



ICRC
independent competition and regulatory commission

ISSUES PAPER

Review of the Retail Electricity Form of Price Control

Report 13 of 2020, October 2020



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

The Commission has responsibilities for a broad range of regulatory and utility administrative matters. The Commission has responsibility under the ICRC Act for regulating and advising government about pricing and other matters for monopoly, near-monopoly and ministerially declared regulated industries, and providing advice on competitive neutrality complaints and government-regulated activities. The Commission also has responsibility for arbitrating infrastructure access disputes under the ICRC Act.

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

The Commission's objectives are set out in section 7 and 19L of the ICRC Act and section 3 of the Utilities Act. In discharging its objectives and functions, the Commission provides independent robust analysis and advice.

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Correspondence or other inquiries may be directed to the Commission at the following address:

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How to make a submission

This issues paper provides an opportunity for stakeholders to provide feedback and evidence to inform the development of the Commission's draft report. It will also ensure that relevant information and views are made public and brought to the Commission's attention.

Submissions on the issues paper close at **5pm Friday 27 November 2020**.

Submissions may be mailed to the Commission at:

Independent Competition and Regulatory Commission
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Alternatively, submissions may be emailed to the Commission at icrc@act.gov.au. The Commission encourages stakeholders to make submissions in either Microsoft Word format or PDF (OCR readable text format – that is, they should be direct conversions from the word-processing program, rather than scanned copies in which the text cannot be searched).

For submissions received from individuals, all personal details (for example, home and email addresses, and telephone numbers) will be removed for privacy reasons before the submissions are published on the website.

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The Commission may be contacted at the above address, by telephone on (02) 6205 0799 or via the Commission's website at www.icrc.act.gov.au.

Table of Contents

How to make a submission	ii
<u>1. Introduction</u>	<u>1</u>
1.1 Background to the review	1
1.2 The scope of the review	2
1.3 Purpose of the issues paper	2
1.4 Commission's role and objectives	2
1.5 Indicative review timeline	4
1.6 Structure of the issues paper	4
<u>2. Developments in the Australian electricity market</u>	<u>5</u>
2.1 Developments in the wholesale market	5
2.2 Developments in the retail market	7
2.3 Implications of market developments for network tariffs	9
<u>3. Commission's current form of price control and the network cost calculation methodology</u>	<u>13</u>
3.1 Commission's current form of price control	13
3.2 Commission's pricing model	16
3.3 Commission's current method of estimating network costs	17
<u>4. Consolidated list of questions</u>	<u>21</u>
<u>Appendix 1 – Network charges associated with ActewAGL's standing offer tariffs</u>	<u>22</u>
<u>Appendix 2 – Network costs calculation methods in other jurisdictions</u>	<u>24</u>
<u>Abbreviations and acronyms</u>	<u>26</u>
<u>References</u>	<u>27</u>

List of Figures

Figure 2.1 Average monthly wholesale electricity prices in NSW (\$ per MWh)	6
-----------------------------------------------------------------------------	---

Figure 2.2	Changes in the ACT retail market	8
Figure 2.3	Network cost approval process	10
Figure 3.1	The Commission’s pricing model	17
Figure 3.2	Network Charge Growth Comparison	19

List of Tables

Table 1: Indicative timeline of events	4
Table A.2: 2020-21 Network prices for residential customers*	22
Table A.3: 2020-21 Network prices for business customers*	23

List of Boxes

Box 1.1: Sections 7 and 19L: Commission objectives	3
Box 1.2: Section 20(2): Commission’s considerations	3
Box 3.1: The Commission’s price control formula	14
Box 3.2: Side Constraint	15
Box 3.3: Weighted Average Network Cost Change	20

1. Introduction

The Independent Competition and Regulatory Commission (the Commission) is undertaking a review of the form of price control it uses to regulate retail electricity prices. During the retail electricity price investigation 2020-24, the Commission made a reset principle in the Price Direction to review the form of price control. In this review, the Commission will consider current and potential market developments that may have implications for the effectiveness of the current form of price control.

1.1 Background to the review

The Commission is the Australian Capital Territory's (ACT) independent economic regulator, which regulates prices, access to infrastructure services and other matters in relation to regulated industries in the ACT. The Commission also has functions under the *Utilities Act 2000* (Utilities Act) for licensing electricity, natural gas, water and sewerage utility services and making industry codes. The Commission undertakes price investigations in accordance with sections 15, 16 and 17 under Part 3 of the *Independent Competition and Regulatory Commission Act 1997* (ICRC Act), and issues Price Directions under Part 4 of the ICRC Act.

Under the Commission's form of electricity price control, the Commission regulates the maximum weighted average price change that ActewAGL can apply across its 'basket' of standing offer tariffs from one year to the next. Under this form of price control, ActewAGL has the flexibility to determine the number of standing offer tariffs and to adjust the prices of those tariffs as long as the weighted average price across all tariffs does not exceed the weighted average price change determined by the Commission.

The Commission calculates the maximum weighted average price change using a pricing model, which estimates the individual cost components that would be incurred by an efficient retailer in a similar position as ActewAGL when providing electricity services to customers on regulated tariffs. The individual cost components in the Commission's pricing model can be grouped into three broad categories: wholesale costs (the costs associated with purchasing electricity from the wholesale market, representing 44 per cent of total costs), network costs (the cost of transmitting and distributing electricity from generators to consumers, representing 43 per cent of total costs), and retail costs (costs faced by retailers in providing services to customers and the retail margin, representing 13 per cent of total costs).

The Commission allows ActewAGL to pass on the network costs that it incurs when providing electricity services to standing offer customers. ActewAGL calculates the network cost pass-through amount and submits it to the Commission for verification. Network charges are regulated by the Australian Energy Regulator (AER), which determines the maximum revenue that a network business (Evoenergy in the ACT) is able to recover from customers each year. ActewAGL uses network charges approved by the AER when calculating the network cost pass-through amount. After the Commission has verified the network cost pass-through amount, it is included in the Commission's pricing model to calculate the regulated price change. As the network cost component is a significant cost component of the Commission's pricing model, it has a significant effect on the regulated price change determined by the Commission.

In the final report for the 2020-24 retail electricity price investigation, the Commission noted that the increase in the network cost pass-through amount corresponding to regulated tariffs for 2020-21 (5.4 per cent) was significantly higher than the AER approved network price increase for Evoenergy's corresponding regulated tariffs (2.0 per cent). The Commission reported that the difference reflected a change in the mix of network charges incurred by ActewAGL, which had come about because of a change in the mix of consumers on standing offers.

In its final report, the Commission considered that the way in which network costs are allocated to customers on different tariff types may become increasingly important as the number of standing offer customers continues to change. The Commission therefore made a reset principle in the Price Direction 2020-24 to review the form of price control.¹ Reset principles are principles governing the redetermination of prices in a regulated industry, and can provide the opportunity to assess and update, if necessary, aspects of the methodology or approach that will be used by the Commission in future.

1.2 The scope of the review

In this review, the Commission intends to examine the causes of compositional changes in ActewAGL's customer base, how compositional changes are dealt with in the Commission's approach, and implications of compositional changes for the ongoing effectiveness of the form of price control.

The Commission will consider whether changes are needed to how the network cost pass-through is calculated to make sure the form of price control remains effective. The Commission reviewed the other cost components of the Commission's pricing model during its 2018-19 Electricity Model and Methodological Review (EMMR).²

1.3 Purpose of the issues paper

This issues paper serves two main purposes. The first is to inform stakeholders that the Commission is undertaking a review of the electricity form of price control and to seek stakeholder input on any issues they consider relevant. The second purpose is to provide details of the Commission's form of price control, the current methodology for calculating the network cost pass-through amount, and developments in Australian electricity markets and their implications for the form of price control.

1.4 Commission's role and objectives

In carrying out its functions under the ICRC Act, the Commission has the following objectives as set out in sections 7 and 19L of the ICRC Act (Box 1.1).

¹ ICRC 2020a.

² The Commission's methodology review final report is available at <https://www.icrc.act.gov.au/energy/electricity/electricity-model-and-methodology-review-2018-19>

Box 1.1: Sections 7 and 19L: Commission objectives

Section 7:

- (a) to promote effective competition in the interests of consumers;
- (b) to facilitate an appropriate balance between efficiency and environmental and social considerations;
- (c) to ensure non-discriminatory access to monopoly and near-monopoly infrastructure.

Section 19L:

To promote the efficient investment in, and efficient operation and use of regulated services for the long-term interests of consumers in relation to the price, quality, safety, reliability and security of the service.

When making a price direction, in addition to the terms of reference and legislative objectives, the Commission is also required to have regard to the provisions set out in section 20(2) of the ICRC Act (Box 1.2)

Box 1.2: Section 20(2): Commission's considerations

- (a) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies (including policies relating to the level or structure of prices for services) and standard of regulated services; and
- (b) standards of quality, reliability and safety of the regulated services; and
- (c) the need for greater efficiency in the provision of regulated services to reduce costs to consumers and taxpayers; and
- (d) an appropriate rate of return on any investment in the regulated industry; and
- (e) the cost of providing the regulated services; and
- (f) the principles of ecologically sustainable development mentioned in subsection (5);
- (g) the social impacts of the decision; and
- (h) considerations of demand management and least cost planning; and
- (i) the borrowing, capital and cash flow requirements of people providing regulated services and the need to renew or increase relevant assets in the regulated industry; and
- (j) the effect on general price inflation over the medium term; and
- (k) any arrangements that a person providing regulated services has entered into for the exercise of its functions by some other person; and
- (l) any arrangements that a person providing regulated services has entered into for the exercise of its functions by some other person.

Section 19L of the ICRC Act (provided in Box 1.1) requires the Commission to make pricing decisions that promote efficient investment in, and efficient operation of regulated services in the long-term interests of

consumers. Following from this, an important consideration for this review is to ensure that the Commission's final decision continues to allow ActewAGL the opportunity to recover the efficient costs of providing electricity services to standing offer customers.

1.5 Indicative review timeline

The Commission proposes to adopt the indicative timeline in Table 2. In developing the indicative timeline, the Commission has considered the timing of other regulatory processes, both in the ACT and in other jurisdictions, and has aimed to allow sufficient time for ActewAGL and other stakeholders to participate fully in the Review.

Table 1: Indicative timeline of events

Task	Date
Release of issues paper	16 October 2020
Workshop I	November 2020
Submissions on issues paper close	27 November 2020
Draft report	February 2021
Workshop II	March 2021
Submissions on draft report close	26 March 2021
Final report	April 2021

The closing date for submissions on the issues paper is 27 November 2020. The Commission will hold a workshop in November to discuss any issues stakeholders may have prior to making submissions.

Written submissions received by the closing date will be considered in developing a draft report. The Commission may also hold a second workshop following the release of the draft report depending on the issues and stakeholder interest in a further workshop.

1.6 Structure of the issues paper

The remainder of this issues paper is structured as follows:

- Chapter 2 summarises recent developments in the Australian electricity market.
- Chapter 3 discusses the form of price control and the current method of calculating the network cost pass-through amount.
- Chapter 4 presents a consolidated list of questions.
- Appendix 1 presents Evoenergy's network charges associated with ActewAGL's standing offer tariffs.
- Appendix 2 summarises approaches adopted by other Australian regulators to estimate network cost pass-through amounts in determining regulated retail electricity prices or bills.

2. Developments in the Australian electricity market

The Australian electricity market is undergoing a rapid transition. In the wholesale market, the generation mix is undergoing a rapid transition from a centralised system of large fossil fuel generators to smaller scale, dispersed renewable generation. In the ACT retail electricity market, and in retail markets in other jurisdictions, customers are moving from standing offer contracts to market offers reflecting affordability pressures, increased competition and calls by governments and regulators to shop around for cheaper offers. The take-up of smart meters in the ACT is also increasing following the introduction of the Australian Energy Market Operator's (AEMO) Power of Choice reforms and the increasing prevalence of rooftop solar panels. This chapter presents a summary of recent market developments and their implications for this review.

2.1 Developments in the wholesale market

The energy generation mix in the Australian electricity market is rapidly changing. Traditionally, the Australian electricity generation system was characterised by a centralised system of large fossil fuel (mainly coal) generators. As ageing coal generators exit the market, the generation system is now moving to a decentralised system of widely dispersed, relatively small-scale renewable (mainly wind and solar) generators.

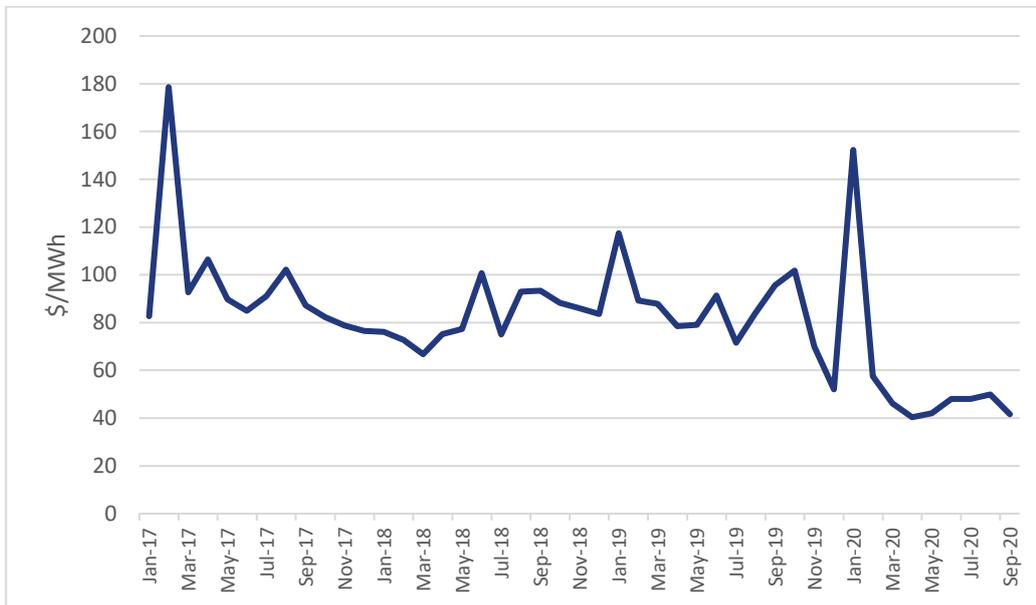
Reflecting the increased supply of renewable energy, wholesale electricity prices in the National Electricity Market (NEM) have been decreasing over the past few years. Prices averaged \$69 per MWh in 2020 compared to around \$85 per MWh in 2017 across the NEM.³ Figure 2.1 shows that electricity spot prices in NSW have decreased from \$82 in January 2017 to \$42 in September 2020.

High wholesale prices in South Australia and Victoria have resulted in the average NEM price being higher than the prices in other jurisdictions. A supply gap created by the closures of South Australia's Northern coal power plant in mid-2016 and Victoria's Hazelwood plant in early 2017 coupled with existing coal power plant failures during high temperatures have driven high prices in South Australia and Victoria.⁴

³ Details at: <https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/data-nem/data-dashboard-nem>.

⁴ AER 2020a p 95

Figure 2.1 Average monthly wholesale electricity prices in NSW (\$ per MWh)



Source: Commission's calculation using AEMO data.

Integrating high volumes of renewable energy into the electricity network has been challenging for several reasons.⁵ First, much of this new generation is in sunny or windy areas far from the main transmission network (also known as the grid). Therefore, this energy is fed into the main grid via long and less efficient transmission lines, resulting in high rates of energy losses during transmission.⁶ Second, the traditional fossil fuel generators provide technical stability services that keep the power system reliable and secure. For example, fossil fuel generators are capable of generating electricity continuously within defined technical limits. The ability of wind and solar generators to provide these services has been limited to date. This is because wind and solar farms use different technologies than the ones used by fossil fuel generators.⁷ Third, wind and solar generators create a need to fill supply gaps when the weather is unfavourable for generation. Therefore, weather driven volatility requires backup energy that can quickly discharge to the grid when needed, from sources such as gas-fired generators or increasingly from battery storage, to have an uninterrupted supply of energy and reduce the risk of black-outs in parts of the network.

Government bodies, including the Council of Australian Governments (COAG) Energy Council, Australian Energy Market Operator (AEMO), the Australian Energy Market Commission (AEMC) and the Energy Securities Board (ESB), are taking a range of actions to smooth this market transition.

The AEMC undertakes the coordination of generation and transmission investment (COGATI) review every two years, as requested by the COAG Energy Council, to examine the drivers that could impact future

⁵ AER 2020a.

⁶ As energy flows through across a network of poles and wires, some of it is lost as heat. The energy loss is higher the further it travels and weaker the transmission lines.

⁷ More information on technical stability services can be found in AER 2020a p 48.

transmission and generation investment.⁸ The first COGATI review, completed in December 2018, made recommendations for reforms to the way investment and generation are coordinated. The second COGATI review is expected to conclude in December 2020.

AEMO has prepared a long-term integrated system plan (ISP), which has identified investment choices and made recommendations on essential actions to optimise consumer benefits amid Australia's rapid transition in the energy sector. The investment choices identified in the ISP include new grid projects, improvements to the existing grid infrastructure and establishing Renewable Energy Zones. Establishing Renewable Energy Zones would involve developing new grid infrastructure in renewable energy rich areas so that several generators can be located in one zone and connected to the grid efficiently.⁹ The ESB is developing a post-2025 market design for the NEM. As part of this market design, the ESB is considering the energy supply chain, all aspects of risks in the energy system and cost recovery arrangements.¹⁰ The ESB released a consultation paper on the market design in September 2020.¹¹

These actions are expected to bring long term benefits to electricity consumers. For example, AEMO estimates that if the ISP is properly implemented in that the associated investments and recommended changes to grid infrastructure are made, consumers will gain around \$11 billion in net market benefits over the next 20 years.¹²

2.2 Developments in the retail market

Developments in the wholesale markets discussed above have already had effects on the ACT retail electricity market. For example, the Commission's electricity price determination in June 2020 would result in a typical customer on ActewAGL's standing offer contracts seeing a 2.56 per cent reduction in retail electricity prices in 2020-21. The price decrease largely reflects falling prices in the wholesale electricity market. A key driver of these lower wholesale prices is the growth in renewable energy generation.¹³

A range of other factors have affected the retail electricity market in the ACT recently. First, there has been a steady increase in the number of customers moving from standing offers to market offers. Standing offers are 'default' contracts that consumers enter into if they do not select a market offer. The prices of these offers are regulated by the Commission, and minimum terms and conditions for these offers are set by the government.¹⁴ These offers provide a safety net for those consumers who do not or are unable to shop around for better offers.

⁸ <https://www.aemc.gov.au/market-reviews-advice/coordination-generation-and-transmission-investment-implementation-access-and#:~:text=The%20inaugural%20COGATI%20review%2C%20completed,to%20conclude%20in%20December%2020.>

⁹ More information on renewable energy zones can be found in AEMC 2019b

¹⁰ COAG Energy Council 2019, p. 6.

¹¹ Available at <http://www.coagenergycouncil.gov.au/publications/post-2025-market-design-consultation-paper-%E2%80%93-september-2020>

¹² AEMO 2020, p. 9.

¹³ AER 2020a

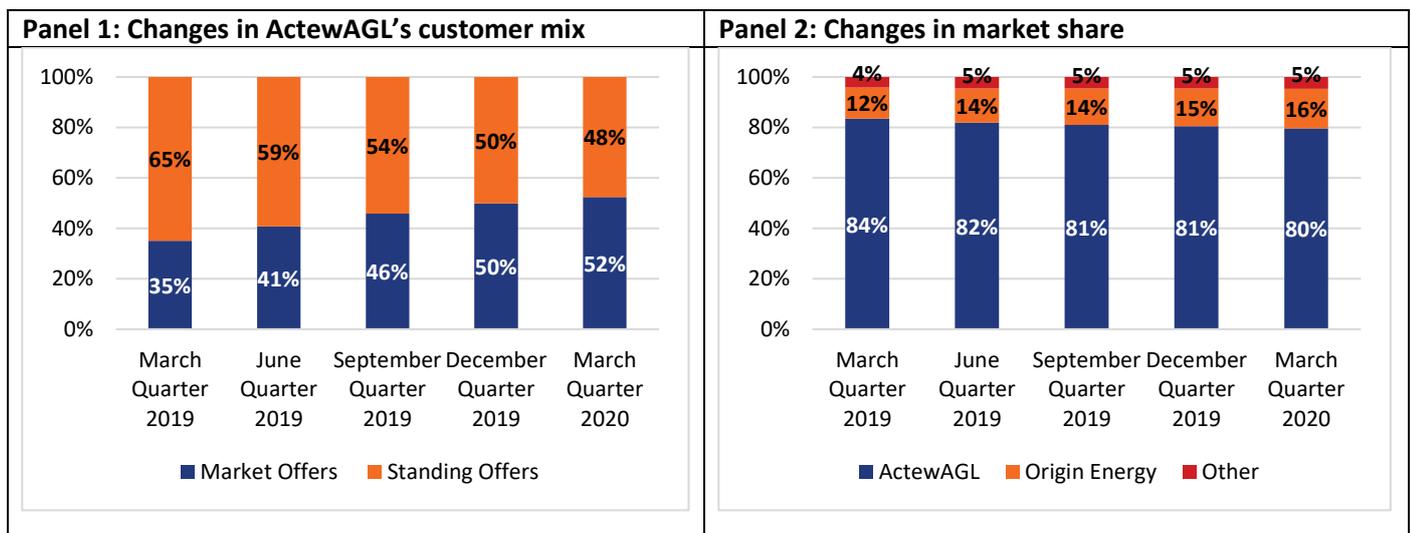
¹⁴ The minimum terms and conditions are set by the National Energy Customer Framework which was developed by State, Territory and Commonwealth Energy Ministers through the COAG Energy Council.

Market offer rates can sometimes be more price competitive and generally have terms and conditions that are set by the retailer rather than through regulation. That means, for example, retailers can change market offer prices more frequently than they can change prices for standing offers.

The increased take-up of market offers in the ACT reflects a range of factors, including affordability pressures which have encouraged consumers to shop around for better deals, increased competition among retailers, and government calls to shop around for cheaper electricity offers. In the March quarter 2019, nearly 65 per cent of ActewAGL’s residential electricity customers were on standing offers. However, within a year, this share declined to less than 48 per cent (in the March quarter 2020; see Figure 2.2). The share of standing offer customers in the ACT is still high relative to that in NSW (12 per cent) and Victoria (5 per cent). Therefore, there is still potential for more ACT customers to shift away from standing offers to market offers.

A second development in the ACT retail electricity market is an increase in competition. ActewAGL is the dominant retailer with a high market share. However, based on AER data,¹⁵ its market share declined from nearly 84 per cent in the March quarter 2019 to around 80 per cent in the March quarter 2020 (see Figure 2.2). Origin Energy appears to be the main competitor to ActewAGL; it increased its market share from around 12 per cent to nearly 16 per cent between the March quarter 2019 and the March quarter 2020. Energy Australia is the other main retailer with around 4 per cent of the market share. Increased competition has potential to put downward pressure on prices of unregulated market offers in the ACT.

Figure 2.2 Changes in the ACT retail market



Source: AER 2020

A third development in the ACT retail electricity market is an increase in the proportion of consumers on time-of-use tariffs or demand tariffs compared to flat rate tariffs. Flat rate tariffs have a daily supply charge and a single rate per energy consumed irrespective of the time of the day the energy was used. This means flat rate customers pay the same usage rate whatever time of the day energy is used. In contrast, customers on time-of-use tariffs pay a fixed supply charge and different usage rates depending on the time of the day when energy is used. Demand tariffs have a fixed supply charge, a usage charge, and a demand

¹⁵ AER 2020b

charge based on how much electricity is used within the daily peak time period set by the retailer. A customer's demand charge will be higher when many appliances are used at the same time during the daily peak time period. More information about different tariffs are available on the Australian Government's Energy Made Easy website.¹⁶

The trend towards moving to time-of-use and demand tariffs in the ACT reflects increased take up of smart meters and the 'tariff assignment policies' of some electricity retailers (such as ActewAGL) that require all smart meter customers to be on these tariffs.

The take up of smart meters in the ACT has increased due to the Power of Choice Reforms introduced by the AEMC in late 2017. The Power of Choice reforms require all new electricity meters for residential and small business customers to be smart meters. The installation of rooftop solar panels has also resulted in an increased take up of smart meters in the ACT; this is because the installation of solar panels also requires installation of a smart meter.¹⁷

The type of retail tariff that a customer has access to varies depending on whether they are a residential or business customer and the type of meter that they have. For example, until recently, ActewAGL customers with a smart meter were automatically placed on a retail demand tariff and had an option to switch to a time-of-use tariff; they were not able to access flat rate tariffs. This practice reflected ActewAGL's tariff assignment policy. These policies vary by retailer and are unregulated. ActewAGL changed its tariff assignment policy from 1 July 2020, and customers with smart meters are now automatically placed on time-of-use tariffs and can opt to move to a retail demand tariff.¹⁸ A factor influencing a retailer's tariff assignment policy is the tariff assignment policy of the network operator (discussed below).

2.3 Implications of market developments for network tariffs

As noted in chapter 1, the AER is responsible for regulating prices charged by network businesses such as Evoenergy. The AER undertakes an investigation (usually every five years) to determine the maximum allowable revenue that a network business may recover and the policies that the business uses to assign network charges to consumers.

In determining the maximum allowable revenue, the AER considers the efficient and prudent costs of owning and operating the network. During the regulatory period, the network business proposes prices to the AER for approval. The AER may approve prices if they are compliant with the revenue allowance, a side constraint and rules set by the AEMC (details below).

Evoenergy and the AER need to follow rules set by the AEMC when setting network prices and network tariff assignment policies. For example, one of the AEMC's rules requires network prices to be cost reflective. This means that the AEMC requires network prices to reflect the efficient cost of providing

¹⁶ <https://www.energymadeeasy.gov.au/article/electricity-tariffs>

¹⁷ <https://energysaver.nsw.gov.au/households/understand-your-usage/smart-meters>

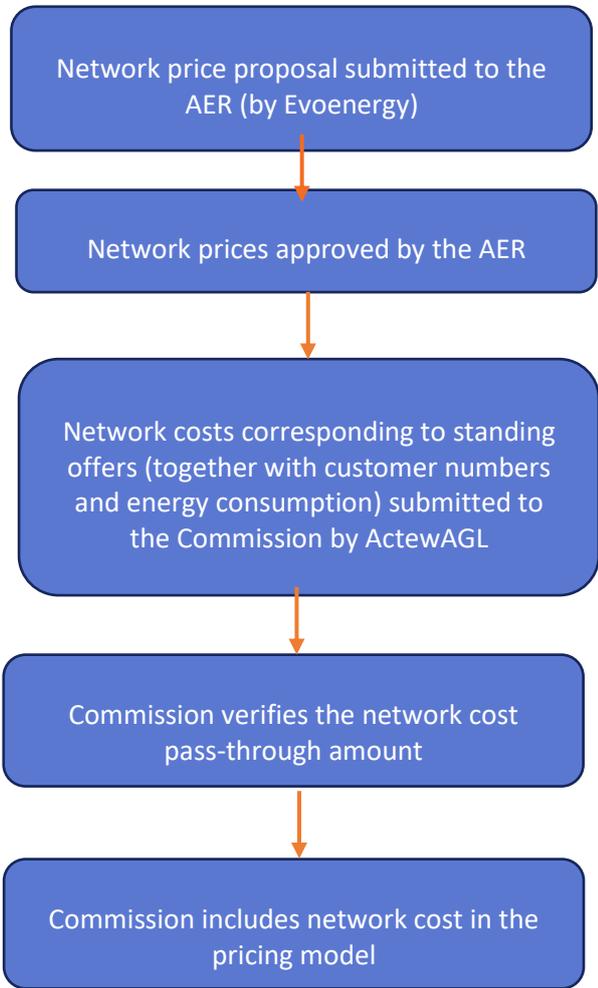
¹⁸ ActewAGL's schedule of charges from 1 July 2019 and 1 July 2020 available at <https://www.actewagl.com.au/plans-and-connections/pricing-information/act-home-prices>

network services to individual consumers so that consumers can make more informed decisions about their electricity usage.¹⁹

For Evoenergy, there is a two percent side constraint that applies to revenue recovered at the tariff class level (i.e. residential, low voltage commercial and high voltage customers). This means that the increase in revenue from each tariff class cannot exceed two percentage points above the maximum allowable percentage increase in revenue determined by the AER.

As noted in chapter 1, the Commission allows ActewAGL to pass on the network costs that it incurs when providing electricity services to standing offer customers. ActewAGL uses network charges approved by the AER when calculating the network cost pass-through amount. After the Commission has verified the network cost pass-through amount, it is included in the Commission’s pricing model to calculate the regulated price change. The network cost approval process is illustrated in Figure 2.3.

Figure 2.3 Network cost approval process



Each of ActewAGL’s standing offers has a different set of network charges. Network charges differ depending on the type of customer (i.e. residential versus business customers) and the type of electricity

¹⁹ AEMC 2014

meter used by the customer (i.e. smart meter versus basic meter), because Evoenergy wants pricing to be cost reflective and provide an incentive to encourage efficient network use.²⁰

Evoenergy has developed its tariff assignment policy in order to send price signals to retailers about the cost of running the network, particularly during peak periods. For example, a key cost of running the electricity network is network augmentation (i.e. expansion) to accommodate growth in peak demand. As such, the demand network tariff and time-of-use network tariff imposed by Evoenergy have higher network charges during peak periods to send a signal to the retailer that it should encourage its customers to be mindful of their electricity usage in that period.

Evoenergy automatically assigns consumers to network demand tariffs if they have a smart meter (irrespective of their retailer or retail tariff) in order to send a price signal to the retailer.²¹ The retailer can choose to pass this price signal onto the consumer (e.g. by encouraging the consumer to have a retail demand tariff) or not (e.g. by allowing them to choose different tariff types). Retailers can change the underlying network tariffs of their consumers within Evoenergy's tariff assignment policy. For example, a retailer is able to change the network tariff for smart meter customers from the network demand tariff to a time-of-use network tariff. However, retailers cannot assign a flat rate network tariff as an underlying network tariff for smart meter customers.²²

ActewAGL's tariff assignment policy appears to be influenced by the network tariff assignment policy of Evoenergy. That is, ActewAGL appears to largely pass on price signals that it receives from the network business to consumers.²³

However, retailers are not required to reflect the tariff assignment policies of the network operators. Some retailers in the ACT have chosen not to pass on some price signals from Evoenergy. For example, Origin Energy and Energy Australia offer flat rate retail tariffs to smart meter customers despite customers' underlying network tariffs being demand or time-of-use network tariffs.²⁴

The market developments described in sections 2.1 and 2.2 have implications for the network cost component of the Commission's pricing model and, therefore, the appropriateness and effectiveness of the form of price control. As described in chapter 1, a change in the mix of standing offer customers led to an increase in the network costs (when expressed in terms of dollars per MWh) incurred by ActewAGL in 2020-21 above the AER approved increase in network prices corresponding to standing offer tariffs.

This is because different network tariffs have different charges. The full list of network tariffs associated with standing offers is available in Appendix 1. Network charges for business customers are generally higher than the network charges for retail customers. Therefore, for example, if ActewAGL's residential customers move away from standing offers, ActewAGL's resulting standing offer customer base will have a higher proportion of business customers, which will result in a higher average network cost per MWh for customers on standing offers. Details on how the network cost component of the Commission's pricing model is calculated are available in chapter 3.

²⁰ Evoenergy 2020 p 4

²¹ Evoenergy 2018, p. 17

²² Evoenergy 2018

²³ As noted in section 2.2, ActewAGL changed its tariff assignment policy for smart meter customers so that customers with smart meters are automatically placed on time-of-use tariffs rather than the demand tariff.

²⁴ Based on information from retailer websites in October 2020.

The trends discussed in this chapter are likely to continue in the future. For example, as discussed in section 2.2, there is still potential for more ACT customers to shift away from standing offers to market offers. Competition in the ACT market has potential to increase over time and the smart meter take-up is likely rise as more basic meters are replaced with smart meters. Chapter 3 contains further details about the Commission's form of control, the pricing model and network costs in this context.

The Commission is seeking feedback on:

1. Do stakeholders have any comments on the trends in the wholesale market discussed above, including whether they are expected to continue?
2. Do stakeholders have any comments on the compositional changes in the retail market? In particular, do stakeholders expect to continue seeing consumers move from standing offers to market offers, and from flat rate tariffs to time of use and demand tariffs?
3. Are there any other changes in Australian energy markets that are likely to have implications for the current review?

3. Commission's current form of price control and the network cost calculation methodology

3.1 Commission's current form of price control

The Commission is responsible for regulating retail electricity prices faced by small customers on ActewAGL's standing offer tariffs. Small customers are defined as customers who consume less than 100MWh of electricity over any period of 12 consecutive months. Small customers are usually residential customers or small business customers. As described in chapter 2, standing offers are default offers that provide a safety net for those customers who do not shop around for unregulated market offers.

The Commission regulates ActewAGL's standing offer prices by determining the maximum allowable percentage price change that ActewAGL can apply across its 'basket' of standing offer tariffs from one year to the next. This is called a 'tariff basket' form of price control. Section 3.2 below explains how the Commission calculates the maximum allowable percentage price change.

ActewAGL's basket of standing offer tariffs (regulated tariffs) contains different standing offers available to residential and small business customers. As described in chapter 2, there are a variety of standing offers with different characteristics, such as flat rate tariffs, time-of-use tariffs and demand tariffs. In the 2020-21 financial year, ActewAGL's basket of regulated tariff has 16 such tariffs (in total for residential and business customers), each with a different set of charges and/or pricing structure. As discussed in chapter 2, Evoenergy has a range of network tariffs and ActewAGL's standing offer tariff structures and assignment policy appears to often reflect that of Evoenergy.

The Commission's tariff basket form of price control allows ActewAGL to adjust individual prices for its different standing offers, as long as the average adjustment across the basket of standing offers does not exceed the maximum allowable percentage change determined by the Commission. Under this approach, the Commission does not set the maximum prices that ActewAGL can charge for its standing offers.²⁵ It only controls the average change across the basket of standing offer tariffs.

In its final decision for the 2020-24 electricity price investigation, the Commission considered that the tariff basket approach is the most appropriate form of price control in the ACT for customers on regulated retail tariffs given the range of tariffs available. The Commission considered that ActewAGL should retain discretion to set individual tariffs in the regulated tariff basket. The current approach gives ActewAGL flexibility in setting tariffs so that ActewAGL is able to adjust prices to meet market conditions and ensure that tariffs are cost reflective.

²⁵ Under an individual price cap form of price control, the regulator sets the maximum level of individual prices.

Verifying ActewAGL's compliance with the Price Direction

Under the Commission's form of price control, the weighted average annual price change in ActewAGL's basket of regulated tariffs must not exceed the maximum allowable percentage change determined by the Commission.²⁶ Every year, the Commission checks if ActewAGL's standing offer prices meet this criterion.

The weighted average price change for a given year is calculated using ActewAGL's proposed standing offer prices (that is, charges) for a particular year compared to the previous year, and weights for each charge.

The weights in the weighted average price calculation are customer numbers and electricity consumption in the 12 months to 31 March for the latest year available.²⁷ ActewAGL's electricity offers have a supply charge (a fixed daily rate per customer) and variable rates per unit of energy consumed.²⁸ Weights are determined by customer numbers for the supply charge and by energy consumption for the variable charge.

The prices used in this calculation differ across the two years, but the weights remain unchanged from one year to the next. For example, when calculating the weighted average price change for the 2020-21 financial year, the prices used are the charges for 2020-21 and 2019-20, and the weights are the customer numbers and electricity consumption values for the 12 months to 31 March 2020.

The same weights are used in both the year in question and the previous year so that the calculated average across the tariff basket only measures the change in prices from one year to the next. For consistency, it is important that the Commission calculates individual cost components that inform the maximum weighted average price increase using a similar approach (discussed in section 3.2).

The mathematical formula for the Commission's price control is presented in Box 3.1.

Box 3.1: The Commission's price control formula

ActewAGL's regulated retail tariffs should comply with the following formula:

$$1 + Y^t \geq \frac{\sum_{i=1}^n \sum_{j=1}^m P_{ij}^t Q_{ij}^{t-1}}{\sum_{i=1}^n \sum_{j=1}^m P_{ij}^{t-1} Q_{ij}^{t-1}}, \text{ for all } i \text{ and } j,$$

$$\text{subject to } 1.02 + Y^t \geq \frac{\sum_{j=1}^m P_{ij}^t Q_{ij}^{t-1}}{\sum_{j=1}^m P_{ij}^{t-1} Q_{ij}^{t-1}}, \text{ for each } i.$$

where:

- ActewAGL has n regulated retail tariffs that each have up to m components;
- t denotes a financial year;
- i denotes a regulated tariff and j denotes a component of tariff i ;

²⁶ The maximum allowable percentage price change is calculated for each year of the regulatory period in the annual price recalibration (or annual price reset), using the method set out in the Price Direction.

²⁷ Quantities used to calculate the 2020-21 weighted average price change, for example, are the customer numbers and usage for the 12 months to March 2020.

²⁸ The number of variable rates in each tariff depends on the tariff type. For example, a flat rate tariff has a single rate per energy consumed irrespective of the time of the day and time-of-use tariffs have multiple rates depending on the time of the day. ActewAGL is permitted to change both the fixed and variable charges in each tariff type.

- Y^t is the maximum average percentage increase in regulated retail tariffs determined in accordance with the Commission's pricing model;
- P_{ij}^t is the price that ActewAGL proposes to charge for component j of regulated tariff i for year t ;
- P_{ij}^{t-1} is the price that ActewAGL charges for component j of regulated tariff i in the year $t-1$;
- Q_{ij}^{t-1} is the reference quantity for component j of the regulated tariff i defined as the actual quantity (in both customer numbers and megawatt hours) as reported by ActewAGL for the 12-month period ending 31 March in year $t-1$.

The Commission's form of price control also has a side constraint to ensure that the weighted average price increase of any single tariff does not differ too much from the maximum allowed percentage change (Box 3.1).

Box 3.2: Side Constraint

As part of the form of control, the Commission also imposes a 2.0 percentage point upper bound side constraint that ensures that the weighted price increase of any single tariff does not differ significantly from the allowed percentage change. In particular, it means that the weighted average price change for any individual standing offer tariff will be within two percentage points above the weighted average price change determined by the Commission. This restriction is an upper bound because the constraint does not limit price reductions. ActewAGL is able to reduce tariffs by any amount that is larger than the allowed price change determined by the Commission.

The Commission introduced the side constraint in the 2020-24 retail price investigation because it considered that there would be benefits to consumers by limiting how much ActewAGL can change prices of individual tariffs in any single year. This is because limiting price increases in any single year would ensure the bill increments for an average electricity customer will be close to the weighted average price change determined by the Commission, and hence provide greater price stability for consumers.²⁹

The Commission has examined the form of price control used by the AER, Queensland Competition Authority (QCA), Essential Services Commission in Victoria (ESA), and the Office of the Tasmanian Economic Regulator (OTTER) when regulating retail electricity prices. None of those regulators use a tariff basket approach. Therefore, the methods used by those regulators to regulate prices are not directly comparable to the method used by the Commission.

The methods used by other regulators to calculate the network cost component are summarised in Appendix 2.

²⁹ ICRC 2020b, p. 18

3.2 Commission's pricing model

The Commission determines the maximum allowable percentage price change that ActewAGL can apply to its basket of regulated tariffs each year using a pricing model. The pricing model estimates the individual cost components that would be incurred by an efficient retailer in a similar position as ActewAGL when providing electricity services to ACT customers on regulated tariffs.

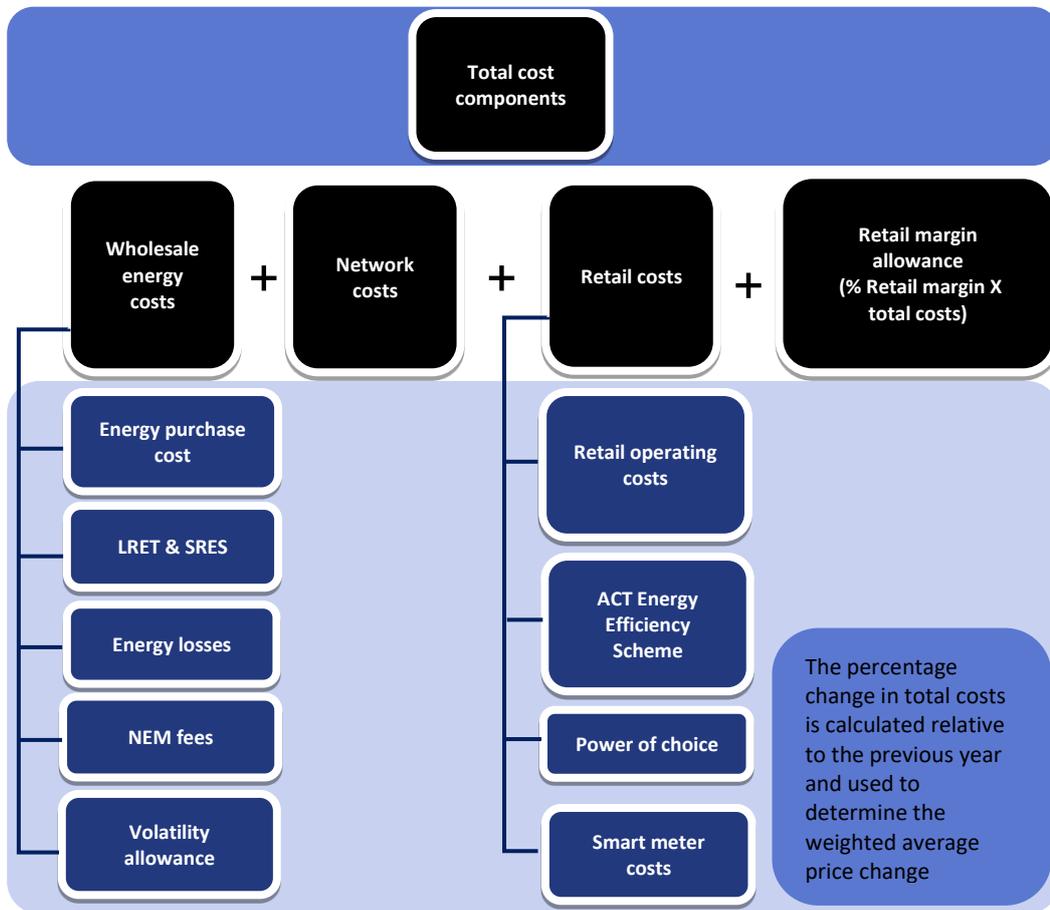
The Commission's pricing model contains three main cost categories:

- wholesale electricity costs, which comprise energy purchase costs, Large-scale Renewable Energy Target (LRET) and Small-scale Renewable Energy Scheme (SRES) costs, energy losses, and National Electricity Market (NEM) fees
- network costs, which include transmission and distribution costs and jurisdictional scheme costs (which include the feed-in-tariff schemes)
- retail costs, which comprise retail operating costs, smart meter costs and Energy Efficiency Incentive Scheme (EEIS) compliance costs.

A large portion of costs are not within the control of the retailer and hence are not regulated by the Commission. These include wholesale costs (except for the hedging strategy used by the retailer) and network costs. The costs that are within the control of the retailer include retail operating costs and the retail margin.

Once the cost categories are estimated, they are added together and multiplied by a retail margin (to provide a profit allowance) to produce total costs to be recovered in dollars per megawatt hour (\$/MWh). The total costs are then compared to the total costs calculated for the previous year. This produces a maximum allowable percentage increase that ActewAGL can apply to its basket of regulated retail tariffs. The cost categories are shown in Figure 3.1.

Figure 3.1 The Commission's pricing model



3.3 Commission's current method of estimating network costs

As described in section 1.1, the network cost component of the Commission's pricing model is calculated by ActewAGL based on AER approved network prices. The network cost is sent to the Commission for verification. After verification, the Commission includes the network cost pass-through amount in the pricing model which calculates the maximum allowed price change that ActewAGL can apply across its basket of standing offer tariffs.

As there are different network charges for different standing offer retail tariffs, ActewAGL calculates the network cost pass-through amount for a particular year as a weighted average network cost (expressed in \$/MWh terms) for standing offer customers.

In the weighted average network cost calculation, the network prices (or charges) are the regulated charges for each network tariff. The weights are ActewAGL's standing offer customer numbers and their electricity usage for each standing offer in the 12 months to 31 March. As with retail tariffs, network tariffs have a daily supply charge per customer and variable charge per energy consumed. Therefore, both the customer

numbers and the energy consumed are needed when calculating the network cost pass-through amount. Data on the weights are provided to the Commission by ActewAGL on a commercial in confidence basis.

When calculating the weighted average annual change in network costs, ActewAGL uses different network charges for each year and also different weights (customer numbers and energy usage) for each year. That is, the network cost pass-through amount can change year to year for two reasons: (1) if there are changes in the AER approved network prices, and (2) if there are changes in the weights.

The weights can change when ActewAGL's standing offer customer mix changes from year to year (e.g. if there is a change in the proportion of customer on different tariff types). To put it another way, the increase in the network cost amount in the Commission's pricing model includes the effect of compositional changes in ActewAGL's customer base, in addition to the effect of price changes that are approved by the AER.

In contrast, the Commission's form of price control (described in section 3.1) calculates the weighted average price change by keeping the weights fixed year to year. This means that the weighted average price change in the Commission's form of price control reflects price changes only, whereas the method used to calculate the change in network costs reflects price changes as well as changes in ActewAGL's standing offer customer mix.

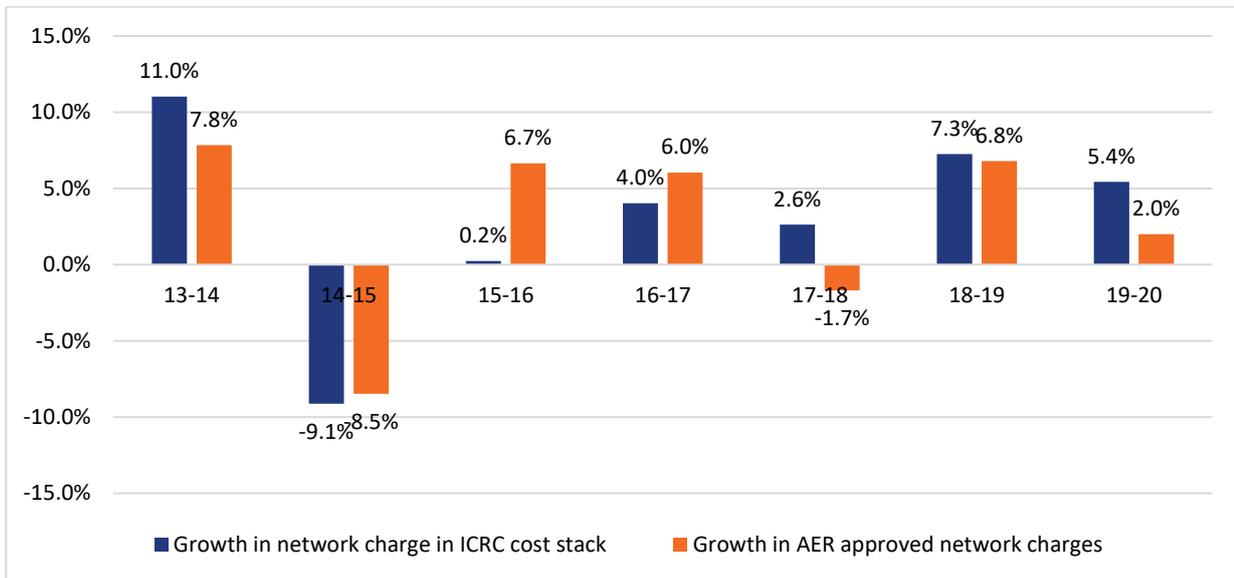
As part of this review, the Commission will consider whether the difference between the network cost calculation method and the form of control is appropriate and consistent.

As described in chapter 1, the network cost component in the Commission's pricing model recorded a 5.4 per cent annual increase in the 2020-21 financial year compared to the AER approved increase in network prices of 2.0 per cent. The change in the customer mix had resulted from an increase in customers, especially residential customers, changing retailers or moving from a standing offer to a market offer. This caused the proportion of standing offer customers on tariffs with relatively low network costs (i.e. residential tariffs) to fall and the proportion of customers with high network costs (i.e. business tariffs) to rise.

In addition to the changing residential versus business customer mix described above, the network cost increase reflected a change in the mix of standing offer business customers. The weighted average network cost (expressed in dollar per MWh terms) for business customers increased significantly despite network prices rising by 2.0 per cent. This is because there was a higher proportion of standing offer business customers on more expensive network tariffs. For example, the number of standing offer customers on the business demand tariff (a tariff with a relatively high weighted average network cost) had increased as smart meters are installed. In contrast, the number of customers on all other business tariffs had decreased.

Figure 3.2 shows that, since 2017-18, network costs for standing offer customers have increased by more than network prices in each year. The Commission's analysis indicates that this reflects the market changes described above and in chapter 2. Prior to 2017-18, the difference between changes in network costs and prices was less consistent, with the change in the network costs calculated by ActewAGL (and verified by the Commission) sometimes being higher and sometimes being lower than the change in the AER approved network charges. For instance, in 2015-16, the network cost component increased by 0.2 per cent when the AER approved increase in network prices was 6.7 per cent.

Figure 3.2 Network Charge Growth Comparison



Source: Commission's calculations.

The mathematical formula used to calculate the weighted average network cost change from one year to the next is presented in Box 3.2.

Box 3.3: Weighted Average Network Cost Change

$$1 + Y_{network}^t = \frac{\sum_{i=1}^n \sum_{j=1}^m P_{ij}^t Q_{ij}^{t-1}}{\sum_{i=1}^n \sum_{j=1}^m P_{ij}^{t-1} Q_{ij}^{t-2}} * \frac{[Total\ usage\ in\ year\ t-2]}{[Total\ usage\ in\ year\ t-1]}$$

where:

- ActewAGL pays Evoenergy for n network tariffs that each have up to m components;
- t denotes a financial year;
- i denotes a regulated tariff and j denotes a component of tariff i ;
- $Y_{network}^t$ is the change in the network cost components (in percent) in the Commission's pricing model;
- P_{ij}^t is the network price for component j of network tariff i for year t ;
- P_{ij}^{t-1} is the network price for component j of network tariff i for year $t-1$;
- Q_{ij}^{t-1} is the quantity for component j of the regulated tariff i defined as the actual quantity (in both customer numbers or megawatt hours) as reported by ActewAGL for the 12-month period ending 31 March in year $t-1$.
- Q_{ij}^{t-2} is the quantity for component j of the network tariff i defined as the actual quantity (in both customer numbers or megawatt hours) as reported by ActewAGL for the 12-month period ending 31 March in year $t-2$.
- Total usage in year $t-1$ is the total actual electricity usage in megawatt hours by ActewAGL's standing offer customers in year $t-1$.
- Total usage in year $t-2$ is the total actual electricity usage in megawatt hours by ActewAGL's standing offer customers in year $t-2$.

The Commission is seeking feedback on:

4. Do stakeholders have any comments on the implications of having different calculation methods for network costs compared to the maximum allowable price increase?
5. Are there any other comments that stakeholders would like to make?

4. Consolidated list of questions

The preceding chapters identified a number of questions on which the Commission is seeking feedback. The list is consolidated in this section.

This list is not exhaustive, and submissions may address other issues that relate to the review. Submissions do not have to address all the questions set out by the Commission.

1. Do stakeholders have any comments on the trends in the wholesale market discussed above, including whether they are expected to continue?
2. Do stakeholders have any comments on the compositional changes in the retail market? In particular, do stakeholders expect to continue seeing consumers move from standing offers to market offers, and from flat rate tariffs to time of use and demand tariffs?
3. Are there any other changes in Australian energy markets that are likely to have implications for the current review?
4. Do stakeholders have any comments on the implications of having different calculation methods for network costs compared to the maximum allowable price increase?
5. Are there any other comments that stakeholders would like to make?

Appendix 1 – Network charges associated with ActewAGL’s standing offer tariffs

This appendix presents Evoenergy’s network charges associated with ActewAGL’s standing offer tariffs.

Table A.2: 2020-21 Network prices for residential customers*

Customer class	Network price
Residential Demand Network	
Supply charge (c/day)	36.91
Direct debit supply charge (c/day)	36.91
Energy (c/kWh)	3.22
Maximum demand (c/kW/day)	15.55
Basic Residential Network	
Supply charge (c/day)	41.44
Direct debit supply charge (c/day)	41.44
Energy (c/kWh)	8.04
Residential 5000 Network	
Supply charge (c/day)	63.82
Direct debit supply charge (c/day)	63.82
Energy (<60 kWh/day) (c/kWh)	6.66
Energy (>60 kWh/day) (c/kWh)	8.04
Residential Heat Pump Network	
Supply charge (c/day)	108.90
Direct debit supply charge (c/day)	108.90
Energy (<165 kWh/day) (c/kWh)	5.08
Energy (>165 kWh/day) (c/kWh)	8.04
Residential TOU Network	
Supply charge (c/day)	41.44
Direct debit supply charge (c/day)	41.44
Peak Energy (c/kWh)	14.43
Shoulder Energy (c/kWh)	6.54
Off-peak Energy (c/kWh)	3.20
Off-Peak Night Network	
Energy (c/kWh)	2.21
Off-Peak Day & Night Network	
Energy (c/kWh)	3.40

Notes:* Network prices presented in this table are provided to the Commission by ActewAGL and are based on Evoenergy’s network prices approved by the AER. The Commission applies standing offer customer numbers and energy consumptions to these prices to estimate network costs on \$/MWh basis.

Table A.3: 2020-21 Network prices for business customers*

Customer class	Network price
LV demand network	
Supply charge (c/day)	66.76
Energy (c/kWh)	4.76
Maximum demand (c/kW/day)	45.77
General Network	
Supply (c/day)	74.67
Energy (<330 kWh/day) (c/kWh)	12.27
Energy (>330 kWh/day) (c/kWh)	15.94
General TOU Network	
Supply (c/day)	74.67
Business (c/kWh)	19.34
Evening (c/kWh)	8.76
Biz Off-Peak (c/kWh)	3.96
LV TOU kVA Demand Network	
Supply (\$/day)	250.61
Business (c/kWh)	7.28
Evening (c/kWh)	4.02
Biz Off-Peak (c/kWh)	2.19
Maximum Demand (c/kVA/day)	46.06
Streetlighting	
Supply (c/day)	74.99
Energy (c/kWh)	8.52
Small Unmetered Loads	
Supply (c/day)	41.23
Energy (c/kWh)	12.48

Notes: * Network prices presented in this table are provided to the Commission by ActewAGL and are based on Evoenergy’s network prices approved by the AER. The Commission applies standing offer customer numbers and energy consumptions to these prices to estimate network costs on \$/MWh basis.

Appendix 2 – Network costs calculation methods in other jurisdictions

This appendix provides a summary of methods used by other regulators to calculate the network cost component in retail electricity regulation models.

AER

The AER regulates standing offer prices in South East Queensland, New South Wales, and South Australia under the default market offer regulation (DMO). The DMO price in each distribution zone is the maximum price that electricity retailers can charge residential and small business customers on a standing offer contract.

When calculating the DMO price changes for 2020-21, the AER adjusted the DMO prices for 2019-20 to reflect forecast changes in wholesale, environmental and network costs. The residual costs (including retail costs) were adjusted according to changes in the Australian Consumer Price Index (CPI).

For its 2020-21 DMO determination, the AER calculated the network cost adjustment using indicative network tariffs in all regions (as approved tariffs were not yet available), and a representative annual usage. The representative annual usage reflects the annual electricity usage of a typical customer in each distribution zone. This usage differs across distribution zones. However, the representative annual usage in each distribution zone remained unchanged between years. Therefore, network cost change in the DMO reflected the network price changes only.

QCA

The QCA regulates electricity prices in regional Queensland. The QCA uses an individual price cap form of price control. This involves setting regulated retail prices for each of the individual retail tariffs available in the regional Queensland. As at 2020-21, the QCA sets regulated prices for 35 tariff lines (6 for residential customers, 9 for small business customers, 2 for both residential and small business customers, 7 for large business customers, 9 for very large business customers, and 2 for unmetered supply).

The prices for each retail tariff line are calculated using a network plus retail cost build-up methodology where the network cost is treated as a pass-through and the retail component (energy and retail costs) is determined by the QCA.

The network cost component of each of these retail tariff lines is the network price regulated by the AER if there is an underlying network tariff. Not all retail tariffs have underlying network tariffs. This is because the distributor has retired certain network tariffs that underpin the existing retail tariffs or has introduced new network tariffs that are materially different to the existing retail tariff structures.

For the existing regulated retail tariffs that do not have an underlying network tariff, the QCA has determined the network cost component by using a price indexation approach. The QCA's price indexation approach uses indices that reflect changes in network prices. Therefore, the QCA's method of adjusting network prices reflects the AER approved price changes.

ESA

The ESC in Victoria determines the Victorian Default Offer (VDO) to regulate standing offer prices. The VDO is the tariff that electricity retailers must charge customers on flat rate standing offer contracts. The VDO includes a daily supply charge as well as a usage charge (per kWh). The VDO price differs across the customer type (residential customer or small business customer) and the distribution zone. Differences in tariffs across distribution zones reflect the unique costs of providing electricity services in each area.

The network cost component of the VDO is the simplest network tariff in each distribution zone – generally a daily supply charge and a flat rate usage charge. The VDO also includes metering charges for each distribution zone, and a controlled load option for domestic customers.

When updating the VDO prices each year, the network cost component is updated using the AER regulated prices. Therefore, network cost change in the VDO reflect the AER approved price changes only.

OTTER

OTTER regulates the retail electricity prices in Tasmania using a notional maximum revenue approach. The notional maximum revenue is the maximum revenue that Aurora Energy (the main electricity retailer in Tasmania) can earn based on forecast customer numbers and associated forecast customer loads.

The network cost component of the notional maximum revenue is the total network cost based on the forecast customer numbers and the network prices regulated by the AER. OTTER includes an adjustment to the network cost to account for cost over/under recoveries from previous periods. The only costs that have under or over recoveries are those cost components for which the price is not known at the time of setting prices. These components include renewable energy costs, AEMO ancillary services costs and possible some metering costs.

Abbreviations and acronyms

ACT	Australian Capital Territory
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
COAG	Council of Australian Governments
Commission	Independent Competition and Regulatory Commission
EMMR	Electricity Model and Methodology Review
ESB	Energy Securities Board
ESC	Essential Services Commission
MWh	Megawatt hour
NEM	National Electricity Market
OTTER	Office of the Tasmanian Economic Regulator
QCA	Queensland Competition Authority

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