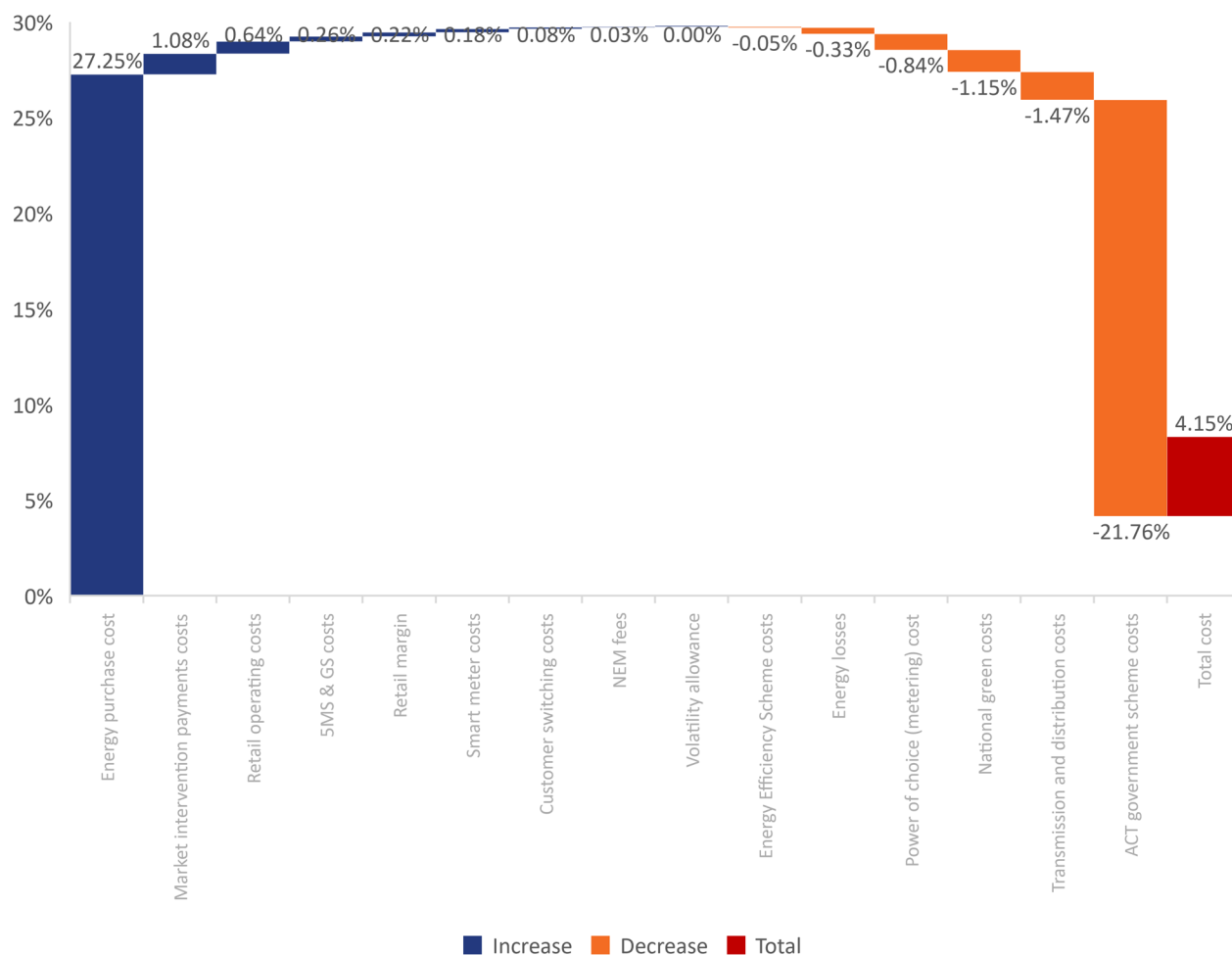
The price rise is driven by the significant increase in wholesale electricity costs, which is largely offset by the reduction in ACT Government scheme costs. Energy purchase costs put upward pressure on prices (up \$75.75/MWh, which contribute 27.25 percentage points to the price rise). ACT Government scheme costs put downward pressure on prices this year (down \$60.49/MWh, which offsets the price increase by 21.76 percentage points). Other cost components, most notably ActewAGL's cost pass-throughs, made a small contribution to the maximum average price change.

The main reasons for the cost changes are:

- Energy purchase cost increases throughout the National Electricity Market as result of high input fuel prices, high demand and constrained supply.
- ACT Government scheme costs decreased because of a fall in LFiT support payments. LFiT support payments are the difference between the fixed contract price to renewable generators and the

prevailing wholesale electricity prices. Because of an increase in wholesale electricity prices, the contract-for-difference payments to contracted generators decreased.

**Figure ES0.2. Contribution to the price increase by costs component, 2023–24**



Source: Our calculations.



# 1. Introduction

Our Price Direction for standing offer prices for the supply of electricity to small customers by ActewAGL from 1 July 2020 to 30 June 2024 (the price direction) requires us to recalibrate (reset) the weighted average electricity price change on an annual basis for the years 2021–22, 2022–23 and 2023–24 (ICRC 2020a, p. 6).

In line with the price direction, the price reset reflects updates to wholesale electricity costs, environmental scheme costs and network costs. Because these costs change over time, ActewAGL's regulated standing offer retail electricity prices need to be updated.

This report sets out the result of our reset of the maximum price change for the supply of electricity to small customers by ActewAGL to apply in 2023-24 as specified in the price direction.

The remainder of this report is structured as follows:

- Chapter 2 sets out our decision on the maximum allowed change in ActewAGL's regulated retail electricity prices for 2023-24 and analyses the impact of the price change on customer bills.
- Chapter 3 reviews the main drivers of the price change in 2023-24.
- Chapter 4 compares electricity prices between the ACT and other Australian jurisdictions.
- Chapter 5 describes the annual recalibration process set out in the price direction.
- Appendix 1 calculates the efficient costs of supplying electricity to customers on ActewAGL's regulated tariffs in accordance with our methodology and the updated inputs for 2023-24.

## 2. Maximum price change for 2023-24 and impact on consumers

This chapter presents the outcome of the price reset of the maximum allowable average percentage change that ActewAGL can adopt for its standing offer tariffs for 2023-24. It also shows the expected impact on customers.

### 2.1 Maximum price change for 2023-24

The average nominal change in ActewAGL's basket of regulated tariffs for 2023-24 will be an increase of 4.15%. This is equivalent to a real decrease in the regulated retail price of 2.72% after excluding inflation. Table 2.1 shows the cost components used to calculate the maximum average percentage increase.

**Table 2.1. Update of electricity cost components for 2023-24 (with 2022-23 costs for comparison)**

Cost component	2022-23 (\$/MWh)	2023-24 (\$/MWh)	Dollar change (\$/MWh)	Contribution to the price change (%)
Wholesale energy purchase cost	83.87	159.62	75.75	27.25%
National green scheme costs	18.25	15.06	-3.19	-1.15%
Energy losses	1.09	0.17	-0.92	-0.33%
Volatility allowance	0.30	0.30	0.00	0.00%
NEM fees	1.32	1.41	0.09	0.03%
<b>Total energy purchase cost</b>	<b>104.83</b>	<b>176.56</b>	<b>71.73</b>	<b>25.81%</b>
Transmission and distribution costs	88.87	84.80	-4.07	-1.47%
ACT Govt scheme costs	45.27	-15.23	-60.50	-21.76%
Large scale FiT scheme costs	36.13	-23.14	-59.27	-21.32%
Small and medium scale FiT scheme costs	5.76	5.38	-0.38	-0.14%
Other ACT Govt schemes costs	3.38	2.53	-0.85	-0.31%
<b>Total network costs</b>	<b>134.14</b>	<b>69.57</b>	<b>-64.57</b>	<b>-23.26%</b>
Retail operating cost	15.92	17.71	1.79	0.64%
Energy efficiency scheme costs	3.04	2.90	-0.14	-0.05%
AEMC power of choice costs	2.32	-	-2.32	-0.83%
Smart meter costs	2.96	3.46	0.50	0.18%
5-minute & global settlements costs	-	0.72	0.72	0.26%
Customer switching costs	-	0.21	0.21	0.08%
Market intervention payments costs	-	3.01	3.01	1.08%
<b>Total retail costs</b>	<b>24.24</b>	<b>28.02</b>	<b>3.78</b>	<b>1.36%</b>
<b>Total energy + retail + network costs</b>	<b>263.21</b>	<b>274.15</b>	<b>10.94</b>	<b>3.93%</b>
Retail margin	14.74	15.35	0.61	0.22%
<b>Total costs</b>	<b>277.95</b>	<b>289.50</b>	<b>11.55</b>	<b>4.15%</b>

Source: Our calculations.

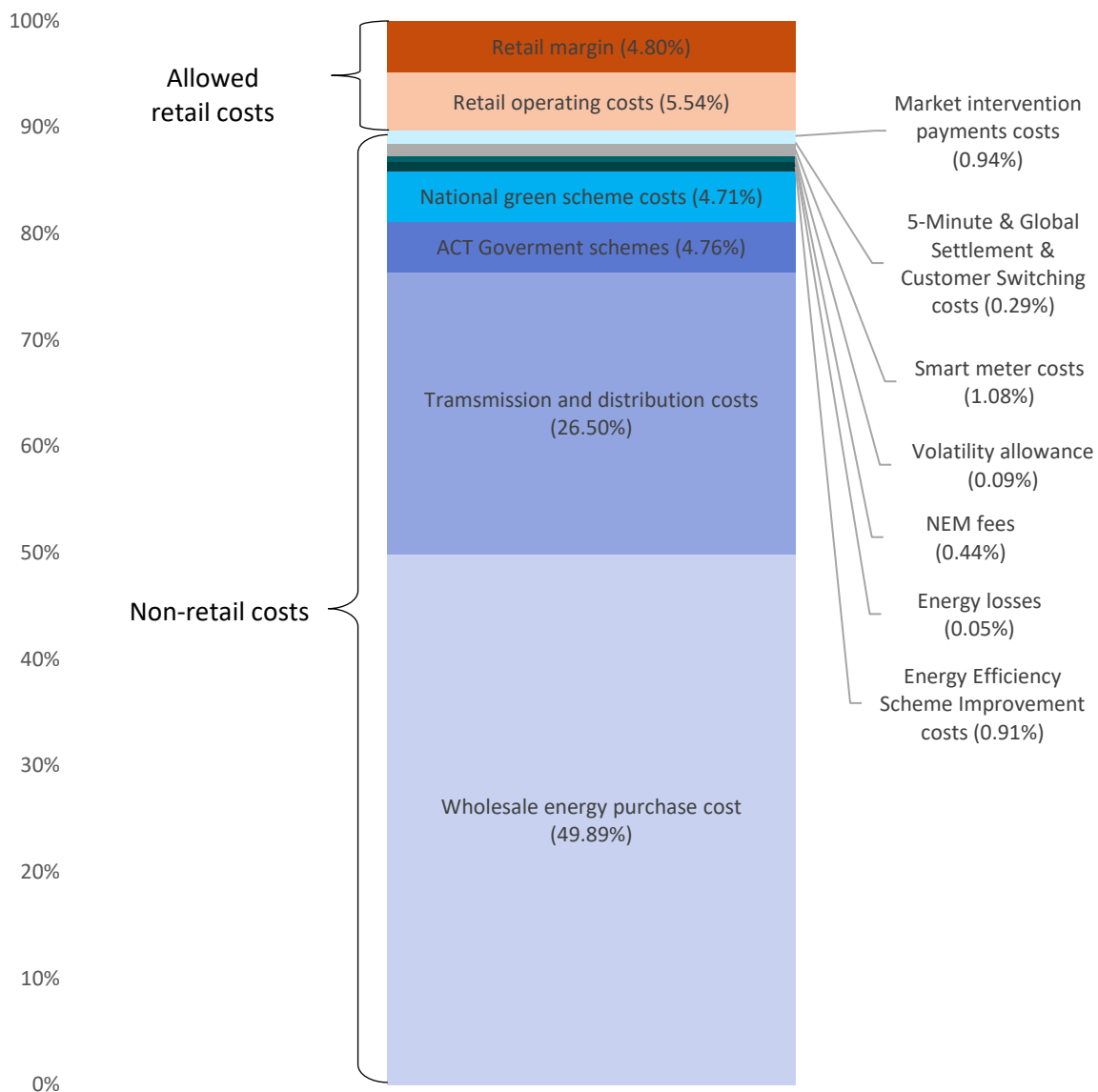
Note: All numbers are rounded to two decimal places.

Figure 2.1 shows the share of each cost component in total costs. These costs include:

- the direct cost of purchasing electricity from the National Electricity Market (NEM), excluding the cost 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
- Transmission and distribution costs
- ACT Government scheme costs, which comprise feed-in-tariff scheme costs (small, medium and large scale), the energy industry levy and the utilities network facilities tax.

The main costs over which the retailer has control relate to hedging, retail operating costs and retail margin; these are the main cost components we regulate. Retail operating costs and the retail margin account for around 10% of the total costs for 2023–24.

**Figure 2.1. Cost components as share of total costs, 2023–24**



Source: Our calculations.

## 2.2 Impact on consumers

To assess the effects of the price reset on residential and non-residential customers, we 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 represent a single person living in an apartment, an average customer may be a small family in a townhouse, and a large customer may be a large family in a detached house.

The table shows that if ActewAGL increases the average standing offer prices by 4.15%, the annual bill increases range from \$44 for a small residential customer consuming 3,800 kWh up to \$87 for a large residential customer consuming 7,500 kWh. For an average residential household consuming 6,500 kWh per year, the annual bill will increase by \$75 in 2023–24.

**Table 2.2. Estimated annual bill changes for different types of residential customers, 2023–24**

Consumer type	Annual usage (kWh)	Estimated annual bill 2022–23 (\$)	Estimated annual bill 2023–24 (\$)	Change (\$)
Large	7,500	2,085	2,171	87
Average	6,500	1,807	1,882	75
Small	3,800	1,056	1,100	44

Source: Our calculations.

Note: All estimated annual bills and changes in dollars are rounded to the nearest integer.

Table 2.3 shows our estimates of annual electricity bill changes for a range of typical non-residential customers. The impact on a typical bill ranges from an increase of \$115 for a small non-residential customer consuming 10,000 kWh to an increase of \$462 for a large non-residential customer consuming 40,000 kWh. For an average non-residential customer consuming 25,000 kWh, the annual bill will increase by \$289 in 2023–24.

**Table 2.3. Estimated annual bill changes for different types of small business customers, 2023–24**

Consumer type	Annual usage (kWh)	Estimated annual bill 2022–23 (\$)	Estimated annual bill 2023–24 (\$)	Change (\$)
Large	40,000	11,118	11,580	462
Average	25,000	6,949	7,238	289
Small	10,000	2,780	2,895	115

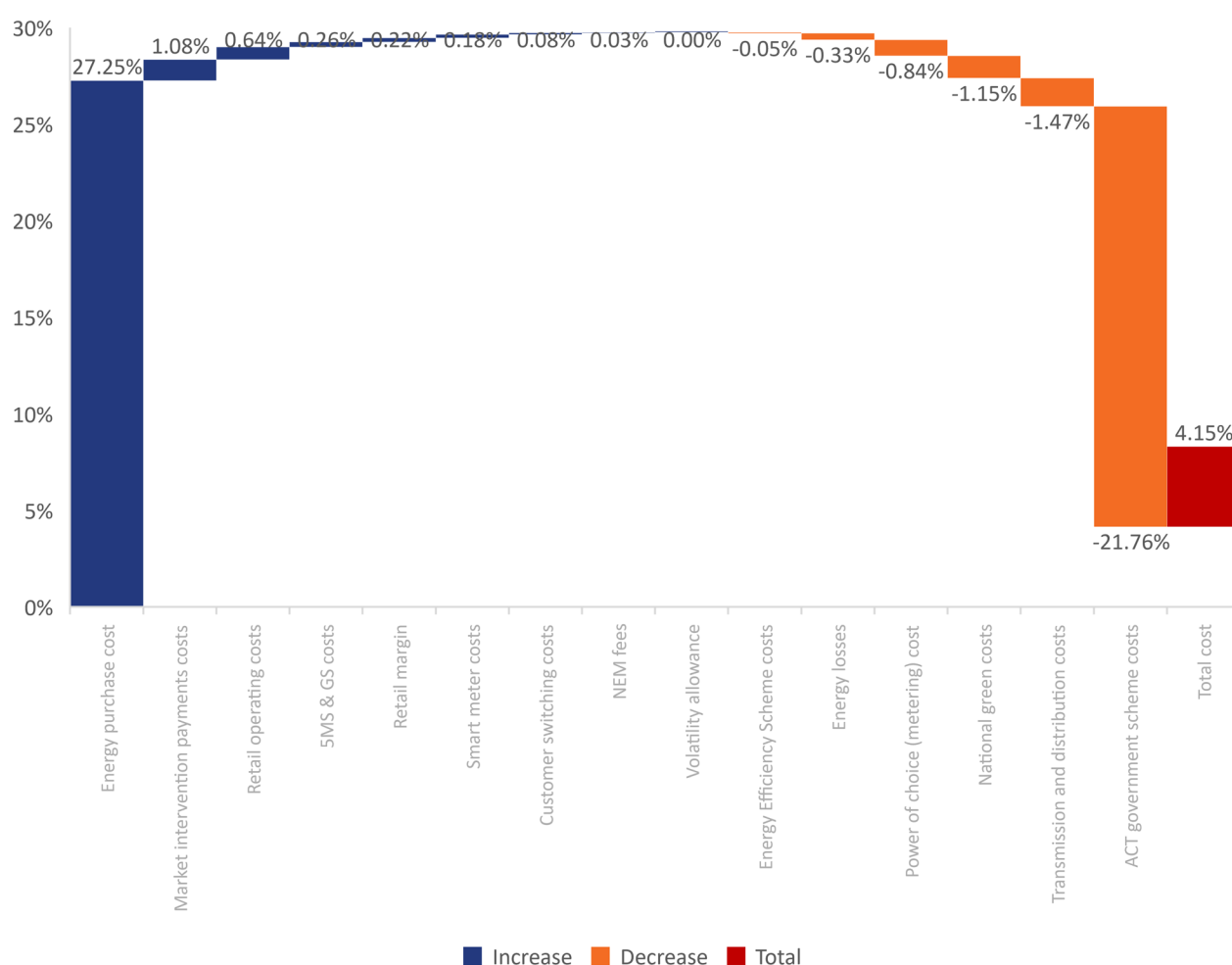
Source: Our calculations.

Note: All estimated annual bills and changes in dollars are rounded to the nearest integer.

### 3. Reasons for the price change

This chapter discusses the main reasons for the maximum average price increase in standing offer prices for 2023-24. Appendix 1 presents details about how each cost component was estimated.

**Figure 3.1. Contribution to the price increase by costs component, 2023–24**



Source: Our calculations.

Figure 3.1 shows the main contributors to the change in maximum standing offer prices. The biggest contributor to the price increase this year was the energy purchase costs (up \$75.75/MWh, which contributes 27.25 percentage points to the price increase). The ACT Government schemes costs put downward pressure on price (down \$60.49/MWh, which offset the price increase by 21.76 percentage points).

## 3.1 Network costs

Total network costs for standing offer customers will decrease from \$134.14 per MWh in 2022–23 to \$69.57 per MWh in 2023–24, a decrease of \$64.57/MWh, which contribute -23.23 percentage points to the maximum average price increase.

Network costs include transmission and distribution costs and ACT Government scheme costs. Transmission and distribution costs are regulated by the AER and ACT Government scheme costs are passed through in the network costs approved by the AER.<sup>1</sup> The large decline in network costs is driven primarily by the ACT Government scheme costs, of which \$23.14/MWh is a rebate being paid to consumers for the return of funds from the ACT Government's LFiT scheme.

### Transmission and distribution costs

These are the cost of poles and wires to transport electricity from generators to consumers. The transmission and distribution costs for standing offer customers will decrease from \$88.87/MWh in 2022-23 to \$84.80/MWh in 2023–24, a decrease of \$4.07/MWh, which contributes -1.47 percentage points to the maximum average price increase.

On 4 May 2023, the AER approved a 0.8% nominal increase in distribution charges and a 18.2% nominal decrease in transmission charges for Evoenergy, which is the ACT's network service provider (AER 2023a and Evoenergy 2023). This reflects an overall decrease in Evoenergy's allowed revenue in 2023-24 and an increase in forecast electricity consumption (AER 2023a).

### ACT Government scheme costs

ACT Government scheme costs decreased largely due to a fall in the LFiT costs. For the first time the LFiT costs are negative, which requires Evoenergy to return over-recovered funds back to ACT customers.

On 24 April 2023, the ACT Government determined that the reasonable cost of the ACT electricity distributor meeting its obligations, under the *Electricity Feed-in (Large-scale Renewable Energy Generation) Act 2011*, is -\$68.45 million for 2023-24.<sup>2</sup> Under the National Electricity Rules, the AER cannot include a negative jurisdictional scheme amount in regulated network charges and as a result Evoenergy set the LFiT amount to zero in its pricing proposal. To return the \$68.45 million to ACT customers, Evoenergy stated that it will apply a separate, downwards adjustment to the AER's approved network charges for 2023-24 – that is, Evoenergy intends to charge network prices that are below the AER's approved prices for 2023-24 in order to return the LFiT amount to ACT customers.<sup>3</sup>

<sup>1</sup> For the first time the LFiT cost is negative and as such does not meet the requirements of the National Electricity Rules in relation to jurisdictional scheme amounts and cannot be included in Evoenergy's network prices regulated by the AER. As a result, Evoenergy set the 2023-24 LFiT jurisdiction amount to zero in its pricing proposal and separately published a set a network prices with a downward adjustment to return the LFiT amount to ACT customers.

<sup>2</sup> Electricity Feed-in (Large-scale Renewable Energy Generation) (Reasonable Costs of FiT Support Payments) Determination 2023, Notifiable instrument NI2023-207. [Electricity Feed-in \(Large-scale Renewable Energy Generation\) \(Reasonable Costs of FiT Support Payments\) Determination 2023 | Notifiable instruments \(act.gov.au\)](#)

<sup>3</sup> Evoenergy 2023, Electricity Network Pricing Proposal 2023-24, p.16

The LFiT costs for standing offer customers will decrease from \$36.13 per MWh in 2022–23 to -\$23.14 per MWh in 2023–24. This is mainly because of an increase in wholesale electricity prices.

Overall, the ACT Government scheme costs for standing offer customers will decrease from \$45.27/MWh in 2022–23 to -\$15.23/MWh in 2023–24, a decrease of \$60.50/MWh, which contributes -21.76 percentage points to the maximum average price increase.

### **Why do higher wholesale prices decrease the large-scale feed-in-tariff cost?**

Under the large-scale FiT scheme, the ACT Government sources renewable electricity from large-scale wind and solar farm generators in the ACT, South Australia, Victoria and NSW. The ACT Government has agreed to pay these generators a 'contract price' for the electricity they feed into the grid. This arrangement encouraged the contracted generators to invest in supplying renewable energy because they have certainty that they will recover the costs of their investments.

Evoenergy, as the ACT electricity distributor, administers the scheme for the ACT Government.

The 'contract price' is fixed and, therefore, can be above or below the wholesale electricity spot price at any given time. Where wholesale spot prices are below the fixed contract price, Evoenergy makes a top-up payment to the generator to honour the agreed contract price. However, when market prices are high, generators return earnings above the agreed fixed contract price to Evoenergy.

The rising wholesale electricity spot prices during 2022 resulted in a substantial over-recovery by Evoenergy in respect of the large-scale FiT scheme. In 2023–24 Evoenergy will return the over-recovered funds<sup>4</sup> to ACT electricity consumers in the form of a rebate. Hence, higher wholesale electricity prices led to a reduction in the LFiT costs which will put downward pressure on the electricity prices for 2023–24.

## **3.2 Energy purchase cost**

Energy purchase costs will increase from \$83.87/MWh in 2022–23 to \$159.62/MWh in 2023–24, an increase of \$75.75/MWh. We estimate the energy purchase costs using the forward price of energy over a 23-month period, which has included periods of extremely high prices as shown in Figure 3.2 (see Appendix 1 for further details of how the energy purchase cost is calculated).

<sup>4</sup> The over-recovery will be partially returned in 2023–24 with any residual amount to be returned in 2024–25 and 2025–26.



**Figure 3.2. Daily forward prices (\$ per MWh), July 2021 to June 2023**

Source: Our calculation using ASX data.

Energy purchase costs increased throughout the National Electricity Market because of higher coal and gas prices reflecting world events. A reduction in thermal generation and the slowing of large-scale renewables coming online contributed to the increase in these costs (AER 2022).

Energy purchase costs are the costs incurred by retailers in purchasing electricity from the wholesale market to meet the demand of their customers. Purchases of energy through the wholesale energy market account for around 30% of the total cost of providing retail electricity services to customers on regulated retail tariffs in the ACT.

### 3.3 Cost pass throughs

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

On 21 April 2023, ActewAGL submitted two pass-through applications to the commission covering a number of regulatory change events for consideration as part of the 2023-24 recalibration process. ActewAGL made a cost pass-through application for various regulatory reforms and for market intervention payments.

#### Regulatory reforms

ActewAGL's first pass-through application covers a number of regulatory reforms:

- Five-minute settlement (5MS)
- Global settlements (GS)
- Customer switching
- Electricity Business to Business (B2B) framework

## Five-minute settlement and global settlement

On 28 November 2017, the Australian Electricity Market Commission (AEMC) made a final rule to reduce the time interval for financial settlement in the national electricity market from 30 minutes to five minutes.<sup>5</sup> The AEMC considered that aligning dispatch and settlement at five minutes would have the following significant enduring benefits relative to the previous arrangements:

1. improved price signals for more efficient generation and use of electricity
2. improved price signals for more efficient investment in capacity and demand response technologies to balance supply and demand
3. improved bidding incentives.<sup>6</sup>

On 6 December 2018, the AEMC made a final rule to move the current market settlement framework from what is known as 'settlement by difference' to a GS framework.<sup>7</sup> The GS framework treats all retailers equally by allocating a share of unaccounted for energy to all retailers in a distribution area and enabled AEMO to fully reconcile the market. The AEMC identified the following three key benefits of the GS framework:

1. improved transparency, leading to fewer settlement disputes between retailers and lower levels of unaccounted for energy over time
2. competition on equal terms
3. improved risk allocation driving enhanced incentives.

The AEMO was responsible for planning and implementing the 5MS and GS change. The changes commenced on 1 May 2022.<sup>8</sup>

Given the timing of the GS project aligned with 5MS, ActewAGL undertook the projects together and the costs for GS are included with the costs for 5MS. ActewAGL provided us with a set of documents detailing the activities it undertook to comply with 5MS and GS regulatory requirements. ActewAGL has proposed to recover all the operating expenditure in 2023-24 and to spread the recovery of the capital expenditure equally over five years from 2023-24 to 2027-28. The resulting costs and pass-through values are presented in Table 3.1 below.

<sup>5</sup> AEMC 2017, Rule Determination: National Electricity Amendment (Five Minute Settlement) Rule 2017, November.

<sup>6</sup> AEMC 2017, Rule Determination: National Electricity Amendment (Five Minute Settlement) Rule 2017, November, pii.

<sup>7</sup> AEMC 2018, Rule Determination: National Electricity Amendment (Global Settlement and Market Reconciliation) Rule 2018, December.

<sup>8</sup> A GS 'soft start' occurred on 1 October 2021, followed by the full commencement on 1 May 2022.

**Table 3.1. 5MS and GS standing offer customer pass-through costs, \$2023-24**

	2023-24	2024-25	2025-26	2026-27	2027-28
<b>Standing offer customer opex</b>	389,575				
<b>Standing offer customer capex</b>	325,590	325,590	325,590	325,590	325,590
<b>5MS &amp; GS pass-through \$/MWh</b>	1.79	0.82	0.82	0.82	0.82

Source: ActewAGL and our calculations.

## Customer switching

On 19 December 2019, the AEMC made a final rule in relation to improving market processes that facilitate customers changing retailers.<sup>9</sup> The AEMC considers the rule changes in the long terms interest of consumers because they:

- simplify the Rules and in doing so increase transparency and certainty within the transfer process
- provide flexibility to AEMO and industry to determine the most effective and efficient customer switching process- now and into the future – through procedure changes.

ActewAGL has proposed to recover all the operating expenditure in 2023-24 and to recover the capital expenditure over 5 years from 2023-24 to 2027-28. The resulting costs and pass-through values are presented in Table 3.2.

**Table 3.2. Customer switching standing offer customer pass-through costs, \$2023-24**

	2023-24	2024-25	2025-26	2026-27	2027-28
<b>Standing offer customer opex</b>	66,956				
<b>Standing offer customer capex</b>	140,744	140,744	140,744	140,744	140,744
<b>Customer switching pass-through \$/MWh</b>	0.52	0.35	0.35	0.35	0.35

Source: ActewAGL and our calculations.

## Electricity Business to Business framework

ActewAGL is also seeking a pass-through to recover costs associated with meeting obligations set out in the electricity B2B framework. ActewAGL reports that in 2020 the Information Exchange Committee consulted on recommended process improvements to the B2B electricity procedures as required by the NER. The changes required to comply appear to be minor system changes. The total costs reported by ActewAGL are set out in Table 3.3.

<sup>9</sup> AEMC 2019, Rule Determination: National Electricity Amendment (Reducing Customers' Switching Times) Rule 2019, December.

**Table 3.3. B2B framework standing offer customer pass-through costs, \$2023-24**

	2023-24	2024-25	2025-26	2026-27	2027-28
<b>Standing offer customer opex</b>	8,118				
<b>Standing offer customer capex</b>	24,382	24,382	24,382	24,382	24,382
<b>B2B framework pass-through \$/MWh</b>	0.08	0.06	0.06	0.06	0.06

Source: ActewAGL and our calculations.

## Commissions' consideration

A regulatory change event is an event that occurs on or after 31 May 2020 and before 30 June 2024 by any ACT or Commonwealth 'Authority' that has the effect of varying the nature, scope, standard or risk of providing services to small customers, or the manner in which those services are provided. A regulatory change event may result from a decision, or passing of legislation or regulation, that took effect prior to 31 May 2020, but the material effect of the change being applied varies the nature, scope, standard or risk on or after 31 May 2020 and before 30 June 2024. A regulatory change event may include obligations in respect of:

- any customer hardship program;
- retailer of last resort events;
- environmental schemes including the LRET and SRES schemes and the Energy Efficiency Improvement Scheme; or
- changes in distribution or transmission charges.

We consider that the introduction of SMS and GS reforms satisfy the definition of a regulatory change event. The AEMC is a Commonwealth Authority, and the new rules varied the way services are provided to small customers. In particular, the SMS framework replaced the 30-minute settlement that was in place for nearly 2 decades and represents a substantial change to the supply of electricity markets, impacting ActewAGL as a retailer. The AEMC acknowledged that there will be significant one-off, and some ongoing, costs associated with the upgrades required to IT systems. The AEMC also considered it appropriate for the SMS and GS rule to be implemented simultaneously due to synergies between the two projects.

We also consider that customer switching regulatory obligations satisfy the definition of a regulatory change event. The reforms established a process that allows customers to transfer retailers within two days after the end of the cooling off period. Under the old arrangements, customers had to wait until the next periodic meter read, which meant up to 90 days for the transfer to occur.<sup>10</sup> Retailers had to adapt their IT systems to accommodate the changes and deliver training to staff.

We have reviewed the scope of process improvements to the B2B electricity procedures. We do not consider that the B2B changes impact the nature, scope, standard, risk and manner of providing services to small customers. The changes required to comply appear to be minor system changes and do not increase business-as-usual activities. Our retail operating costs include some allowance for compliance with regulatory obligations. We do not consider that these costs require explicit compensation under our cost

<sup>10</sup> Unless opted for a one-off special meter read.

pass-through framework. As such, we consider that the incremental cost changes due to improvements to B2B procedures are compensated through the annual retail operating costs CPI adjustment process.

## Timing of ActewAGL's application

The costs ActewAGL has included in its pass-through application are actual costs incurred during 2019-20, 2020-21 and 2021-22. These costs are new and were not included in commission's previous decisions. ActewAGL delayed applying to recover the costs until the 2023-24 price recalibration process, for the following reasons:

- the proposed pass-through amount is based on actual costs, rather than forecasts
- the recovery of the Power of Choice pass through was completed in 2022-23. ActewAGL postponed new pass-through applications to minimise price volatility.

## Assessment of the pass-through amount for 5MS, GS and CS

We examined the information provided by ActewAGL to assess the prudence and efficiency of its proposed pass-through costs.

### Prudence

Under our approach, ActewAGL's expenditure will be deemed prudent if it is reasonably necessary to meet the new regulatory obligations.

ActewAGL was required to undertake this expenditure to meet obligations arising from 5MS, GS and CS reforms. As such, the decision to undertake expenditure is considered a prudent decision.

### Efficiency

We assessed the processes and practices undertaken by ActewAGL to meet its regulatory requirements, and whether the lowest-cost option was adopted in meeting its obligations.

For this assessment, we:

- reviewed the documentation that ActewAGL submitted in support of its proposed pass-through costs
- met with ActewAGL on 10 May 2023 to discuss our initial queries in relation to the reviewed material, and
- made two requests for additional information from ActewAGL on 16 May 2023 and 22 May 2023 on its proposed pass-through costs.

In response, ActewAGL provided us with details of its decision-making process to select a vendor for its requirements, its reasons for attributing all implementation costs to a consequence of a pass-through event and the costs for large customers and non-ACT customers.

ActewAGL advised that changes it introduced for compliance with 5MS also facilitate the same reforms for non-ACT and large customers. The changes required for the CS reforms also were required for NSW customers. ActewAGL proposed to re-calculate the share of costs relevant to standing offer customers to reflect this.

ActewAGL provided us with an updated cost-pass through amount on 19 May 2023. For this update, ActewAGL used customer numbers to apportion the costs between different types of customers. This is a

departure from the approach used in the original application, where the allocation was based on energy volumes (MWh). ActewAGL's argued that because the cost of system and process changes is a fixed cost, customer usage has no bearing on the costs associated with the new regulatory obligations.

We consider that the cost-allocation methodology based on energy volumes provides the most balanced measurement of customer segments and avoids the potential to discriminate in favour of large customers. It is also consistent with the calculation of costs within our cost-index model, as well as with the commission's past decisions relating to cost pass through applications.

For this decision, we amended ActewAGL's cost pass-through application to allocate the costs relevant to standing offer customers based on energy volumes rather than customer numbers. As a result, the share of costs to be recovered from standing offer customers has reduced from 25% (as per May 2023 update) to 14%. This led to a reduction of the pass-through amount from \$2.40 per MWh to \$0.93 per MWh.

**Table 3.4. Other regulatory change events pass-through costs, \$2023-24**

	Total costs	Costs allocated to Standing Offer customers (26% of total)	Costs allocated to Standing Offer customers (14% of total)	2023-24 Pass-through ActewAGL proposal (\$/MWh)	2023-24 Pass-through ICRC adjustment (\$/MWh)
<b>5MS/GS</b>	5,793,566	1,473,579	790,822	<b>1.79</b>	<b>0.72</b>
<b>CS</b>	2,213,093	562,895	302,087	<b>0.52</b>	<b>0.21</b>
<b>B2B</b>	373,395	94,972	0	<b>0.08</b>	<b>0</b>
<b>Total</b>	<b>8,380,054</b>	<b>2,131,466</b>	<b>1,092,909</b>	<b>2.40</b>	<b>0.93</b>

Source: ActewAGL and our calculations.

## Timing of pass-through cost recovery

We accepted ActewAGL's request to pass-through the capital costs associated with the regulatory pass-through event over their estimated asset life of five years, consistent with established regulatory practice. For operating expenditure, the total costs are recovered in full in 2023-24.

## Market intervention payments

Following a significant period of volatility in the wholesale electricity market, the AEMO simultaneously suspended all regional spot markets from 15 June 2022 to 24 June 2022 to maintain orderly operation of the NEM. In addition, over the course of 2022-23 AEMO activated the Reliability and Emergency Reserve Trader (RERT) mechanism on a number of occasions, including during administered pricing events.

Costs associated with market suspension payments and activation of the RERT mechanism are recovered by AEMO through retailers, which pass on these costs to customers. In 2022-23, ActewAGL incurred costs associated with:

- pricing compensation claims relating to the June 2022 administered pricing event; and
- costs associated with the AEMO exercising its RERT function.

Costs associated with these events are not accounted for in the commission's annual price recalibration process and therefore ActewAGL is seeking to recover costs for standing offer customers through the cost pass through application process.

The administered pricing compensation claims are determined by the NER and the AEMO compensation guidelines and are designed to maintain the incentive for participants to supply services while administered pricing is effective. The process is run independently by the AEMC. ActewAGL has provided the commission with the invoices from AEMO setting out the direction and administered price cap compensation amounts. The total amount for all customers within the region is \$2,609,866.

The RERT mechanism is used by AEMO to maintain system reliability and security using reserve contracts in the event that a critical shortfall in reserves is forecast. ActewAGL provided the commission with the AEMO invoices setting out the RERT amounts for 2022. The total RERT payment was \$4,011,443.

ActewAGL has adopted the same allocation methodology that the commission used for the other regulatory change event pass-throughs to allocate the market intervention payments to standing offer customers. First, ActewAGL allocates costs to ACT mass market customers based on MWhs using data for the AEMO weeks in which the market was impacted. Second, ActewAGL allocates ACT mass market costs between ACT market offer customers and standing offer customers based on MWhs. The commission updated the data used for the second step of this allocation based on information provided by ActewAGL for the year ending 31 March 2023 for consistency with the calculation of the other pass-throughs.

Table 3.5 below shows the total costs associated with market intervention payments and the costs allocated to ACT mass market customers and standing offer customers. The resulting pass-through, converted to a cost per MWh for inclusion in the cost stack is \$3.01 per MWh.

**Table 3.5. Market intervention pass-through costs, \$2023-24**

	Total costs	Costs allocated to ACT mass market customers (47% of total costs)	Costs allocated to Standing Offer customers (38% of ACT mass market)	Pass-through \$/MWh
<b>Administered pricing compensation</b>	2,609,866	1,216,743	461,692	1.19
<b>RERT</b>	4,011,443	1,870,171	709,635	1.82
<b>Total</b>	6,621,309	3,086,913	1,171,327	3.01

Source: ActewAGL and our calculations.

The commission agrees with ActewAGL's assessment that the costs associated with the market intervention payments are not accounted for in the commission's annual recalibration process and should be treated as a regulatory change event pass-through. We have reviewed the settlement invoices provided by ActewAGL and are satisfied that the amounts align with those set by AEMO. The allocation methodology used to determine the proportion of costs to be recovered from standing offer customers is also reasonable and consistent with the approach the commission uses for other cost components. The resulting pass-through amount of \$3.01 per MWh for market intervention payments has been included in the cost stack for the 2023-24 price recalibration.

The commission also notes ActewAGL's statement that it is likely to continue incurring additional costs related to the June 2022 administered pricing event and would seek to pass these costs through to customers in future price recalibrations.

## Our decision on the proposed pass-throughs costs

While we considered the proposed pass-through costs for SMS, GS, CS and B2B are reasonable, we did not accept ActewAGL's proposal to allocate the costs relevant to standing offer customers based on customer numbers rather than energy volumes. We amended ActewAGL's cost pass-through application as follows:

- We used energy volumes to allocate the costs between different customer segments.
- We updated the data used for this allocation based on information provided by ActewAGL for the year ending 31 March 2023.

We accepted ActewAGL's proposed pass-through amount for market intervention payments because it is consistent with AEMO settlement statements and the allocation methodology used to determine the proportion of costs to be recovered from standing offer customers is reasonable. We updated the data used to allocate the costs to standing offer customers based on information provided by ActewAGL for the year ending 31 March 2023 for consistency with the calculation of the other pass-throughs.

Table 3.6 summarises the difference between ActewAGL's updated pass-through amount and our decision.

**Table 3.6. Our decision on standing offer customer pass-through costs, \$2023-24**

ActewAGL proposal	2023-24	2024-25	2025-26	2026-27	2027-28
Regulatory reform costs	955,365	490,716	490,716	490,716	490,716
Market intervention costs	1,171,327				
<b>Total pass-through \$/MWh</b>	<b>5.10</b>	<b>1.23</b>	<b>1.23</b>	<b>1.23</b>	<b>1.23</b>
Our decision	2023-24	2024-25	2025-26	2026-27	2027-28
Regulatory reform costs	361,741	182,792	182,792	182,792	182,792
Market intervention costs	1,171,327				
<b>Total pass-through \$/MWh</b>	<b>3.94</b>	<b>0.47</b>	<b>0.47</b>	<b>0.47</b>	<b>0.47</b>

We determined an amount of \$2,264,236 as total pass-through costs to be recovered over five years.

The total approved pass-through amount for 2023-24 is \$1,533,068.

Our decision adds \$3.94 per MWh to the cost-index model, which translates into 1.42 percentage points to the average price increase for 2023-24 compared to the 1.84 percentage point increase implied by ActewAGL's proposal.

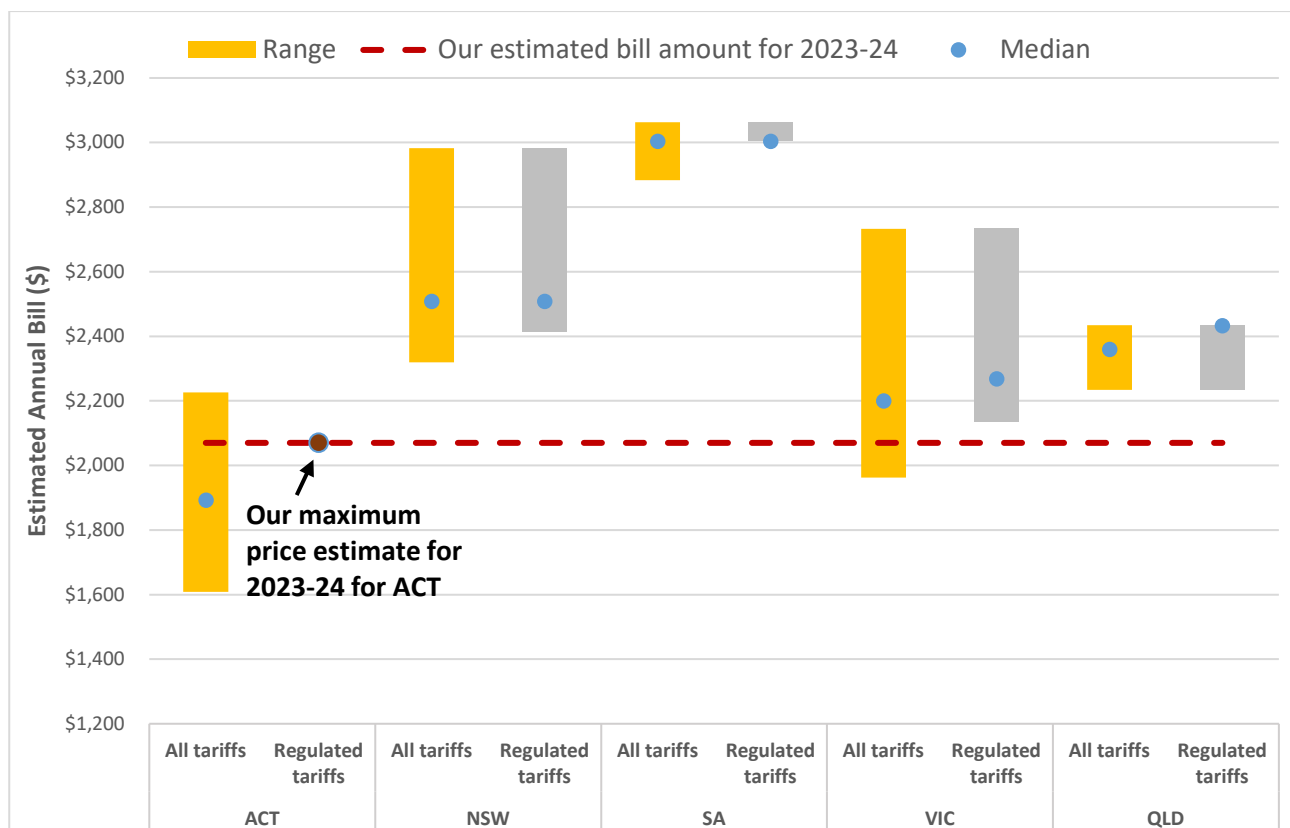


## 4. Inter-jurisdictional comparison of electricity prices

Figure 4.1 and Figure 4.2 compare the average annual bill amount in 2023–24 for residential customers on standing offers consuming 6,500 kWh.

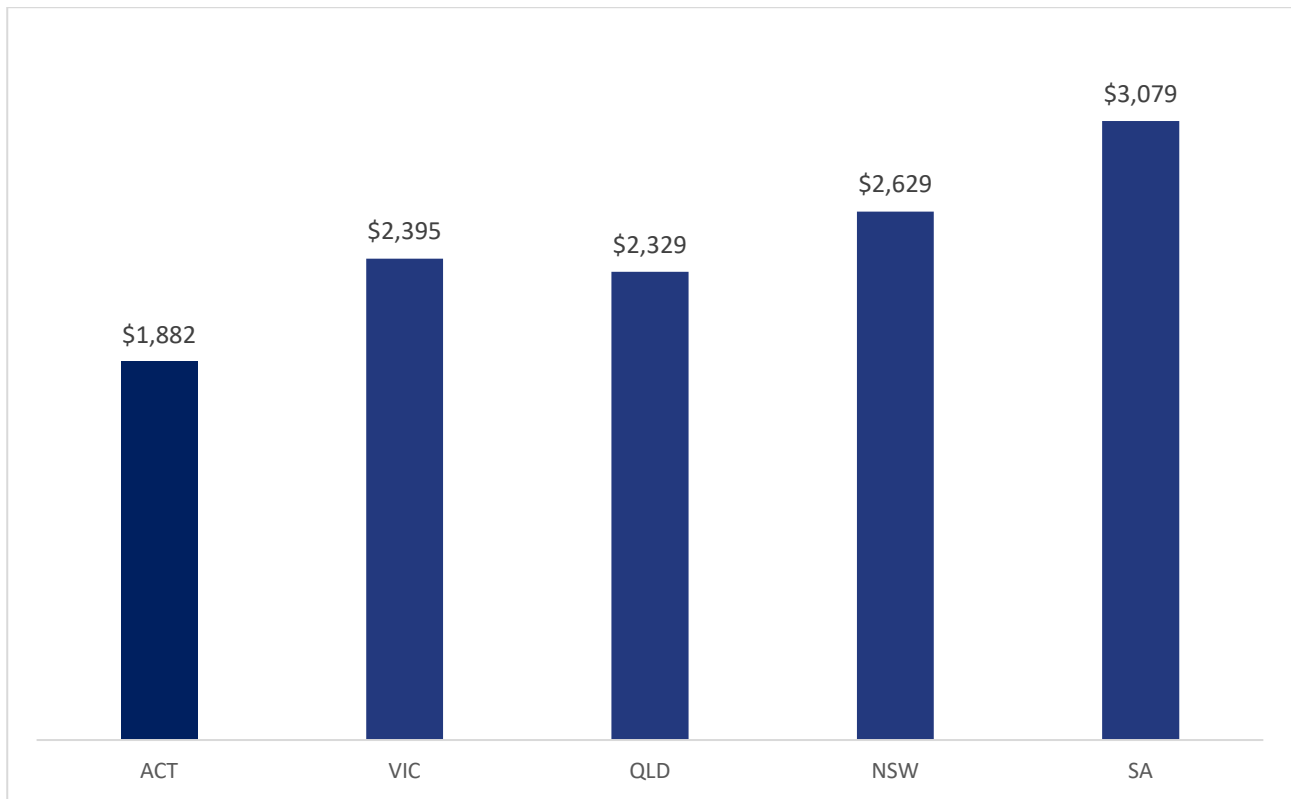
The average annual bill for Canberrans on standing offers will be the lowest compared to the average standing offer bills faced by customers in New South Wales, Victoria, Queensland and South Australia. The Tasmanian figures were not available for the year 2023–24. The maximum average standing offer bill amount for the ACT reflects the 4.15% increase in ActewAGL's regulated basket of tariffs.

**Figure 4.1. Estimated annual bills based on estimated prices as at 1 July 2023 for interjurisdictional customers using 6,500 kWh**



Source: Our calculations using OTTER 2022, ESC 2023, AER 2023b and AER 2023c.

Note: Bill estimates include GST. ACT maximum price estimate for 2023-24 is based on our pricing model estimate of the cost of providing electricity (in \$/MWh)

**Figure 4.2. Maximum annual residential standing offer electricity bills as at 1 July 2023 using 6,500 kWh**

Source: Our calculations using ESC 2023, and AER 2023b.

Note: Bill estimates are based on annual usage of 6,500 kWh and exclude GST. Data on residential supply charge and usage charge used to estimate the bill are from AER's 2023-24 DMO for NSW, SA and SE QLD, and ESC's 2023-24 VDO for Victoria. NSW and Victoria bill estimates are the weighted average of the bills across the distribution zones within those states, weighted by customer numbers in the corresponding distribution zone. ACT bill is based on our pricing model estimate of the cost of providing electricity (in \$/MWh).

Care needs to be taken in making interstate comparisons as the regulated price increases mentioned only apply to standing offer tariffs. Many customers may pay less if they shop around for better deals on market offers.

We implemented an industry code to make it easier for consumers in the ACT to shop around for better offers. Details on the ACT Retail Electricity (Transparency and Comparability) Code are at [www.icrc.act.gov.au/energy/act-retail-electricity-transparency-and-comparability-code](http://www.icrc.act.gov.au/energy/act-retail-electricity-transparency-and-comparability-code).

## 5. Annual price recalibration process

This chapter explains how we reset regulated prices for 2023–24. We also describe the information we received from ActewAGL for this price recalibration.

### 5.1 The assessment process

Clause 8.1 of the 2020–24 price direction sets out the assessment process for an annual recalibration. The dates set out relate to the year of the relevant assessment process. The assessment process occurs before the relevant regulatory year in which the weighted average price change applies.

The assessment process occurs as follows:

- (a) On or before 8 May, ActewAGL must submit to the Commission the following information:
  - (i) Calculation of costs associated with achieving environmental objectives for the year in question, including Large-scale Renewable Energy Target (LRET), Small-scale Renewable Energy Scheme (SRES) and ACT Energy Efficiency Improvement Scheme costs, and any proposed adjustments.
  - (ii) Calculation of costs associated with smart meters, both the forecast and the actual from the previous year.
  - (iii) Full accounting of all proposed pass-through event costs that may be claimed under clause 9 and its sub-clauses.
- (b) ActewAGL must submit to the Commission for verification the updated network cost allowance for the regulated customer load as soon as Evoenergy's 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 30 April.
- (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 may change. The Commission will provide its determination to ActewAGL 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 must provide the Commission with its proposed schedule(s) of standing offer prices including the associated weighted average price change calculations.
- (f) ActewAGL must demonstrate to the Commission that the changes of weighted average price of every standing offer tariff comply with the upper bound side constraint set out in clause 6.
- (g) Subsequent to clauses 8.1(e) and (f) 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).

Clause 8.1.1 of the 2020–24 price direction sets out that in the event the AER does not publish approved network charges in time to allow us to determine  $Y^t$  for the approved standing offer prices to apply on 1 July in a regulatory year, ActewAGL's schedule of standing offer prices as of 30 June in the same calendar year will be the standing offer prices until the new standing offer prices are approved.

## 5.2 Calculating the value of the Y factor

The Y factor ( $Y^t$ ) is the maximum average percentage change that ActewAGL 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 us to determine  $Y^t$  to be the percentage change in the cost-index calculated from the components listed in Table 5.1.

**Table 5.1. Components of the cost-index model, 2023–24**

Component	Method
Wholesale energy purchase cost (\$/MWh)	As determined by us using our energy purchase cost model discussed in section 8.4 of the price direction.
Volatility allowance (\$/MWh)	The volatility allowance is \$0.302/MWh in each year of the regulatory period.
National green scheme costs (\$/MWh)	As determined by us using the method described in section 8.5 of the price direction.
Energy losses (\$/MWh)	As determined by us at the time of the recalibration using our energy loss formula and information from the AEMO. The method is described in section 8.6 of the price direction.
NEM fees (\$/MWh)	Previous year's value adjusted by the change in CPI.
Network costs (\$/MWh)	As determined and approved by the AER and applied by ActewAGL to the standard retail contract customer load, and subsequently verified by us. The allowance is subject to the revised method as outlined in our Form of Price Control Review (ICRC, 2021)
Retail operating costs (\$/MWh)	Adjust previous year's value by the change in CPI and convert this to a per MWh allowance based on customer numbers and energy usage at each annual price recalibration exercise.
ACT Energy Efficiency Improvement Scheme	Estimates from ActewAGL for the 2022–23, 2023–24 and 2024–25 year as relevant, subject to verification and a prudence and efficiency assessment by us.
Smart meter costs	Estimates from ActewAGL for the 2022–23, 2023–24 and 2024–25 year as relevant, with any adjustment required to account for the difference between forecast and actual costs in the previous year.
Cost pass-through (\$/MWh)	Cost pass-through verified by us in current dollars as adjusted by the change in CPI.
Retail margin (%)	Determined by us as 5.6 per cent of cost components (equivalent to 5.3 per cent of the total cost stack) for the 2020–24 regulatory period.

Source: ICRC 2020a.

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

## 5.3 Calculation of the change in CPI

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

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

We have calculated the change in the consumer price index to be applied in 2023–24 as 7.07%:

$$\Delta CPI_{2023-24} = \frac{126.1 + 128.4 + 130.8 + 132.6}{118.8 + 119.7 + 121.3 + 123.9} - 1 = 0.0707$$

## 5.4 Information we received from ActewAGL

### Submission

ActewAGL submitted the information on 8 May 2023 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.

### Customer numbers and electricity usage

ActewAGL provided customer numbers and energy usage estimates for 2022–23 on 6 May 2023. This data is required for calculating the retail operating costs.

### Network costs

The network cost allowance for 2022–23 is based on Evoenergy's annual pricing proposal approved by the AER on 4 May 2023.

# Appendix 1 Efficient costs for 2023–24

This appendix presents our calculation of the efficient costs of supplying electricity to small customers on ActewAGL’s regulated tariffs using our pricing model and methodology set out in the 2020–24 price direction.

## A.1.1 Pricing model

Our pricing model determines the maximum average percentage change that ActewAGL can apply to its suite of regulated retail tariffs on an annual basis. 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. Transmission and distribution costs are regulated by the AER and ACT Government scheme costs are passed through in the network costs approved by the AER. For the first time, network costs also include a rebate for the negative reasonable cost determination made by the ACT Government for the Large-scale Feed-in Tariff (LFIT) scheme.
- Retail costs, which comprise retail operating costs, EEIS costs and the retail margin.

Our estimation of each of these cost categories and their components are discussed below.

## A.1.2 Estimation of major cost categories

### A.1.2.1 Wholesale energy purchase cost

To estimate energy purchase cost, we need estimates of contract position and contract prices (forward prices). The contract position refers to the number of base swap, peak swap and base cap contracts used in the hedging strategy.

#### Contract position

We determine the contract position using the heuristic specified in the 2020–24 price investigation.<sup>11</sup> We applied the heuristic to the half-hourly ACT load data from 1 January 2018 to 31 December 2022.

On 1 October 2021, the 5-minute settlement arrangement commenced to align financial settlement and operational dispatch at 5-minute intervals. From 1 October 2021, AEMO publishes load data on a 5-minute basis. That means, for the 2023-24 reset, we have 5 quarters of 5-minute data and 11 quarters of 30-minute data. We convert the 5-minute interval data to 30-minute intervals as follows:

<sup>11</sup> For more details about the heuristic, see our final decision for 2020–24 price investigation.

- Map six 5-minute intervals to a corresponding 30-minute interval
- Add the load volumes for the corresponding six 5-minute intervals. This sum represents the volume of electricity demanded and supplied over a 30-minute interval.

The resulting contract positions are shown in Table A1.1.

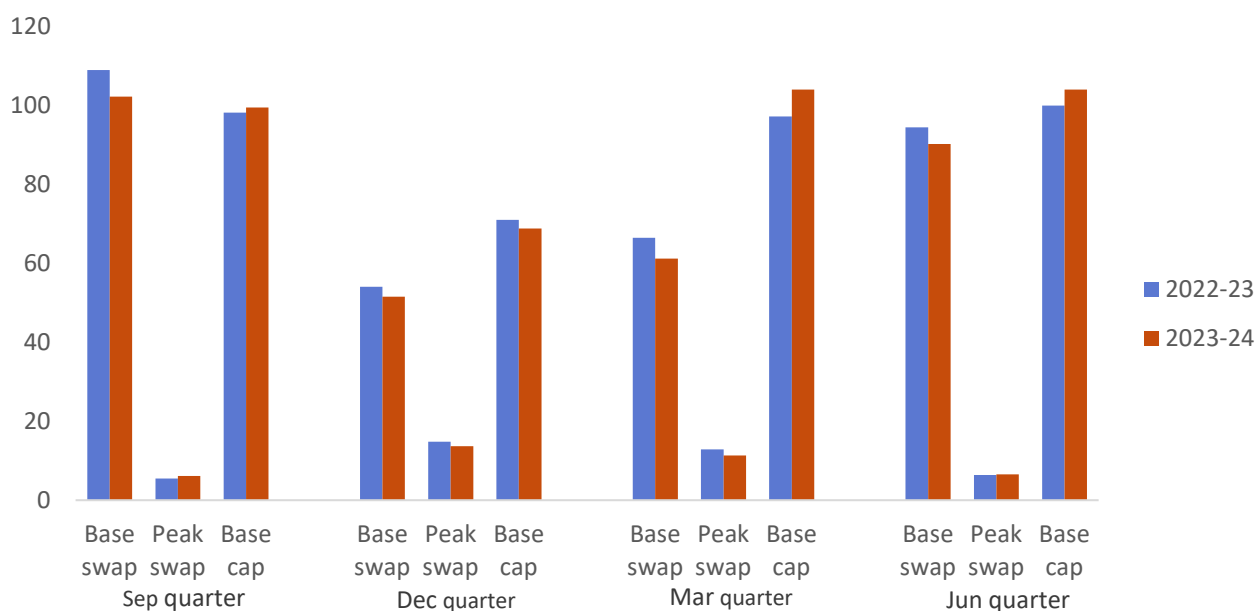
**Table A1.1. Quarterly contract position (MW per half-hour), 2022-23 and 2023-24**

Contract type	2022-23				2023-24			
	Sep quarter	Dec quarter	Mar quarter	Jun quarter	Sep quarter	Dec quarter	Mar quarter	Jun quarter
<b>Base swap</b>	108.97	54.06	66.46	94.43	102.28	51.55	61.20	90.22
<b>Peak swap</b>	5.53	14.80	12.90	6.40	6.15	13.83	11.56	7.04
<b>Base cap</b>	98.15	70.98	97.22	99.95	99.49	68.87	103.82	103.52

Source: Our estimation using AEMO data.

Figure A1.1 shows that the quarterly positions for base swap contracts in 2023–24 are lower compared with 2022-23. The base cap positions for 2023-24 are generally higher than for 2022-23, except the December quarter. The peak swap positions for 2023-24 are higher in September and June quarters and lower in December and March quarters.

**Figure A1.1. Quarterly contract position (MW per half-hour), 2022-23 and 2023-24**



Source: Our estimation using AEMO data.

## Contract prices

To estimate contract prices, we use the 23-month average of forward prices from 1 June 2021 to 30 April 2023 from the ASX Energy. These prices are published daily for each quarter. We use base swap, peak swap and base cap contract prices.

The contract prices used in 2023-24 price recalibration are shown in Table A1.2.

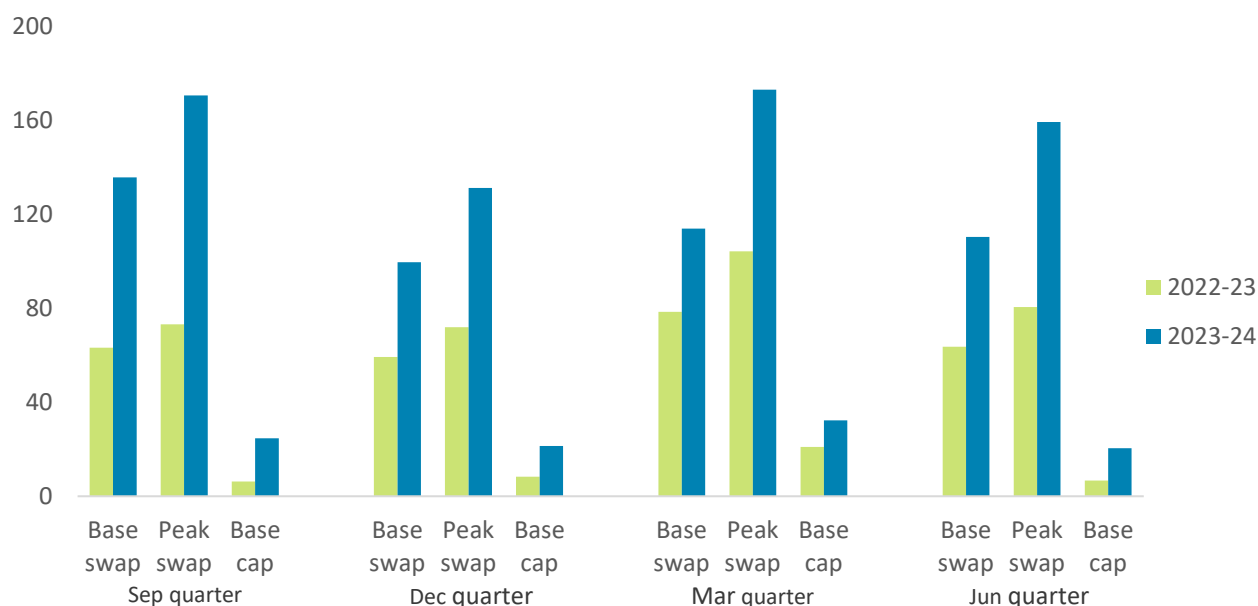
**Table A1.2. Quarterly contract prices (\$ per MWh), 2022-23 and 2023-24**

Contract type	2022–23				2023–24			
	Sep quarter	Dec quarter	Mar quarter	Jun quarter	Sep quarter	Dec quarter	Mar quarter	Jun quarter
<b>Base swap</b>	63.19	59.24	78.41	63.56	135.70	99.62	113.81	110.32
<b>Peak swap</b>	73.22	71.99	104.22	80.49	170.47	131.11	172.94	159.25
<b>Base cap</b>	6.28	8.30	21.02	6.65	24.63	21.46	32.34	20.51

Source: Our calculation using ASX data.

The contract prices for 2023-24 are significantly higher than those for 2022-23 (table A1.2 and figure A1.2). This is also evident in the daily forward prices shown in figure A1.3. Higher forward prices led to a higher energy purchase cost estimate for 2023-24.

**Figure A1.2. Quarterly contract prices (\$ per MWh), 2022-23 and 2023-24**



Source: Our calculation using ASX data.



**Figure A1.3. Daily forward prices (\$ per MWh), July 2021 to June 2023**

Source: Our calculation using ASX data.

## Energy purchase cost estimate for 2023-24

Our approach to estimating energy purchase cost involves four steps:

- determining the appropriate contract position
- determining contract prices
- developing a half-hourly profile of load and spot prices, and
- calculating settlement payments and difference payments.

We used the contract prices and the contract position described above.

As noted above, for the 2023-24 reset, we have 5 quarters of 5-minute data and 11 quarters of 30-minute data. To get the half-hourly profile of load and spot prices we convert the 5-minute interval data to 30-minute intervals as follows:

- Map six 5-minute intervals to a corresponding 30-minute interval
- Add the load volumes for the corresponding six 5-minute intervals. This sum represents the volume of electricity demanded and supplied over a 30-minute interval

- Take a simple average of spot prices for the corresponding six 5-minute intervals. This average represents the spot price traded over a 30-minute interval.<sup>12</sup>

This resulted in an energy purchase cost of \$159.62 per MWh for 2023–24. This is 90.32% higher than the cost for 2022–23 of \$83.87 per MWh. The increase in energy purchase costs mainly reflects higher forward electricity prices.

### A.1.2.2 National green scheme costs

We calculate the costs of complying with the national green scheme requirements using publicly available data and the equations in chapter 3 of the 2020–24 price investigation report. Key data inputs used in the calculations are in Table A1.3.

**Table A1.3. National green scheme costs components, 2023 and 2024**

National green scheme cost component	2023	2024
<b>Parameters common for LRET and SRES</b>		
Half-yearly load weights	0.528	0.472
Cost of debt for half year (%)	1.00%	1.00%
<b>Large-scale renewable energy target (LRET) data</b>		
Renewable power percentage (RPP) (%)	18.96%	18.96%
Average Large-scale generation certificate (LGC) spot price (\$/certificate)	\$41.94	\$55.85
<b>Small-scale renewable energy scheme (SRES) data</b>		
Small-scale technology percentage (STP) (%)	16.29%	17.99%
Average small-scale technology certificate (STC) spot price (\$/certificate)	\$39.28	\$40.00

Source: Our calculation using data from Clean Energy Regulator (CER), ICAP, and ActewAGL.

### Large-scale renewable energy target (LRET) cost

The LRET cost for 2023–24 is calculated using two components: the renewable power percentages for 2023 and 2024 calendar years, and the estimated average large-scale generation certificate (LGC) prices in these two years. Half-hourly load weights are calculated using ActewAGL’s load data to convert calendar year values to financial years.

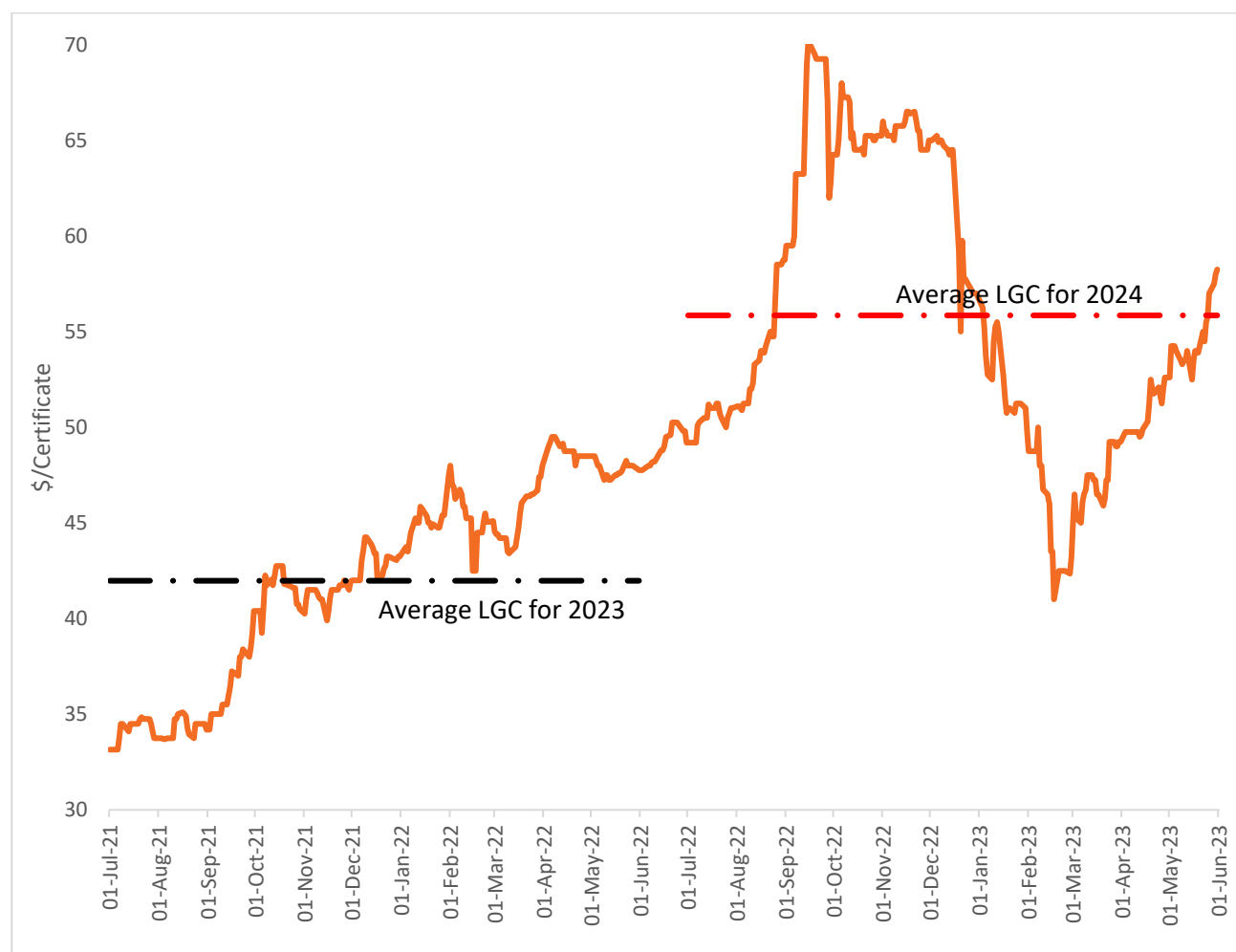
Renewable power percentages for each calendar year are published by the Clean Energy Regulator. We estimated the renewable power percentages for both calendar years using the Clean Energy Regulator’s formula and the data for energy savings target. The estimated renewable power percentages for both 2023 and 2024 is 18.96%.

<sup>12</sup> Our approach is consistent with the method AEMO used to calculate spot price for a 30-minute trading interval as the average of the six 5-minute dispatch interval prices. See AEMC’s fact sheet on how the spot market works at: <https://www.aemc.gov.au/sites/default/files/content/d6cc8e9d-6a9f-4648-bef7-b25cad5df460/5-Fact-sheet-How-the-spot-market-works.pdf>.

The LGC price for 2023 is \$41.94 per certificate, which is the 11-month average price to 31 May 2022. This increases to \$42.35 per certificate when holding costs are applied. The estimated LGC price for 2024 is \$55.85, which has been calculated as the 11-month average of LGC prices from 1 July 2022 to 31 May 2023. This increases to \$56.41 per certificate when holding costs are applied.

As figure A1.4 shows, the average LGC prices for 2024 is higher than the average LGC prices for 2023.

**Figure A1.4. LGC spot prices (\$ per certificate), July 2021 to June 2023**



Source: ICAP data.

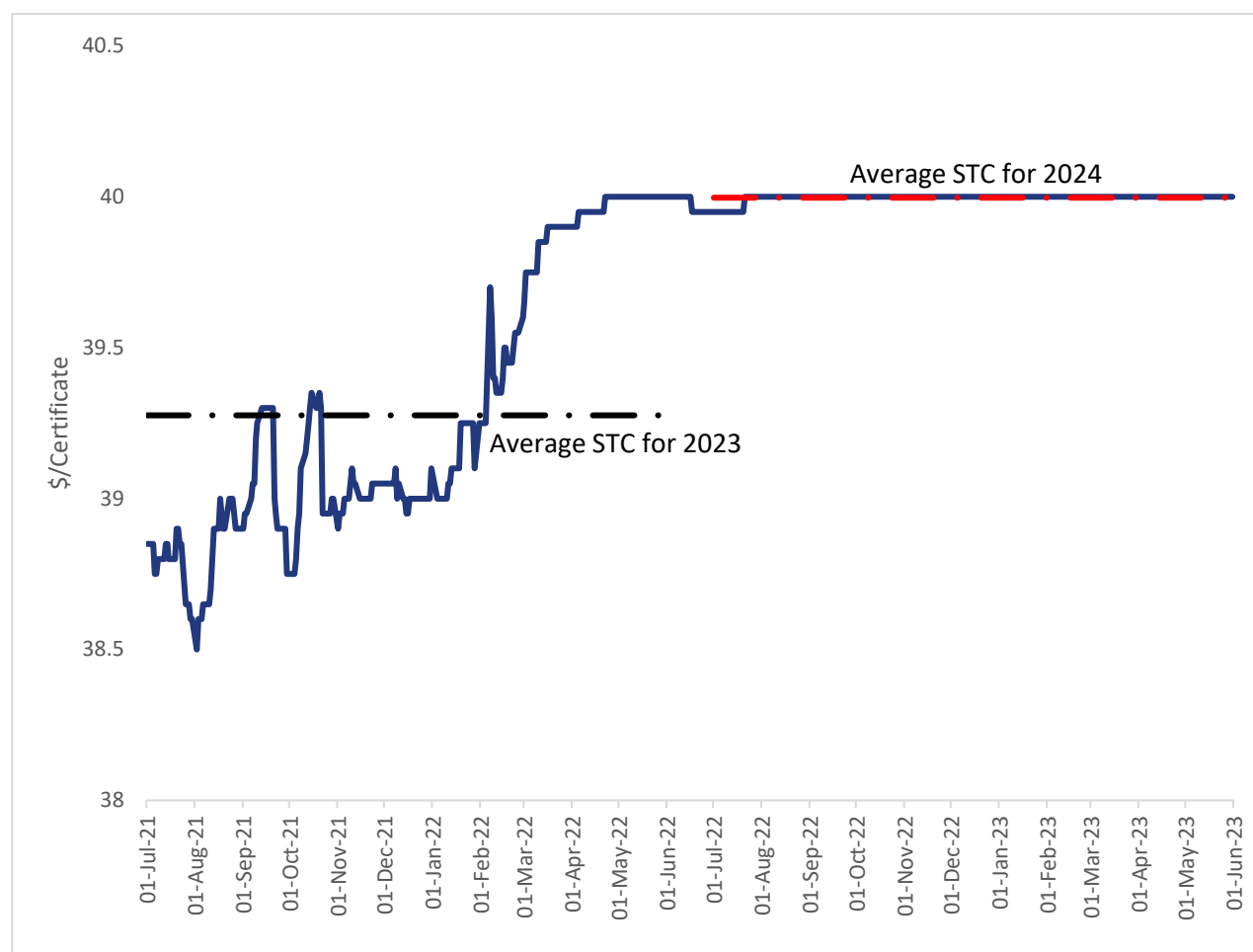
## Small-scale renewable energy scheme (SRES) cost

The small-scale technology percentages are the estimates published by the Clean Energy Regulator. We use these estimates for both 2023 and 2024 calendar years. These estimates for 2023 and 2024 are 16.29% and 17.99% respectively.

The STC price for 2023 is \$39.28 per certificate, which is the 11-month average of STC prices until 31 May 2022. This increases to \$39.67 per certificate when holding costs are applied. The estimated STC price for 2024 is \$40.00, which is calculated as the 11-month average of STC prices from 1 July 2022 to 31 May 2023. This increases to \$40.40 per certificate when holding costs are applied.

As figure A1.5 shows, the average STC prices for 2024 is higher than the average STC prices for 2023.

**Figure A1.5. STC spot prices (\$ per certificate), July 2021 to June 2023**



Source: ICAP data.

## Cost adjustment

We add a cost adjustment to the estimates described above to take any differences between the actual and estimated values for the renewable power percentage and small-scale technology percentage into account. This cost adjustment for 2023–24 is negative \$1.07 per MWh.

## National green scheme cost estimate for 2023–24

Our estimate of the total green scheme cost allowance for 2023–24 is \$15.06 per MWh using the cost components described above. Table A1.4 shows our estimate of the total national green scheme cost and its components. The estimated green scheme cost for 2023–24 is 17.48% lower than the allowance estimated for 2022–23.

**Table A1.4. National green scheme cost (\$/MWh), 2022–23 and 2023–24**

National green scheme cost component (\$/MWh)	2022–23	2023–24
LRET	\$7.58	\$9.29
SRES	\$9.77	\$6.84
Cost adjustment	\$0.91	-\$1.07
<b>Total green scheme cost</b>	<b>\$18.25</b>	<b>\$15.06</b>

Source: Our calculations.

Note: All estimated annual bills and changes in dollars are rounded to the nearest integer.

### A.1.2.3 Energy losses

We determine the cost of energy losses by applying AEMO's energy loss factors to our estimates of the energy purchase cost, green scheme costs and NEM fees. For 2023–24, our estimate of the cost of energy losses is \$0.17 per MWh, which is lower than \$1.09 per MWh in 2022–23. The main reason for the fall in energy losses is the lower marginal loss factor (transmission) for 2023–24.

### A.1.2.4 Volatility allowance

In our 2020–24 price investigation, we set the volatility allowance at \$0.30 per MWh for the regulatory period (ICRC 2020b, p.28). We have applied a volatility allowance of \$0.30 per MWh for 2023–24.

### A.1.2.5 National electricity market (NEM) fees

Our final decision in 2020–24 price investigation was to determine NEM fees for the first year of the regulatory period (which is 2020–21) using cost estimates reported by AEMO (published in its final budget and fees 2019–20) and index this estimated cost by the consumer price index (CPI) for subsequent years.

Our estimated NEM fee cost for 2023–24 is \$1.41 per MWh which resulted from indexing the estimated NEM fees cost for 2022–23 (which was \$1.32 per MWh) by the CPI increase of 7.07%.

### A.1.2.6 Network costs

In our pricing model, network costs include the costs of transmission, distribution, basic metering, and ACT Government scheme costs. These costs are charged by Evoenergy, the owner and operator of the ACT electricity network and are regulated by the AER.

As discussed in section 3.1, the AER released the approved network charges for the ACT for 2023–24 on 4 May 2023, which excludes the LFiT costs of negative \$68.45 million.

To return the LFiT costs to ACT customers, Evoenergy applied a separate, downwards adjustments to AER's approved network charges for 2023–24. This reduced its network cost allowance by \$23.14 per MWh, to \$69.57 per MWh for 2023–24.

We examined this proposal and determined the \$69.57 per MWh as the network cost allowance associated with standing offer customers for 2023–24. This allowance is 48.14% lower than the allowance in 2022–23 (Table A1.5).

**Table A1.5. Network costs for standing offer customers (\$/MWh), 2022–23 and 2023–24**

Network cost component (\$/MWh)	2022–23	2023–24 (incl. LFiT)
Distribution use of system cost	\$61.36	\$61.25
Transmission use of system cost	\$21.24	\$16.96
ACT government scheme cost	\$45.27	-\$15.23
FiT small and medium scale costs	\$5.76	\$5.38
FiT large-scale costs	\$36.13	-\$23.14
Other ACT government scheme costs	\$3.38	\$2.53
Metering costs	\$6.27	\$6.59
<b>Total Network costs</b>	<b>\$134.14</b>	<b>\$69.57</b>

Source: Our calculations using approved Evoenergy network prices and ActewAGL data.

Note: All numbers are rounded to two decimal places.

In accordance with our decision in the form of price control review, we calculated the weighted average price change in the network cost between last year and this year using the latest weights only. The weighted average price change is then applied to last year's network cost to calculate this year's network cost allowance. For details about this change see ICRC (2021).

### A.1.2.7 Retail operating cost

Our estimated retail operating cost for 2023–24 is \$17.71 per MWh. We estimated the 2023–24 retail operating cost by adjusting the 2022–23 per customer allowance of \$133.55 by the change in the 2023–24 CPI of 7.07%. This adjustment takes the allowance per customer to \$143.00 for 2023–24.

This value is then converted into an allowance per MWh for retail operating costs using customer numbers and energy usage information we received from ActewAGL for the year to 31 March 2023. This converts to an allowance of \$17.71 per MWh for 2023–24, representing a 11.25% increase from the 2022–23 cost allowance of \$15.92 per MWh. The increase reflects changes in the number of standing offer customers (which determines the total retail operating cost allowance) and energy usage (which determines the allowance on a dollar per MWh basis). However, the increase in retail operating cost is higher than CPI increase, which is mainly because standing offer energy usage fell at a faster rate than the fall in standing offer customer numbers.

### A.1.2.8 Energy efficiency improvement scheme (EEIS) cost

Our estimated allowance for 2023–24 EEIS cost is \$2.90 per MWh. This is 4.51% lower than the 2022–23 EEIS cost of \$3.04 per MWh.

To estimate the EEIS cost for 2023–24, we used information we received from ActewAGL. The energy savings target increased to 14.6% in calendar year 2023 (from 12.5% that applied in 2022). The EEIS costs are forecast to be largely the same as the costs incurred in 2022–23.

We are satisfied that ActewAGL has undertaken a robust expenditure decision making process to meet its EEIS compliance requirements and that its proposed costs are below the cost ceiling we determined based on the scheme’s penalty rate for non-compliance.

### A.1.2.9 Smart meter costs

The smart meter cost for 2023–24 is \$3.46 per MWh. This is based on ActewAGL’s smart meter costs for the 12 months to 31 March 2023.

### A.1.2.10 Market intervention payments costs

We allow ActewAGL to recover \$1.17 million from standing offer customers in 2023–24 for market intervention payments, resulting in a pass-through amount of \$3.01 per MWh.

### A.1.2.11 5-Minute settlement, global settlement and customer switching costs

We allow ActewAGL to recover \$0.36 million for 5MS, GS and customer switching costs from standing offer customers in 2023–24, resulting in a pass-through amount of \$0.93 per MWh.

### A.1.2.12 Retail margin

In our 2020–24 price investigation, we decided to apply a retail margin of 5.6% throughout the regulatory period. We calculated the \$/MWh retail margin by multiplying this rate by the total \$/MWh electricity cost in our cost stack. This generated a retail margin of \$15.35 per MWh for 2023–24.

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