ICRC
independent competition and regulatory commission

PRICE RECALIBRATION

Retail electricity price recalibration 2022–23: standing offer prices for the supply of electricity to small customers

Report 3 of 2022, June 2022

The Independent Competition and Regulatory Commission is a Territory Authority established under the *Independent Competition and Regulatory Commission Act* 1997 (the ICRC Act). We are 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 our outcomes.

We have responsibility for a broad range of regulatory and utility administrative matters. We are responsible 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

We are responsible for managing the utility licence framework in the ACT, established under the *Utilities Act 2000* (Utilities Act). We are responsible for the licensing determination process, monitoring licensees' compliance with their legislative and licence obligations and determination of utility industry codes.

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 2022–23, in line with the price direction.

Our price recalibration for 2022–23

The price recalibration (reset) will result in the price of ActewAGL's basket of standing offer tariffs falling, on average, by 1.25% in 2022-23. This is equivalent to a real decrease of 4.93% after excluding inflation.

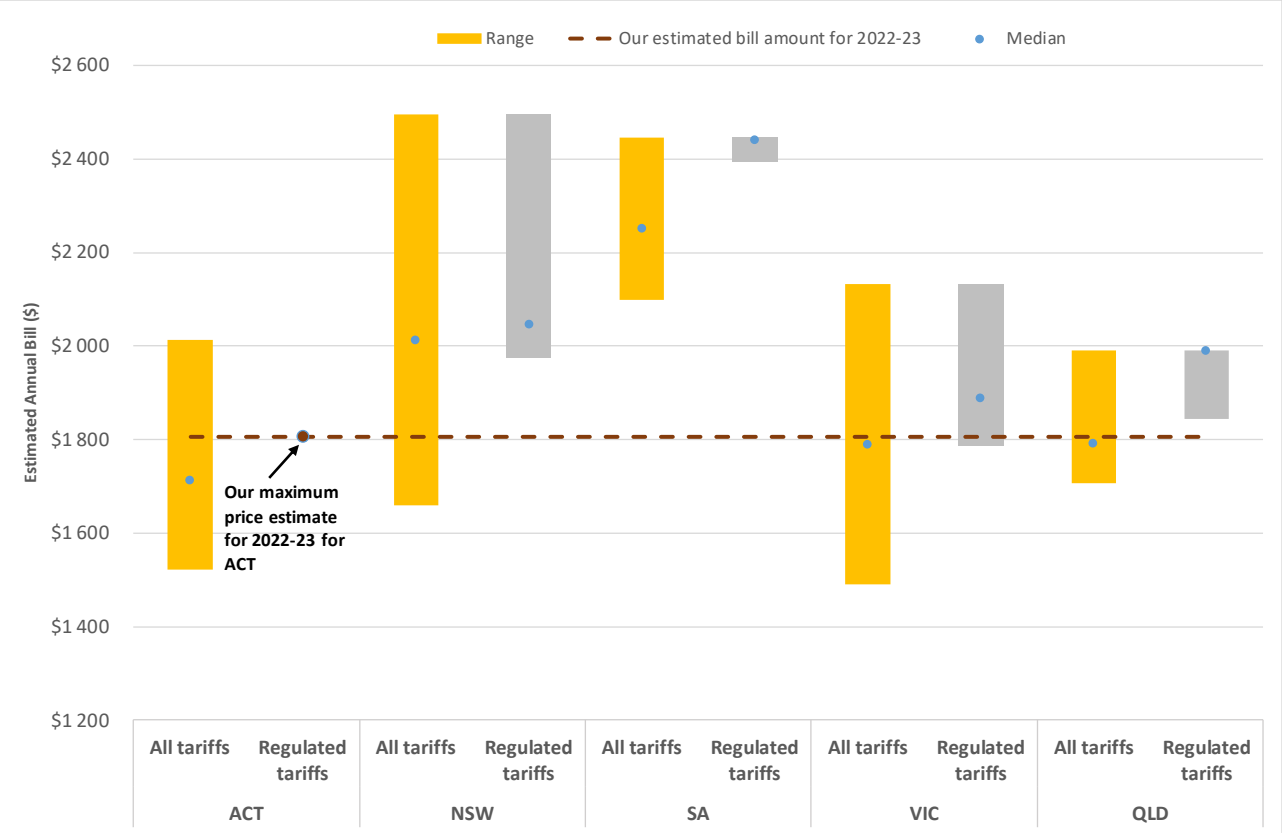
Impact on customers

The minimum average decrease of 1.25% will translate to an annual bill saving of $23 for an average residential customer consuming 6,500kWh. For an average non-residential customer consuming 25,000kWh, the decrease in the annual bill will be around $88.

These price reductions 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 2022 for interjurisdictional customers using 6,500 kWh



Source: Our calculations using OTTER 2021, ESC 2022a and 2022b, and AER 2022b.

Note: Data from OTTER 2021 was adjusted to reflect price growth effective from July 2022. NSW, SA and QLD growth rates are based on DMO price growth rates in each region. Victoria growth rates are based on the two ESC VDO decisions released in 2022. ACT price growth is our approved rate. Growth rates for control load customers and non-control load customers were calculated based on the usage weights given by OTTER. NSW and Victoria growth rates are the weighted average growth rate across the distribution zones within those states, respectively, weighted by customer numbers in the corresponding distribution zone.

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 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.
- Retail costs, which comprise retail operating costs, energy efficiency incentive scheme (EEIS) costs, power of choice cost, smart meter costs and retail margin.

The main costs that the retailer has control over relate to hedging, retail operating costs and retail margin; these are also the main components that we regulate. Retail operating costs and the retail margin account for around 11% of total costs for 2022–23.

Causes of the price decrease

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 2022–23.

Table ES0.1. Update of electricity cost components for 2022–23 (with 2021–22 costs for comparison)

Cost component	2021–22 ($/MWh)	2022–23 ($/MWh)	Dollar change ($/MWh)	Contribution to the price decrease (%)
Wholesale energy purchase cost	73.80	83.87	10.07	3.58%
Other energy purchase costs	22.15	20.97	-1.18	-0.42%
Total energy purchase cost	**95.95**	**104.83**	**8.89**	**3.16%**
Transmission and distribution costs	90.94	88.87	-2.07	-0.74%
ACT Govt scheme costs	56.64	45.27	-11.37	-4.04%
Total network costs	**147.58**	**134.14**	**-13.44**	**-4.77%**
Retail operating cost	15.81	15.92	0.11	0.04%
Other retail costs	7.22	8.32	1.10	0.39%
Total retail costs	**23.03**	**24.24**	**1.22**	**0.43%**
Total energy + retail + network costs	**266.55**	**263.21**	**-3.33**	**-1.18%**
Retail margin	14.93	14.74	-0.19	-0.07%
Total costs	**281.47**	**277.95**	**-3.52**	**-1.25%**

Source: Our calculations.

Note: All numbers are rounded to two decimal places.

Figure ES.02 shows the contribution of various cost components to the total percentage change in nominal average regulated prices from 2021–22 to 2022–23.

The price reduction is driven by the reduction in ACT Government scheme costs, which more than offset the increase in wholesale electricity costs. ACT Government scheme costs put downward pressure on prices this year (down $11.37/MWh, which contribute -4.04% percentage points to the price decrease). Energy purchase costs put upward pressure on prices (up $10.07/MWh, which offsets the price decrease by 3.58 percentage points). Other cost components made a minimal contribution to the maximum average price change.

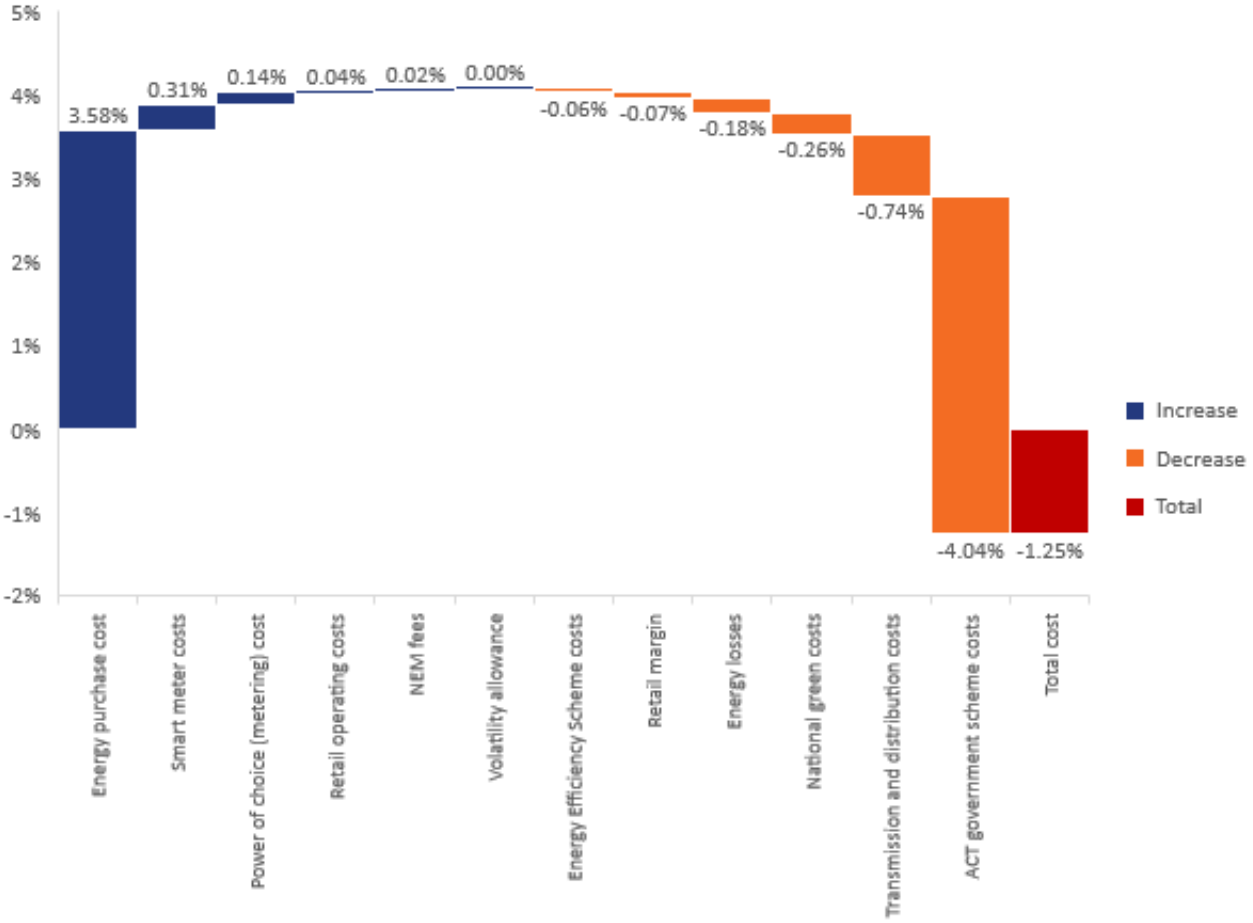
The main reasons for the cost changes are:

- ACT Government scheme costs decreased because of a fall in the large-scale feed-in-tariff (FiT) support payments. Large-scale FiT support payment is 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.

- 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 (ACIL Allen 2022, p. 9).

Figure ES0.2. Contribution to the price decrease by costs component, 2022–23



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 2022–23 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 2022–23 and analyses the impact of the price change on customer bills.
- Chapter 3 reviews the main drivers of the price change in 2022–23.
- 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 2022–23.

2. Maximum price change for 2022–23 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 2022–23. It also shows the expected impact on customers.

2.1 Maximum price change for 2022–23

The average nominal change in ActewAGL's basket of regulated tariffs for 2022–23 will be a decrease of 1.25%. This is equivalent to a real decrease in the regulated retail price of 4.93% after excluding inflation. Table 2.1 shows the cost components used to calculate the minimum average percentage decrease.

Table 2.1. Update of electricity cost components for 2022–23 (with 2021–22 costs for comparison)

Cost component	2021–22 ($/MWh)	2022–23 ($/MWh)	Dollar change ($/MWh)	Contribution to the price decrease (%)
Wholesale energy purchase cost	73.80	83.87	10.07	3.58%
National green scheme costs	18.98	18.25	-0.72	-0.26%
Energy losses	1.60	1.09	-0.51	-0.18%
Volatility allowance	0.30	0.30	0.00	0.00%
NEM fees	1.27	1.32	0.05	0.02%
Total energy purchase cost	**95.95**	**104.83**	**8.89**	**3.16%**
Transmission and distribution costs	90.94	88.87	-2.07	-0.74%
ACT Govt scheme costs	56.64	45.27	-11.37	-4.04%
Total network costs	**147.58**	**134.14**	**-13.44**	**-4.77%**
Retail operating cost	15.81	15.92	0.11	0.04%
Energy efficiency scheme costs	3.19	3.04	-0.16	-0.06%
AEMC power of choice costs	1.93	2.32	0.39	0.14%
Smart meter costs	2.09	2.96	0.87	0.31%
Total retail costs	**23.03**	**24.24**	**1.22**	**0.43%**
Total energy + retail + network costs	**266.55**	**263.21**	**-3.33**	**-1.18%**
Retail margin	14.93	14.74	-0.19	-0.07%
Total costs	**281.47**	**277.95**	**-3.52**	**-1.25%**

Source: Our calculations.

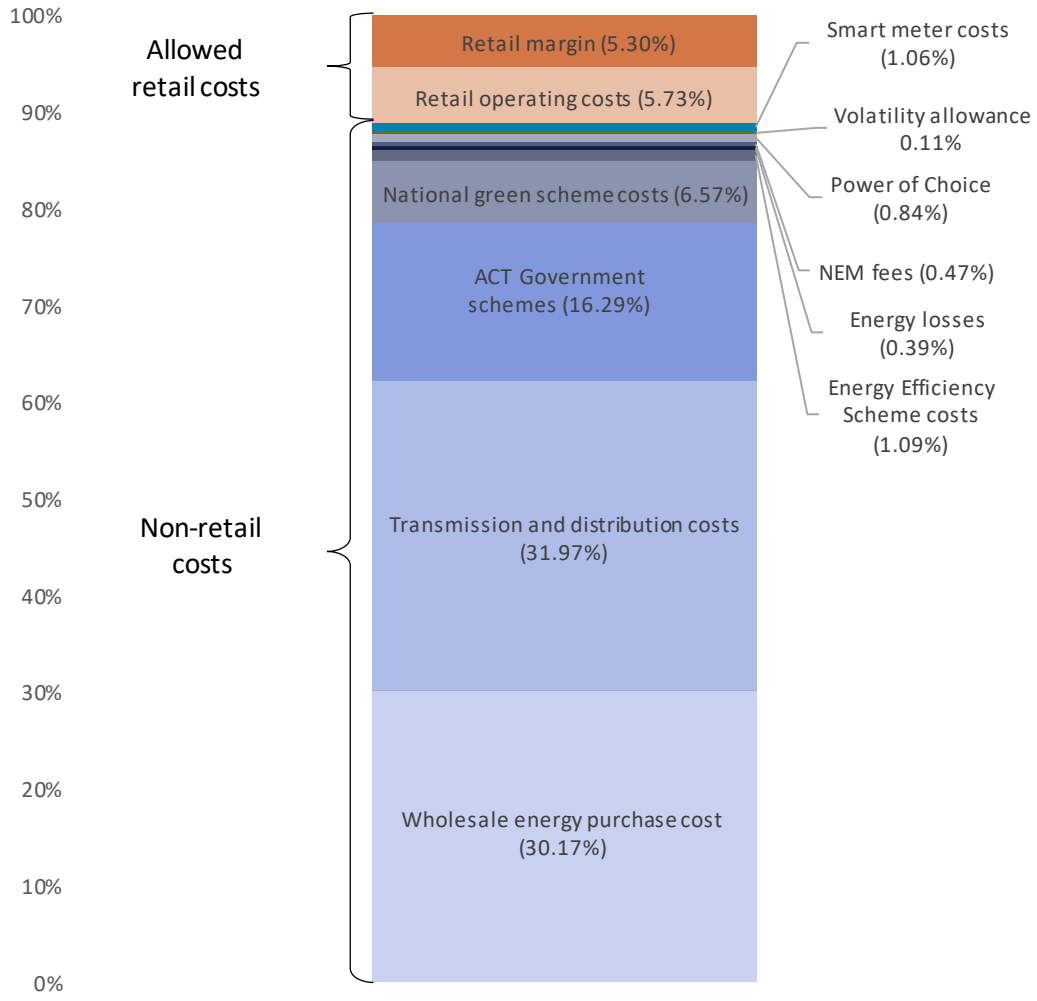
Note: All numbers are rounded to two decimal places.

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 11% of the total costs for 2022–23.

Figure 2.1. Cost components as share of total costs, 2022–23



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 decreases the average standing offer prices by 1.25%, the annual bill saving ranges from $13 for a small residential customer consuming 3,800 kWh up to $26 for a large residential customer consuming 7,500 kWh. For an average residential household consuming 6,500 kWh per year, the annual bill will fall by $23 in 2022–23.

Table 2.2. Estimated annual bill changes for different types of residential customers, 2022–23

Consumer type	Annual usage (kWh)	Estimated annual bill 2021–22 ($)	Estimated annual bill 2022–23 ($)	Change ($)
Large	7,500	2,111	2,085	-26
Average	6,500	1,830	1,807	-23
Small	3,800	1,070	1,056	-13

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 decreases for a range of typical non-residential customers. The impact on a typical bill ranges from a $35 saving for a small non-residential customer consuming 10,000 kWh to a $141 saving for a large non-residential customer consuming 40,000 kWh. For an average non-residential customer consuming 25,000 kWh, the annual bill will fall by $88 in 2022–23.

Table 2.3. Estimated annual bill changes for different types of small business customers, 2022–23

Consumer type	Annual usage (kWh)	Estimated annual bill 2021–22 ($)	Estimated annual bill 2022–23 ($)	Change ($)
Large	40,000	11,259	11,118	-141
Average	25,000	7,037	6,949	-88
Small	10,000	2,815	2,780	-35

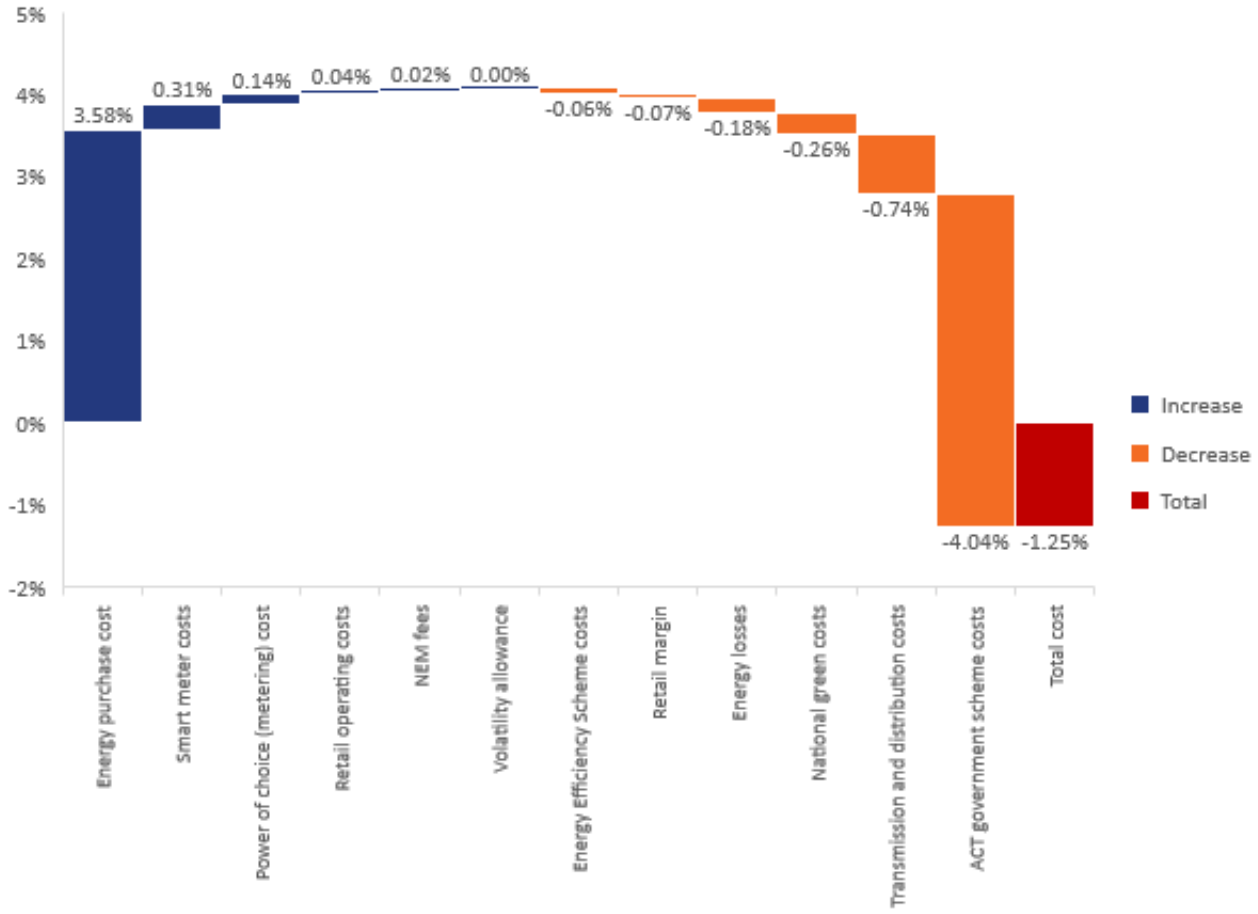
Source: Our calculations.

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 minimum average price decrease in standing offer prices for 2022-23. Appendix 1 presents details about how each cost component was estimated.

Figure 3.1. Contribution to the price decrease by costs component, 2022–23



Source: Our calculations.

Figure 3.1 shows the main contributors to the change in maximum standing offer prices. The biggest contributor to the price decrease this year was the ACT Government scheme costs (down $11.37/MWh, which contribute -4.04% percentage points to the price decrease. Energy purchase costs put upward pressure on prices (up $10.07/MWh, which offset the price decrease by 3.58 percentage points). Other cost components made a minimal contribution to the minimum average price decrease.

3.1 Network costs

Total network costs for standing offer customers will decrease from $147.58 per MWh in 2021–22 to $134.14 per MWh in 2022–23, a decrease of $13.44/MWh, which contribute -4.77 percentage points to the minimum average price decrease.

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.

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 $90.94/MWh in 2021-22 to $88.87/MWh in 2022–23, a decrease of $2.07/MWh, which contributes -0.74 percentage points to the minimum average price decrease.

On 17 May 2022, the AER approved a 5.2% decrease in distribution costs and a 5.6% increase in transmission costs for Evoenergy, which is the ACT's network service provider (AER 2022a, p. 1 and Evoenergy 2022, p. 1). Because distribution costs account for the bulk of network costs (about 70%), the decrease in distribution costs more than offset the increase in transmission costs.

The decrease in distribution costs reflected previously over-recovered revenues and lower reward payments under AER's network incentive schemes (AER 2022a, p. 1).

ACT Government scheme costs

ACT Government scheme costs decreased because of a fall in the large-scale feed-in-tariff costs, which account for 86.26% of ACT Government scheme costs in 2022–23.

The large-scale feed-in-tariff costs for standing offer customers will decrease from $47.23 per MWh in 2021–22 to $36.13 per MWh in 2022–23. This is mainly because of an increase in wholesale electricity prices.

The ACT Government scheme costs for standing offer customers will decrease from $56.64/MWh in 2021-22 to $45.27/MWh in 2021–22, a decrease of $11.37/MWh, which contributes -4.04 percentage points to the minimum average price decrease.

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. The contract price is fixed and, therefore, can be above or below the wholesale spot price at any given time. Evoenergy administers the scheme for the ACT Government.

Generators contracted under this scheme receive the spot price plus the difference between the spot price and the contract price. The difference between the spot price and the contract price is called the large-scale feed-in-tariff cost. The applicable spot price for this payment is the spot price in the jurisdiction in which the generator is located.

The recent increase in wholesale spot prices means the difference payments to contracted generators is expected to be lower in 2022-23, compared to 2021-22. Therefore, the higher wholesale prices led to a decrease in the large-scale feed-in-tariff cost.

3.2 Energy purchase cost

As shown in Figure 3.1, energy purchase costs will increase from $73.80/MWh in 2021–22 to $83.87/MWh in 2022–23, an increase of $10.07/MWh. This will offset the minimum average price decrease for 2022–23 by 3.58 percentage points.

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 (ACIL Allen 2022, p. 9).

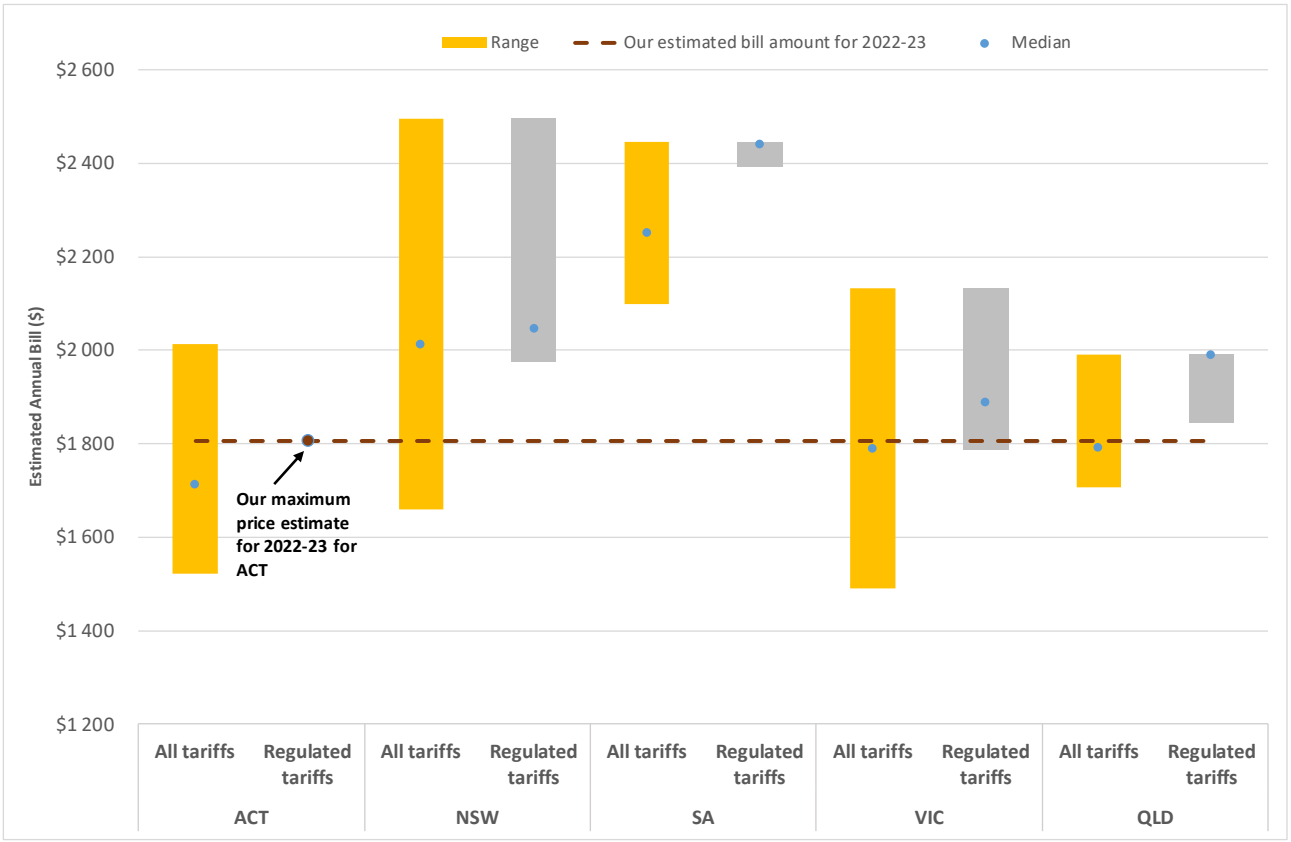
Energy purchase costs are the costs incurred by retailers in purchasing electricity from the wholesale market to meet the demand of their customers. Purchases of energy through the wholesale energy market account for around 30% of the total cost of providing retail electricity services to customers on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

4. Inter-jurisdictional comparison of electricity prices

Figures 4.1 and 4.2 compare the average annual bill amount in 2022–23 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. The maximum average standing offer bill amount for the ACT reflects the 1.25% decrease in ActewAGL's regulated basket of tariffs.

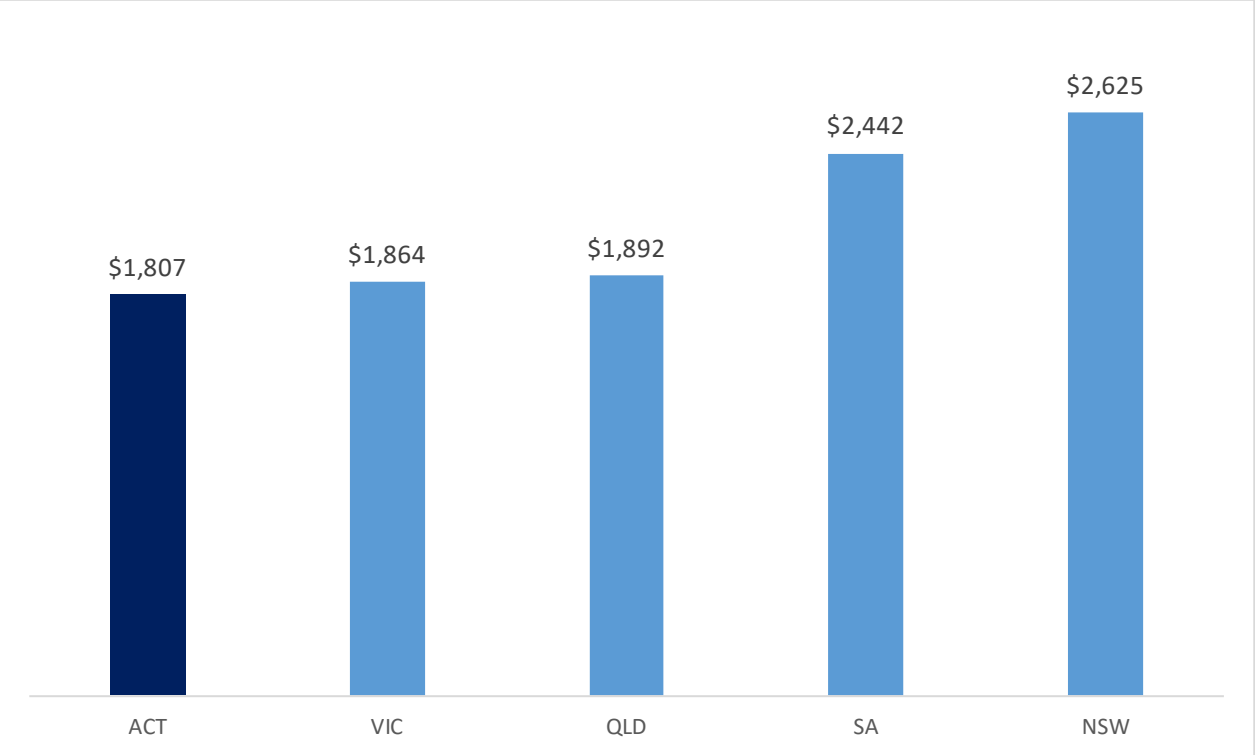
Figure 4.1. Estimated annual bills based on estimated prices as at 1 July 2022 for interjurisdictional customers using 6,500 kWh



Source: Our calculations using OTTER 2021, ESC 2022a and 2022b, and AER 2022b.

Note: Data from OTTER 2021 was adjusted to reflect price growth effective from July 2022. NSW, SA and QLD growth rates are based on DMO price growth rates in each region. Victoria growth rates are based on the two ESC VDO decisions released in 2022. ACT price growth is our approved rate. Growth rates for control load customers and non-control load customers were calculated based on the usage weights given by OTTER. NSW and Victoria growth rates are the weighted average growth rate across the distribution zones within those states, respectively, weighted by customer numbers in the corresponding distribution zone.

Figure 4.2. Maximum annual residential standing offer electricity bills as at 1 July 2022 using 6,500 kWh



Source: Our calculations using ESC 2022a and 2022b, and AER 2022b.

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 2022-23 DMO for NSW, SA and SE QLD, and ESC's 2022-23 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).

The regulated price decreases mentioned only apply to standing offer tariffs. We encourage consumers to regularly compare these tariffs to other offers that are in the market.

We implemented an industry code last year 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.

5. Annual price recalibration process

This chapter explains how we reset regulated prices for 2022–23. 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, 2022–23

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 prudency and efficiency assessment by us.
AEMC Power of Choice costs	Depreciate the remaining capital expenditure of $1,010,463 over 2022–23 as relevant using straight line depreciation and adjust the depreciated value for the change in CPI in each relevant year. There will be no Power of Choice cost allowance in 2023–24 as the cost recovery period ends in 2022–23.
Smart meter costs	Estimates from ActewAGL for the 2022–23, 2023–24 and 2024–25 year as relevant, with any adjustment required to account for the difference between forecast and actual costs in the previous year.
Cost pass-through ($/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 2022–23 as 3.87%:

$$\Delta CPI_{2022-23} = \frac{118.8 + 119.7 + 121.3 + 123.9}{114.4 + 116.2 + 117.2 + 117.9} - 1 = 0.0387$$

5.4 Information we received from ActewAGL

Submission

ActewAGL submitted the information on 6 May 2022 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.

Power of Choice cost pass-through for 2022–23

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.

On 23 April 2018, as part of our 2018–19 price reset, ActewAGL submitted a confidential application for consideration of a pass-through event for the costs arising from the Power of Choice changes (ICRC 2019, p. 31). The Power of Choice 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. ActewAGL proposed to recover a total of $5.04 million as pass-through costs.

In its submission to the 2022–23 price reset, ActewAGL has proposed to recover a proportion of the unrecovered capital costs associated with Power of Choice changes in 2022–23.

Customer numbers and electricity usage

Customer numbers and energy usage estimates for 2022–23 were provided by ActewAGL on 6 May 2022. 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 17 May 2022.

Appendix 1 Efficient costs for 2022–23

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.
- Retail costs, which comprise retail operating costs, EEIS costs and 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 2020–24 price investigation.[1] We applied the heuristic to the half-hourly ACT load data from 1 January 2017 to 31 December 2021.

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.[2] That means, for the 2022-23 reset, we have one quarter of 5-minute data and nineteen quarters of 30-minute data. We convert the 5-minute interval data to 30-minute intervals as follows:

- Map six 5-minute intervals to a corresponding 30-minute interval

[1] For more details about the heuristic, see our final decision for 2020–24 price investigation.
[2] AEMO provided us the required data for 2022-23 price reset.

- 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.

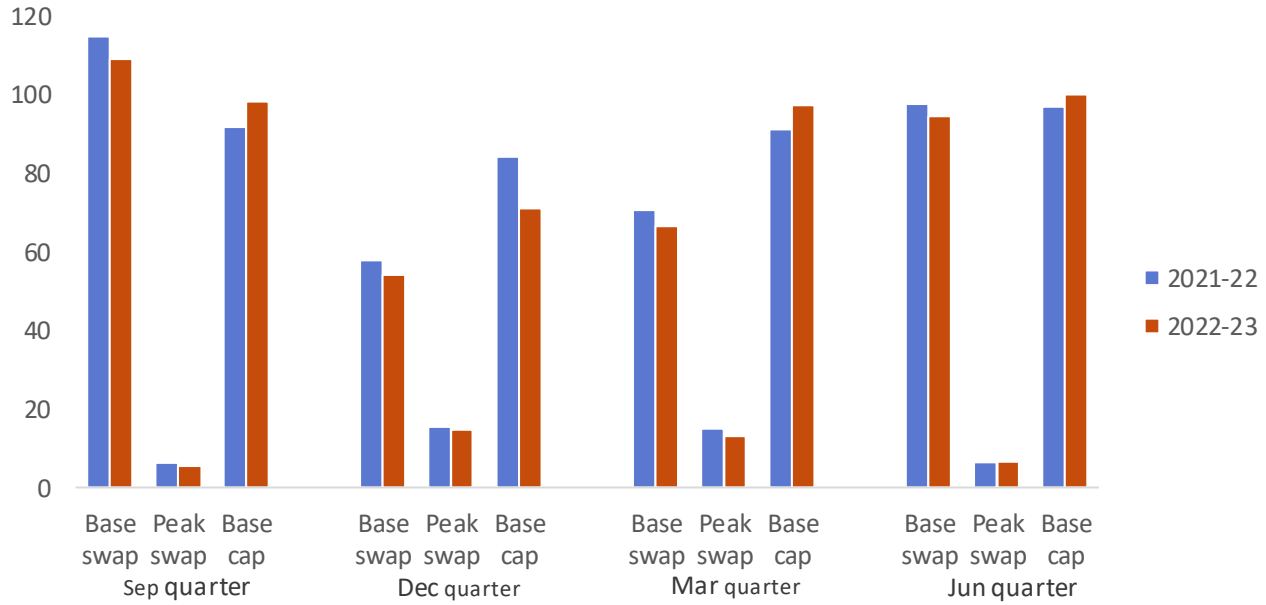
Table A1.1. Quarterly contract position (MW per half-hour), 2021–22 and 2022–23

Contract type	2021–22				2022–23			
	Sep quarter	Dec quarter	Mar quarter	Jun quarter	Sep quarter	Dec quarter	Mar quarter	Jun quarter
Base swap	114.71	57.77	70.55	97.54	108.97	54.06	66.46	94.43
Peak swap	6.26	15.41	14.95	6.40	5.53	14.80	12.90	6.40
Base cap	91.68	84.11	91.08	96.84	98.15	70.98	97.22	99.95

Source: Our estimation using AEMO data.

Figure A1.1 shows that the quarterly positions for base swap and peak swap contracts in 2022–23 are lower compared with 2021-22. The base cap positions for 2022-23 are generally higher than for 2021-22, except the December quarter.

Figure A1.1. Quarterly contract position (MW per half-hour), 2021–22 and 2022–23



Source: Our estimation using AEMO data.

Contract prices

To estimate contract prices, we use the 23-month average of forward prices from 1 June 2020 to 30 April 2022 from the ASX Energy. These prices are published daily for each quarter. We use base swap, peak swap and base cap contract prices.

For the 2022-23 price reset, ASX Energy did not publish data on the price of base cap contracts from 1 June 2020 to 19 March 2021, due to the transition to 5-minute settlement windows.

Consistent with our approach in the 2021-22 reset, we calculated the 23-month average base cap price using a combination of actual price data (where it is available) and estimated prices (where the data is unavailable). We estimated missing prices based on the past relationship between base swap prices and base cap prices. Last year, we calculated the ratio of base cap prices to base swap prices for 2020-21 contracts—the latest contract period for which real data are published by ASX. We applied this ratio to base swap prices for 2022-23 to estimate missing base cap prices.

The contract prices used in 2022–23 price recalibration are shown in Table A1.2.

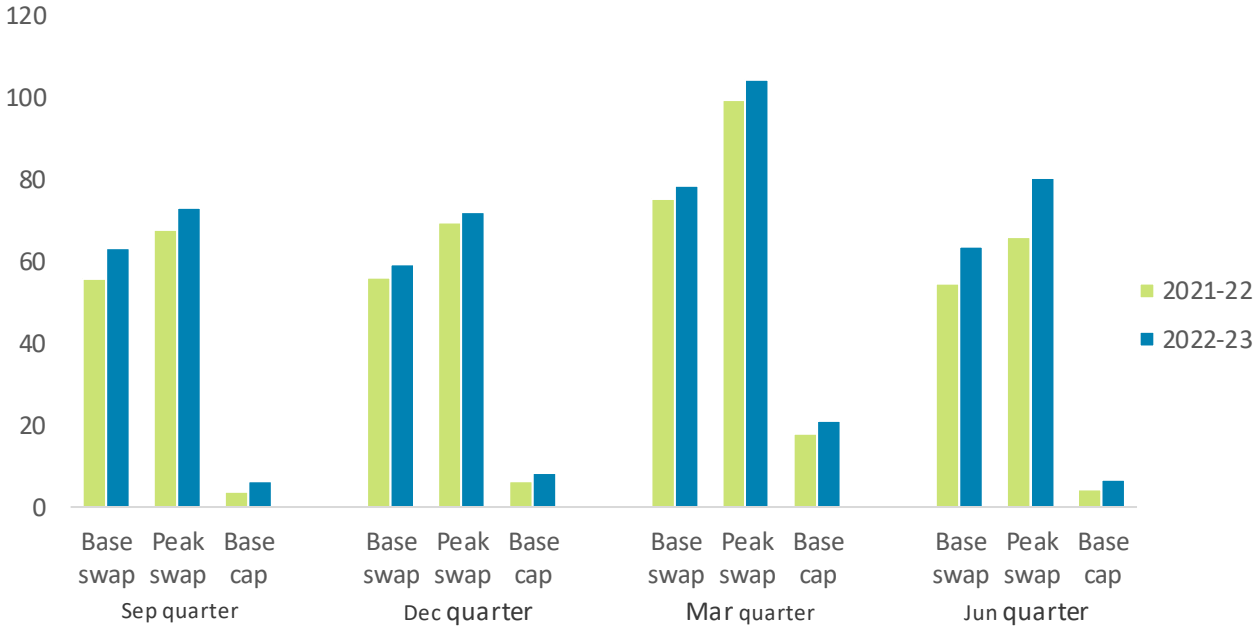
Table A1.2. Quarterly contract prices ($ per MW), 2021–22 and 2022–23

Contract type	2021–22				2022–23			
	Sep quarter	Dec quarter	Mar quarter	Jun quarter	Sep quarter	Dec quarter	Mar quarter	Jun quarter
Base swap	55.69	55.99	75.20	54.53	63.19	59.24	78.41	63.56
Peak swap	67.65	69.46	99.35	65.90	73.22	71.99	104.22	80.49
Base cap	3.71	6.29	17.88	4.29	6.28	8.30	21.02	6.65

Source: Our calculation using ASX data.

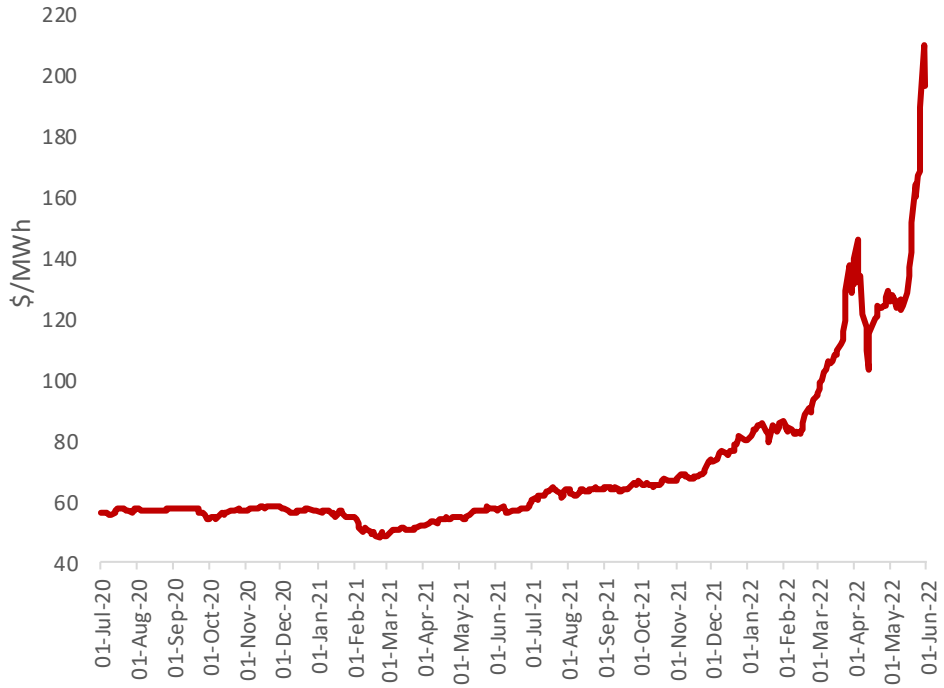
The contract prices for 2022–23 are generally higher than those for 2021–22 (table A1.2 and figure A1.2). This is also evident in the daily forward prices shown in figure A1.3. Higher forward prices led higher energy purchase cost estimate for 2022–23.

Figure A1.2. Quarterly contract prices (MW per half-hour), 2021–22 and 2022–23



Source: Our calculation using ASX data.

Figure A1.3. Daily forward prices ($ per MWh), July 2020 to June 2022



Source: Our calculation using ASX data.

Energy purchase cost estimate for 2022–23

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 2022-23 reset, we have one quarter of 5-minute data and nineteen 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.[3]

This resulted in an energy purchase cost of $83.87 per MWh for 2022–23. This is 13.65% higher than the cost for 2021–22 of $73.80 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.

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[3] 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.

Table A1.3. National green scheme costs components, 2022 and 2023

National green scheme cost component	2022	2023
Parameters common for LRET and SRES		
Half-yearly load weights	0.528	0.472
Cost of debt for half year (%)	1.00%	1.00%
Large-scale renewable energy target (LRET) data		
Renewable power percentage (RPP) (%)	18.64%	18.64%
Average Lage-scale generation certificate (LGC) spot price ($/certificate)	$38.77	$41.91
Small-scale renewable energy scheme (SRES) data		
Small-scale technology percentage (STP) (%)	27.26%	22.34%
Average small-scale technology certificate (STC) spot price ($/certificate)	$38.41	$39.27

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

Large-scale renewable energy target (LRET) cost

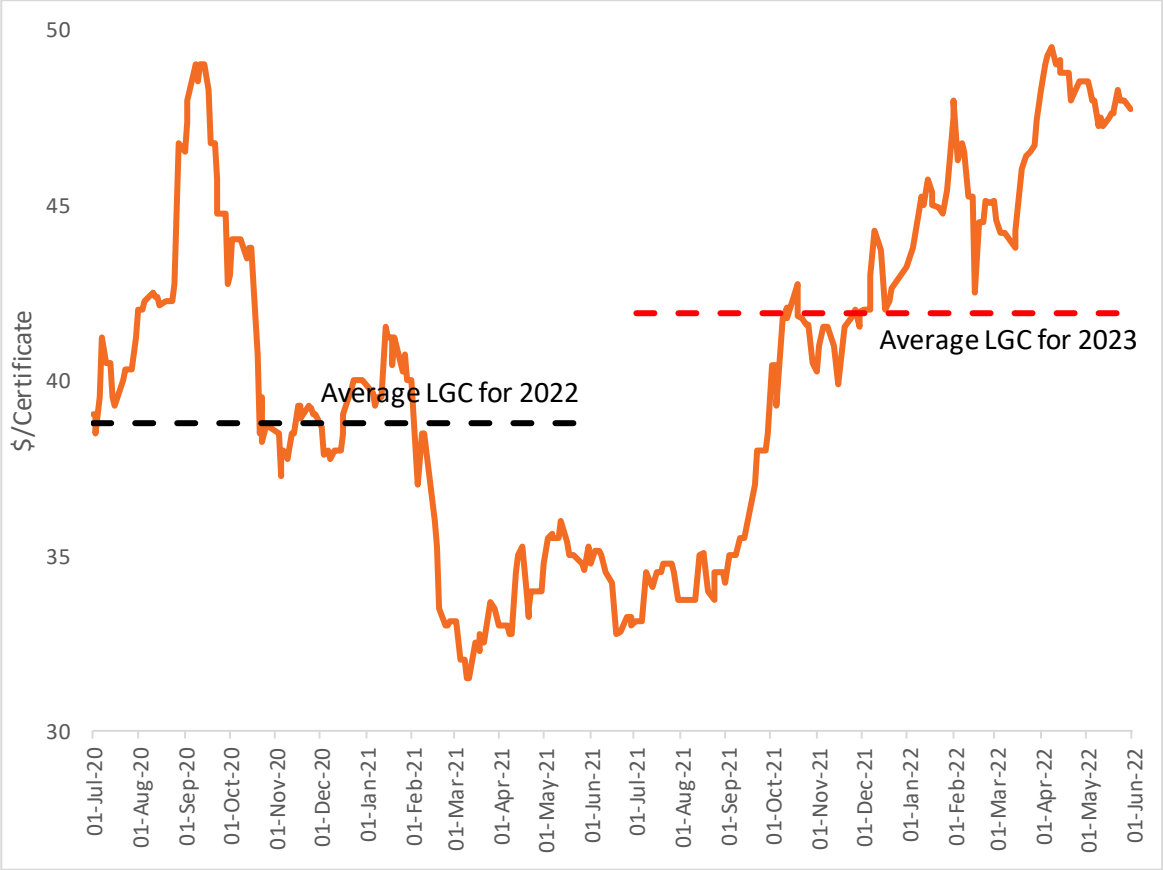
The LRET cost for 2022–23 is calculated using two components: the renewable power percentages for 2022 and 2023 calendar years, and the estimated average large-scale generation certificate (LGC) prices in these two years. Half-hourly load weights are calculated using ActewAGL load data to convert calendar 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 2022 and 2023 is 18.64%.

The LGC price for 2022 is $38.77 per certificate, which is the 11-month average price to 31 May 2021. This increases to $39.16 per certificate when holding costs are applied. The estimated LGC price for 2023 is $41.91, which has been calculated as the 11-month average of LGC prices from 1 July 2021 to 31 May 2022. This increases to $42.33 per certificate when holding costs are applied.

As figure A1.4 shows, the average LGC prices for 2023 is higher than the average LGC prices for 2022.

Figure A1.4. LGC spot prices ($ per certificate), July 2020 to June 2022



Source: ICAP data.

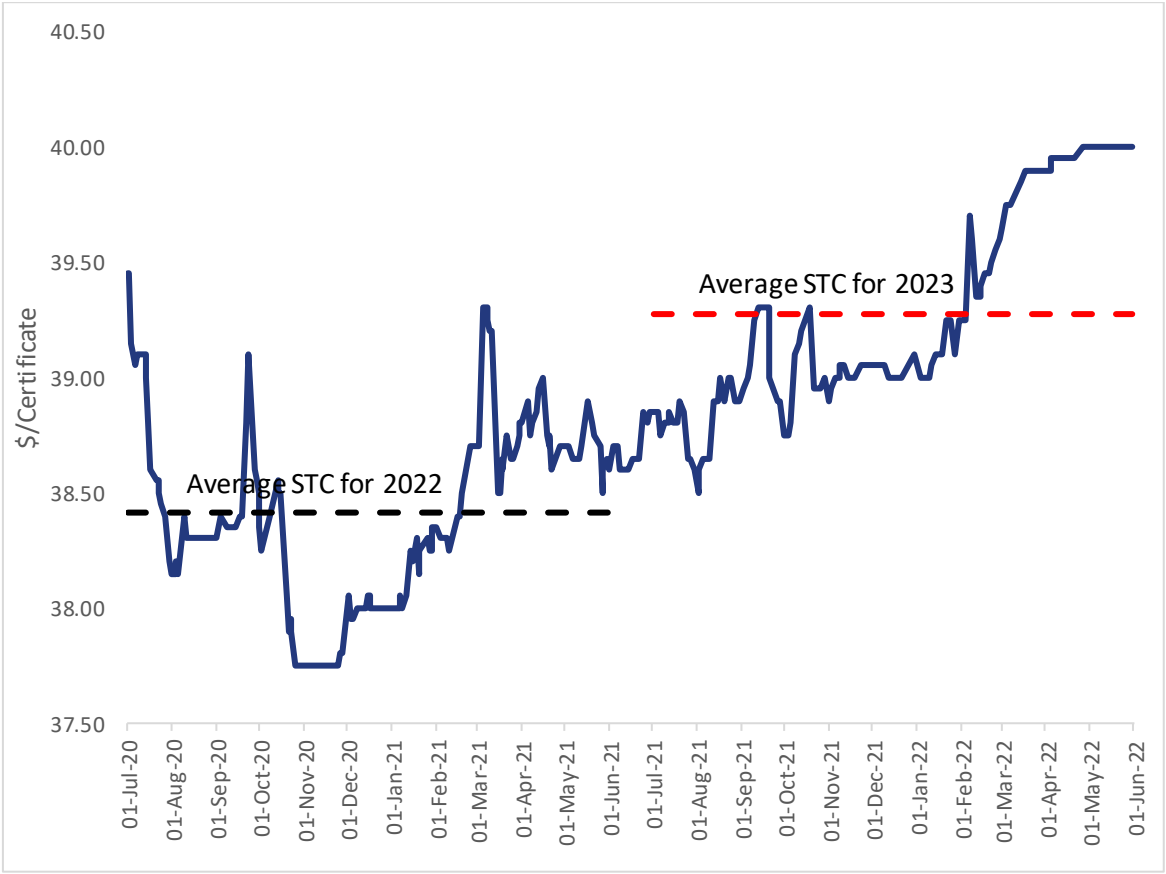
Small-scale renewable energy scheme (SRES) cost

The small-scale technology percentages are the estimates published by the Clean Energy Regulator. We use these estimates for both 2022 and 2023 calendar years. These estimates for 2022 and 2023 are 27.26% and 22.34% respectively.

The STC price for 2022 is $38.41 per certificate, which is the 11-month average of STC prices until 31 May 2021. This increases to $38.80 per certificate when holding costs are applied. The estimated STC price for 2023 is $39.27, which is calculated as the 11-month average of STC prices from 1 July 2021 to 31 May 2022. This increases to $39.67 per certificate when holding costs are applied.

As figure A1.5 shows, the average STC prices for 2023 is higher than the average STC prices for 2022.

Figure A1.5. STC spot prices ($ per certificate), July 2020 to June 2022



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 2022–23 is $0.91 per MWh.

National green scheme cost estimate for 2022–23

Our estimate of the total green scheme cost allowance for 2022–23 is $18.25 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 2022–23 is 3.81% lower than the allowance estimated for 2021–22.

Table A1.4. National green scheme cost ($/MWh), 2021–22 and 2022–23

National green scheme cost component ($/MWh)	2021–22	2022–23
LRET	$7.41	$7.58
SRES	$9.93	$9.77
Cost adjustment	$1.64	$0.91
Total green scheme cost	**$18.98**	**$18.25**

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 2022–23, our estimate of cost of energy losses is $1.09 per MWh, which is lower than $1.60 per MWh in 2021–22. The main reason for the fall in energy losses is lower distribution loss factor for 2022–23.

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 2022–23.

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 2022–23 is $1.32 per MWh which resulted from indexing the estimated NEM fees cost for 2021–22 (which was $1.27 per MWh) by the CPI increase of 3.87%.

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. We allow ActewAGL to pass through the network costs determined by the AER.

On 17 May 2022, the AER released the approved network charges for the ACT for 2022–23. Based on the approved network charges, ActewAGL proposed a network cost allowance of $134.14 per MWh for standing offer customers for 2022–23. We examined this proposal and determined the $134.14 per MWh as the network cost allowance associated with standing offer customers for 2022–23. This allowance is 9.11% lower than the allowance in 2021–22 (Table A1.5).

Table A1.5. Network costs for standing offer customers ($/MWh), 2022–23

Network cost component ($/MWh)	2021–22	2022–23
Distribution use of system cost	**$64.26**	**$61.36**
Transmission use of system cost	**$20.57**	**$21.24**
ACT government scheme cost	**$56.64**	**$45.27**
FiT small, medium and large-scale costs	$53.01	$41.89
Other ACT government scheme costs	$3.64	$3.38
Metering costs	**$6.11**	**$6.27**
Total Network costs	**$147.58**	**$134.14**

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

Note: All numbers are rounded to two decimal places.

Table A1.6 shows the cost breakdown for the feed-in-tariff schemes.

Table A1.6. Feed-in tariff costs ($/MWh), 2021–22 and 2022–23

Feed-in tariff costs ($/MWh)	2021–22	2022–23
Small-scale and medium scale FiT cost	$5.78	$5.76
Large-scale FiT cost	$47.23	$36.13
Total FiT costs	**$53.01**	**$41.89**

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 2022–23 is $15.92 per MWh. We estimated the 2022–23 retail operating cost by adjusting the 2021–22 per customer allowance of $128.58 by the change in the 2022–23 CPI of 3.87%. This adjustment takes the allowance per customer to $133.55 for 2022–23.

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 2022. This converts to an allowance of $15.92 per MWh for 2022–23, representing a 0.71% increase from the 2021-22 cost allowance of $15.81 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 lower than CPI increase, which is mainly because standing offer customer numbers fell at a faster rate than the fall in standing offer energy usage.

A.1.2.8 Energy efficiency improvement scheme (EEIS) cost

Our estimated allowance for 2022–23 EEIS cost is $3.04 per MWh. This is 4.89% lower than the 2021–22 EEIS cost of $3.19 per MWh.

To estimate the EEIS cost for 2022–23, we used information we received from ActewAGL. The energy savings target increased to 12.5% in calendar year 2022 (from 8.6% that applied from 2016 to 2021). Despite this increase, the EEIS costs are forecast to decrease predominately due to reduction in the cost of providing appliance switching incentive to meet ActewAGL's Energy Saving Target obligations.

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 Power of choice

We allow ActewAGL to recover around $1.01 million as power of choice pass through costs for 2022–23. This represents a cost of $2.32 per MWh in 2022–23, which is an increase of 20.34% compared to 2021–22. The increase mainly reflects a decrease in the standing offer electricity usage, which means that the cost is spread across a smaller amount of electricity usage. The cost in dollar terms (as opposed to $/MWh terms) increased by inflation. For this estimation we used electricity usage for the year to 31 March 2022.

The power of choice pass-through adjustment accounts for the costs that ActewAGL incurs to comply with power of choice regulatory changes. These changes, which the AEMC required to be implemented from 1 December 2017, required retailers to make changes to their existing systems and procedures to facilitate the provision of smart metering services.

A.1.2.10 Smart meter costs

The smart meter cost for 2022–23 is $2.96 per MWh. This is based on ActewAGL's smart meter costs for the 12 months to 31 March 2022.

A.1.2.11 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 $14.74 per MWh for 2022-23.

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