6 Retail energy markets

Retail energy markets are the final link in the energy supply chain, providing an interface for energy retailers and energy service providers to sell electricity, gas and energy services to residential and small business customers.[464] The National Energy Customer Framework (NECF) and the Energy Retail Code of Practice (Victoria) regulate the sale and supply of electricity and gas to retail customers.[465]

Retailers purchase energy either from direct contracts with suppliers or from wholesale markets and onsell it to consumers.[466] Consumers are generally able to choose the provider they purchase energy from based on the price and suitability of services available.[467]

Retailers are exposed to financial risk through spot price volatility in wholesale energy[468] markets. To manage this, most retailers purchase hedging contracts that limit part or all of the wholesale price they pay (chapter 2, section 2.5). Hedging enables retailers to offer stable prices to consumers, so that consumers have more predictable energy bills instead of bearing the financial risk of more volatile wholesale energy prices.

Consumers continue to seek more autonomy over their energy costs through installation of consumer energy resources – such as rooftop solar and home batteries. Residential solar photovoltaic (PV) installed in the National Electricity Market (NEM) now exceeds 20 gigawatts (GW), following almost 3 GW of rooftop solar capacity added by consumers in the 2023–24 financial year (chapter 2,

464 Residential customers and small business customers (that consume energy at business premises below the upper consumption threshold) are considered 'small customers' under the National Energy Retail Law. The term 'small customers' is used throughout this report to refer to both residential and small business customers. Where required, the terms 'residential' and 'small business' are used separately.

465 The National Energy Customer Framework is a suite of legal instruments. For further information see AEMC, National Energy Customer Framework, Australian Energy Market Commission, accessed 30 August 2024.

466 Electricity generally must be purchased through the National Electricity Market, but gas is more likely to be purchased directly from suppliers (around 85%) than through the domestic east coast gas market.

467 Consumers in embedded networks – such as those in some apartment buildings, retirement villages or caravan parks where the site owner sells the electricity – may have less opportunity to choose a retailer. This could be because of the different metering and wiring arrangements of the embedded network, or lack of authorised retailers that will provide an 'energy only' contract. Consumers experiencing vulnerability may also face challenges in choosing a retailer (see section 6.6.7 for more information).

468 The word 'energy' is used throughout this chapter when it refers to both electricity and gas. The words 'electricity' and 'gas' are used separately when required.

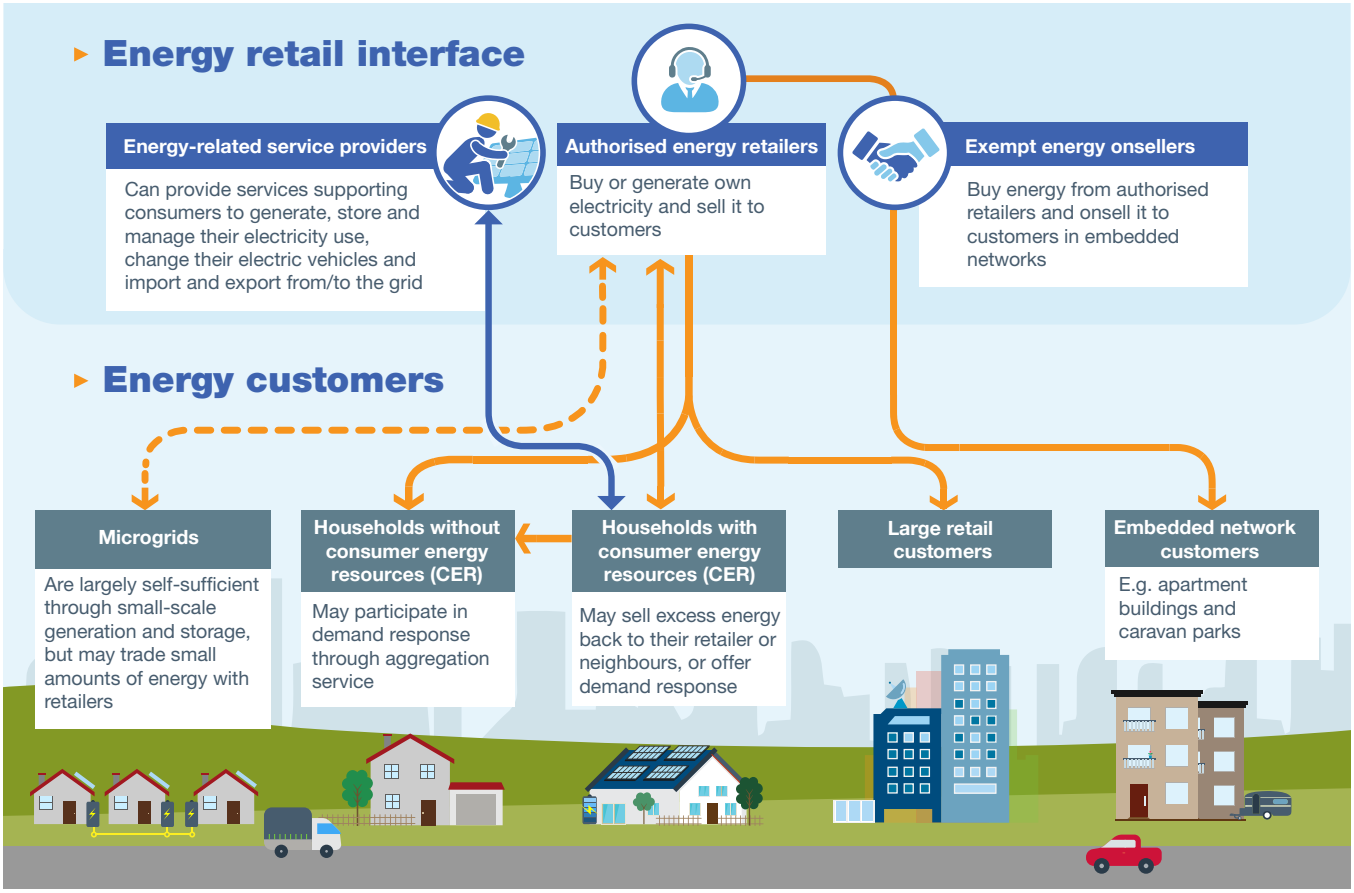
section 2.8.1). This is equivalent to 25% of registered generation capacity across the NEM, making rooftop solar the fuel source with the highest registered capacity across the NEM (chapter 2, Figure 2.14).[469]

Despite some easing of wholesale electricity costs following the significant market events of winter 2022,[470] consumer energy costs remain high by historical standards (chapter 2, Figure 2.3). With broader cost-of-living pressures, increasing network prices and general inflation, retail prices are expected to remain high (section 6.4.1). In 2023–24, bills for customers on standing offers increased compared with the previous year in Queensland, New South Wales, South Australia, the ACT and Tasmania.[471] Bills for customers on market offers increased less markedly than standing offer customers.

Gas bills increased for all customers except those on market offers in some remote Queensland network areas. Gas bills for customers on standing offers increased significantly more compared with those on market offers in all NEM regions. As with 2022–23, Victorian gas customers experienced the most significant increases in 2023–24 (Figure 6.4 and Figure 6.5). Further analysis and more up-to-date data will be provided in the AER's forthcoming Annual retail markets report 2023–24.[472]

With energy affordability continuing to be a priority, governments have implemented measures such as fuel price caps on coal and gas and new power bill relief funds to ease cost-of-living pressures.

Figure 6.1 Retail energy market supply chain



469 Capacity generated by rooftop solar is subtracted from demand (rather than traded in the NEM). With rooftop solar output records set over the summer of 2022–23, when rooftop solar reached a record 11,504 MWh, the rapid uptake of rooftop solar continues to be the major contributing factor to reduced grid demand.

470 In 2022, multiple factors combined to put extreme upward pressure on prices in the NEM. These included coal plant outages, coal supply issues, domestic gas supply shortfalls and hydro generating constraints. For more information see AER, June 2022 market events report, Australian Energy Regulator, 14 December 2022.

471 Standing offer bills remained stable for customers in the Ergon Energy network (Queensland), which has historically remained stable. Customer bill data is calculated based on available offers displayed over time on government price comparison websites Energy Made Easy and Victorian Energy Compare. Pricing data is aggregated across multiple pricing areas within some electricity and gas distribution networks.

472 The AER's Retail performance reporting includes the Annual retail markets report published in November and Retail energy market performance updates published quarterly.

Box 6.1 The AER's role in retail energy markets

The Australian Energy Regulator (AER) protects consumers by regulating the market to ensure they pay no more than necessary for safe, reliable and affordable energy, and by ensuring energy businesses comply with the rules.

We regulate retail energy markets in jurisdictions that have implemented the National Energy Retail Law, including electricity and gas customers in Queensland, New South Wales (NSW), Victoria (electricity connection for retail customers only), South Australia, the Australian Capital Territory (ACT) and Tasmania (electricity customers only). We protect residential and small business energy consumers (particularly vulnerable consumers) while enabling consumers to participate in energy markets.

We are responsible for:

- setting a price cap on standing offers for electricity in South East Queensland, NSW and South Australia – this cap also acts as a reference price for market offers
- maintaining an energy price comparator website (energymadeeasy.gov.au) to help residential and small business customers understand the range of offers in the market, make better choices about those offers and be aware of their rights and responsibilities when dealing with energy providers
- assessing applications from businesses looking to become energy retailers and granting exemptions from the requirement to hold a retailer authorisation
- administering a retailer of last resort scheme, which protects customers and the market if an energy retailer fails
- developing guidance notes for energy retail, wholesale, distribution and transmission markets, and corporate and consumer matters
- monitoring and enforcing compliance (by retailers, exempt sellers and distribution network service providers) with obligations in the Retail Law, Rules and Regulations
- approving policies energy retailers must implement to assist customers who are facing financial hardship and looking for help to manage their bills
- monitoring the NEM and reporting on market performance and energy businesses, including information on trends on energy affordability and customers experiencing hardship.

6.1 Retail market snapshot

Since the last *State of the energy market* report:

- Energy bills for consumers remain high compared with historical levels (section 6.4). An increase in electricity bills for customers on standing and market offers is observable in all NEM regions in 2023–24 compared with the previous year. Gas bills for customers on market offers saw an increase in every jurisdiction, except for Queensland, where there was a marginal reduction. For electricity and gas customers on standing offers, bills increased more than for those on market offers in most regions.
- Broader cost-of-living pressures and increased customer debt levels indicate some consumers are not well-placed to absorb continuing increases in energy prices.
- In its 2024–25 Budget, the Australian Government provided $1.8 million over 4 years to implement a range of consumer-focused energy retail reform measures. These included support for consumers switching to a better deal with just 'one click' and up to $3.5 billion towards an Energy Bill Relief Fund to provide electricity rebates of up to $300 for eligible households and $325 for eligible small businesses. State and territory governments commenced rolling out the rebate schemes in all NEM regions in July 2024. This is in addition to the existing state-based rebate and concession schemes established by state and territory governments.

- Following the 19 July 2024 Energy and Climate Change Ministerial Council meeting, Hon Chris Bowen MP, Minister for Climate Change and Energy submitted a rule change request to the Australian Energy Market Commission (AEMC) to amend the National Energy Retail Rules (NERR). The rule change is part of a package of proposed rule changes to improve energy affordability and consumer protections.[473]
- The AER's calculation of the electricity default market offer 2024–25 (DMO 6) was modified this year to better take into account the treatment of smart meter customers within the forecasting approach. Since DMO 5 (2023–24), the AER has observed wholesale costs easing off while network costs have increased, and that increased retail costs were mostly offset in many regions by the lower allowances (including margins) that AER allowed retailers. These movements have resulted in overall prices decreasing in NSW and South Australia and increasing in southeast Queensland.[474]
- The AER is progressing broader strategies to support energy equity and affordability, including advocating for new consumer protections, and better addressing the needs of consumers experiencing payment difficulties. These include the Game Changer Report, the Final advice to government on future consumer protections, and the Towards energy equity strategy. These strategies they seek to address the AER's concerns about the impact market developments on consumers experiencing vulnerability, who may be less able to adopt technology, modify their energy use or shop around for a cheaper energy contract.

6.2 Retail energy market regulation

Five jurisdictions – Queensland, NSW, South Australia, Tasmania and the ACT – apply a common national framework for regulating retail energy markets. The framework applies to electricity retailing in all 5 jurisdictions and to gas retailing in Queensland, NSW, South Australia and the ACT.

The Retail Law operates alongside the Australian Consumer Law to protect small energy consumers in their electricity and gas supply arrangements. It sets out protections for residential consumers and small businesses.[475] Victoria does not apply the national framework but applies similar regulatory provisions.[476]

The Retail Law and equivalent arrangements in Victoria focus on consumer protections related to the traditional retailer–customer relationship in buying electricity and gas. Protections are generally stronger for consumers supplied through an authorised retailer than consumers in embedded networks or entering solar power purchase agreements.[477]

State and territory-based regulators regulate electricity prices in regional Queensland, Victoria, Tasmania and the ACT.[478] Since 1 July 2019 the AER has set caps on 'standing offer' prices[479] for electricity through the default market offer (DMO). The DMO applies in jurisdictions without state-based price regulation (section 6.4).

473 AEMC, Assisting hardship customers, Australian Energy Market Commission, accessed 11 September 2024.

474 For more analysis on drivers for network cost increases in all jurisdictions see AER, Final Determination – Default market offer prices 2024–25, Australian Energy Regulator, 1 July 2024.

475 The thresholds for who meets the criteria of a residential customer or small business varies between jurisdictions. For example, in jurisdictions where the Retail Law applies, it includes those consuming fewer than 100 megawatt hours (MWh) of electricity or 1 terajoule (TJ) of gas per year. For electricity, in South Australia, small electricity customers are those consuming fewer than 160 MWh per year. In Tasmania, the threshold is 150 MWh per year.

476 Changes to the Victorian framework, including recommendations adopted from the Thwaites *Independent review into the electricity & gas retail markets in Victoria* (August 2017), have seen greater divergence between the Victorian and national frameworks.

477 Embedded networks are smaller, localised private networks that distribute energy to sites such as apartment blocks, retirement villages, caravan parks and shopping centres. They operate alongside major distribution networks under a similar, but different regulatory framework (see section 6.2.3). A solar power purchase agreement is a contract where a business provides, installs and maintains the solar panels in exchange for the consumer agreeing to buy the energy produced by the system at an agreed price for an agreed period.

478 These include the Queensland Competition Authority in regional Queensland, Essential Services Commission in Victoria, Independent Commission and Regulatory Commission in the ACT and Office of the Tasmanian Economic Regulator in Tasmania.

479 Standing offers apply where a customer does not enter a market contract. The terms and conditions of standing offers are prescribed in the National Energy Retail Rules and include consumer protections not required in market retail contracts, such as access to paper billing, minimum periods before bill payment is due, a set period for reminder notices, and no more than one price change every 6 months.

This chapter focuses on the 5 jurisdictions where the AER has regulatory responsibilities, but also covers the Victorian market where applicable. Western Australia and the Northern Territory apply separate regulatory arrangements and are not covered in this report, except where data from those jurisdictions is necessary to provide insights into broader energy consumer issues or assist in comparative analysis between the NEM and other energy systems.

6.2.1 Sellers and resellers of energy services

Market participants that sell and resell energy and services to consumers are classified into:

- those authorised as retailers under the Retail Law
- those exempt from the requirement to be authorised[480]
- those offering energy products and services beyond the scope of the Retail Law – such as energy management services, solar and storage products and off-grid energy systems.

Only customers of authorised retailers enjoy the full protections in the Retail Law, which is administered and enforced by the AER. Other consumers may be covered by the broader Australian Consumer Law, which is administered and enforced jointly by the Australian Competition and Consumer Commission (ACCC) and state and territory consumer protection agencies.[481]

6.2.2 Authorised energy retailers

Under the Retail Law a person must hold a retailer authorisation (unless exempt from the requirement) to sell electricity or gas. The AER issues retailer authorisations and seeks to ensure compliance with consumer protection and other obligations under the Retail Law and Retail Rules. An authorisation covers energy sales to consumers in all 5 participating jurisdictions.[482]

While Victoria is part of the NEM, the Victorian Essential Services Commission (ESC) is also responsible for authorising new retailers into the energy market.

6.2.3 Exempt energy sellers

An energy seller may apply[483] to the AER or the ESC (Victoria) for an exemption from authorisation if it only intends to supply energy services to:

- a limited customer group (for example, at a specific site or incidentally through a relationship such as a body corporate)
- supplement its customers' primary energy connection
- sell or supply electricity ancillary to telecommunication services, such as data centres.

As at August 2024, over 3,600 unique businesses were registered in the AER's public register of exemptions to onsell energy within an embedded network (that is, a small private network whose owner supplies energy to other parties connected to the network).[484] Examples of entities that might be exempt sellers are shopping centres, retirement villages, caravan parks and apartment complexes or remote/rural communities where energy is generated and sold off-grid. Solar power purchase agreement providers are also covered by the AER's and ESC's exemptions frameworks.

480 In Victoria, where the Retail Law does not apply, retailers must hold a licence issued by the Essential Services Commission or seek an exemption from this requirement.

481 Queensland has implemented additional provisions about selling electricity using card-operated meters and model terms and conditions for standard retail contracts for card-operated meters. These are contained in the National Energy Retail Law (Queensland) and National Energy Retail Law (Queensland) Regulation 2014.

482 See the AER website for a public register of authorised retailers and authorisation applicants.

483 Some energy sellers have 'deemed' exemptions, and do not need to apply or register with the AER before receiving the exemption. Examples can include a site-owner selling metered electricity or gas to fewer than 10 customers within the limits of the site.

484 The number of unique businesses registered as exempt energy sellers does not equate to the number of embedded network sites, as a business may onsell to customers across multiple sites.

The Australian Energy Market Commission (AEMC) cited stakeholder estimates that up to 500,000 consumers purchase electricity through embedded networks.[485] Exemption holders must follow strict conditions and meet a range of obligations to their customers (detailed in the AER's guidelines). Conditions are based on the obligations that apply to authorised retailers and distribution network service providers, but are a lighter, less prescriptive form of regulation.[486]

6.2.4 AER review of retail performance data

The *AER (Retail Law) Performance Reporting Procedures and Guidelines* establish how energy retailers report data on their performance – as relates to the National Energy Retail Law (NERL) – to the AER.[487] The AER recently reviewed the Guidelines to better enable data collection and monitor retail market outcomes without imposing unnecessary costs on retailers.[488] On 28 August 2024 the AER released the final version of the updated Guidelines.[489] Key changes include:

- introduction of new indicators to improve the visibility of customers that retailers have specific requirements to support (for example, customers in embedded networks, on life support and impacted by family violence)
- refinement of several indicators to improve definitional clarity and comparability between retailers
- expansion of a range of indicators to gain greater reporting precision and explanatory value
- removal of indicators that may no longer add value.

6.3 Energy bills

Energy retailers communicate with their customers, including through their bills. Energy bills show a customer's energy consumption over a period of time, tariffs, daily supply charges and other fees and discounts. Information on bills can enable consumers to compare their current offer with others available to them. Independent comparator websites provided by the AER (energymadeeasy.gov.au) and the Essential Services Commission (Victoria) (compare.energy.vic.gov.au) enable customers to input their bill usage data and details of the household type and location to access energy bill usage data directly from AEMO and assess their current offer against other market offers available to them (section 6.7.9).

Customers who regularly review and, when necessary, change to a better offer usually pay lower prices. This is particularly evident in energy bill data for 2023–24 which showed a significant increase in bills of customers on standing offers compared with those on market offers for most NEM regions (Figure 6.4 and Figure 6.5). Energy bills for consumers have continued to rise since 2021–22 (section 6.4). In 2023–24, standing offer and market offer prices increased compared with the previous year, with the largest increases in standing offer prices. Following the release of default market offer 6 (DMO 6) (2024–25) on 1 July 2024, market offer and standing offer prices for electricity may decrease between August and October as retailer offers are adjusted and billing cycles are completed.

However, retail energy offers can vary significantly, and hundreds of offers may be available to customers at any one time, particularly for electricity customers. Advertised offers frequently change, as do the terms and charges attached to an offer over time. Customers routinely report finding it difficult to compare and determine which offer is best for their situation. The AER's Better Bills Guideline (Version 2) seeks to address this.

485 AEMC, Updating the regulatory frameworks for embedded networks, Australian Energy Market Commission, 20 June 2019.
486 Embedded networks for gas are not regulated by the AER, and remain a local matter for states and territories.
487 AER, Performance reporting procedures and guidelines (retail law) 2019, Australian Energy Regulator, 1 January 2019.
488 AER, Retail performance reporting procedures and guidelines (2024 update), Australian Energy Regulator, 10 July 2024.
489 AER, AER (Retail Law) Performance reporting procedures and Guidelines – Version 4, Australian Energy Regulator, 28 August 2024.

6.3.1 Better Bills Guideline

Consumers expect bills to be simple, easy to understand and a source of information about how and when to pay. However, energy bills have historically been cluttered, complex and confusing, creating an unnecessary barrier for consumers to participate effectively in energy retail markets and find the best deal.

The AER's updated Better Bills Guideline (Version 2) limits the amount of content allowed at the front of a bill (both electricity and gas) so that consumers can see the essentials at first glance. It requires the retailer to clarify whether they have a better offer available under the heading 'Could you save money on another plan?'. Elsewhere on the bill, retailers must include a simple summary of the existing plan, stating the key features and when any benefits are due to expire, and provide further clarity on the self-read information.[490]

In July 2023, the AER notified authorised retailers that the guideline applies to all small customers of an authorised retailer, including those within embedded networks. The AER has made various decisions under section 37 of the guideline to require retailers to include information about Australian Government and state government energy relief rebates on small customer bills.[491] Retailers were required to comply with the new elements of the guideline from 30 September 2023.

The guideline aims to make it easier for consumers to:

- pay their energy bill
- understand the bill calculation and ensure their bill conforms to their contract
- query their bill
- access interpreter services and seek financial assistance
- report a fault or emergency
- understand their usage to help them use energy efficiently, compare offers and consider new types of energy services.

6.3.2 Components of electricity bills

Retail electricity bills are largely reflective of the cost of producing and supplying electricity. A typical residential electricity retail bill comprises the following costs:

- wholesale electricity purchased through spot and hedge wholesale markets (including managing the risk of wholesale price volatility and price variances across regions)
- network costs, including transporting electricity through transmission and distribution networks, feed-in tariffs for rooftop solar PV systems and metering costs
- costs associated with complying with environmental schemes, such as renewable energy targets and energy efficiency measures
- servicing customers, including provision of billing and customer service
- marketing campaigns to attract and retain customers
- the retailer's margin (profit).

The proportion of each cost as a component of electricity bills varies by jurisdiction, by retailer and over time.

490 AER, Better Bills Guideline (Version 2), Australian Energy Regulator, 30 January 2023.

491 Decisions were made on 10 August 2023, 27 September 2023 and 28 June 2024. See AER, Better Bills Guideline (Version 2), Australian Energy Regulator, 30 January 2023.

Wholesale costs

Wholesale costs are a significant component of electricity bills. Retailers purchase electricity in wholesale markets to sell to customers. Retailers generally charge their customers fixed prices for electricity but need to purchase energy at variable prices in wholesale markets. This means that retailers are exposed to price risk, where they may need to purchase electricity at higher prices than they charge their customers. Retailers generally manage this risk by considering price volatility when setting retail contract prices and by entering hedge contracts that lock in prices for their future wholesale purchases (chapter 2). Alternatively, they might own generation assets or enter demand response contracts to manage risk (section 6.7.4).

Network costs

The AER regulates network charges, which cover the efficient costs of building and operating electricity networks and provide a return to the network service provider's financiers. Across the NEM, distribution costs are the largest component of network costs. Transmission costs are the next biggest component and metering costs make up the balance.

Several factors will have an impact on network costs, such as where the customer is being served (central business district, urban or rural), area density and local terrain. Network costs are generally higher for consumers located in less densely populated areas. The relative efficiency of each network service provider also partly explains differences in network costs (chapter 3, section 3.15.1).

There are likely to be upward pressures on regulated network costs over the next few years, driven by inflation, the impact of higher interest rates and forecast increases in capital expenditure (chapter 3, section 3.13). While this may put upward pressure on retail electricity costs, it may be offset by expected downward trends in wholesale electricity costs (section 6.4).

Environmental costs

Environmental costs are associated with environmental schemes at both national and state levels. These fall into 3 main categories:

- Large-scale renewable energy target (LRET), which provides a financial incentive to encourage investment in large-scale renewable energy generation projects.
- Small-scale renewable energy schemes (SRES), which provide incentives to households and businesses to invest in small-scale renewable energy systems.
- Jurisdictional green schemes, such as state and territory-based energy efficiency improvements for households and businesses, rebates for customer energy resources and feed-in tariffs for rooftop solar.

Most environmental costs relate to complying with the LRET and SRES. These costs are incurred by retailers and passed on to customers.[492]

Retail costs

Retail costs fall into 2 main categories:

- Costs of servicing customers, such as managing billing systems and debt, handling customer enquiries and complying with regulatory obligations. These costs do not vary significantly across jurisdictions.
- Customer acquisition and retention costs, such as marketing and other activities to gain or retain customers. These costs tend to be higher in jurisdictions with high rates of customer switching. In theory, these costs should be offset by reduced retailer profit margins that are driven down due to competition, but there is a risk that competition may increase energy bills for customers if the costs of competing outweigh competition benefits from efficiency and innovation.

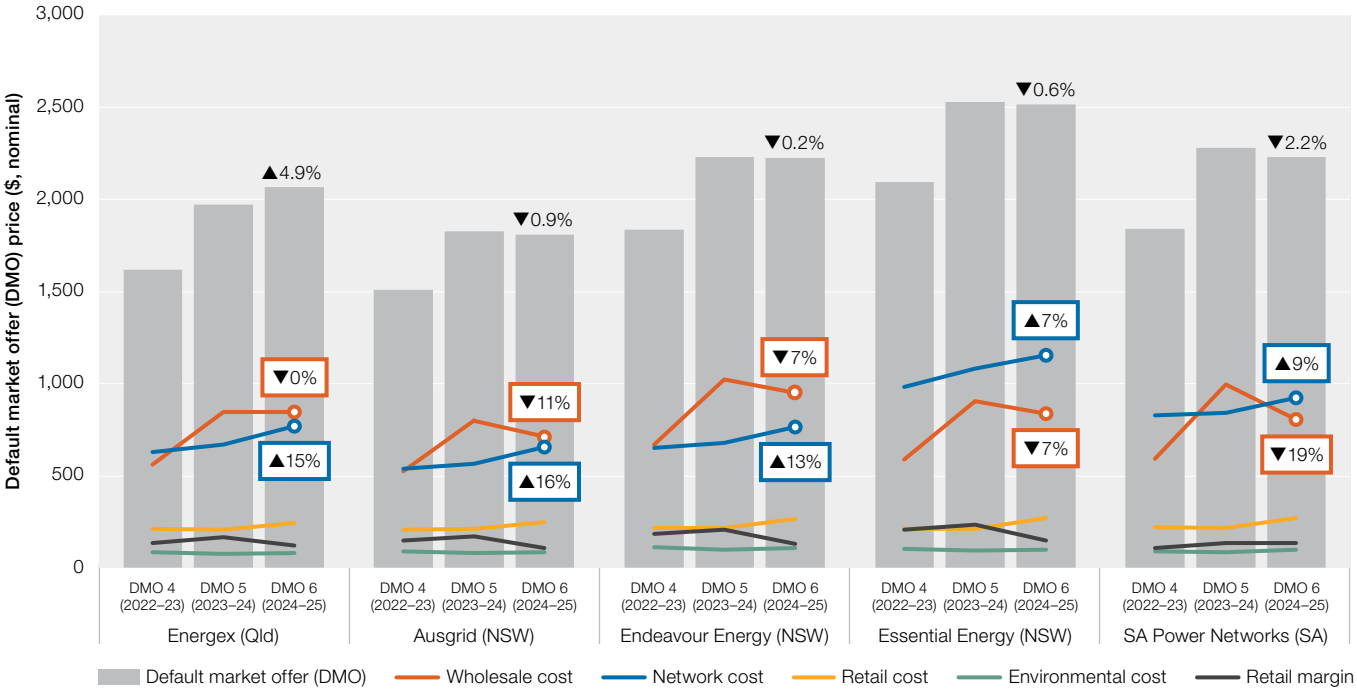
492 AER, Final Determination – Default market offer prices 2024–25, Australian Energy Regulator, 1 July 2024.

6.3.3 Components of the default market offer

The AER calculates a representative retail price for electricity each year known as the default market offer (DMO) reference price. The cost components of each DMO reference price include wholesale, network, environmental and retail costs and margin. The DMO acts as both a price cap for standing offers, and a reference price that discounts and market offers must be measured against. The role of the DMO is further discussed in Box 6.2.

In June 2024, the AER published the DMO 6 determination, which took effect from 1 July 2024. Figure 6.2 illustrates the proportions of each cost component and changes from the preceding years.[493]

Figure 6.2 Components of the default market offer



Note: Comparison of cost components calculated for the 2022–23 (DMO 4), 2023–24 (DMO 5) prices and 2024–25 (DMO 6) prices, for residential customers without controlled load. Prices include GST. Values are nominal. In previous years this data was measured in cents per kilowatt hour and included totals for all NEM regions, enabling like-for-like comparison to Figure 6.3. As at September 2024, this data was unavailable for 2024.

Source: AER, Default market offer prices 2023–24, July 2024.

Components of DMO 6 (2024–25) compared with the previous year are notably different. Calculated wholesale costs increased significantly from DMO 4 to DMO 5 (from between 30% and 40% to between 50% and 69% of the overall retail price). Over that same period, network, environmental and retail costs remained relatively stable.

DMO 6 shows reductions in wholesale costs as a proportion of electricity bills, between 7% to 19% lower for residential customers without controlled load in South Australia and NSW and remaining stable in South East Queensland. This is attributable to downward movements in most contract prices and changes in the shape of customer load profiles. The load profile to model costs in South Australia – where a 19% decrease in wholesale costs was calculated – saw the greatest impact since DMO 5 (compared with all other NEM regions covered by the DMO).[494]

493 For more information about methodological changes in the calculation of DMO 6 compared with previous years, see AER, Default market offer prices 2024–25, Australian Energy Regulator, 1 July 2024.

494 AER, Final Determination – Default market offer prices 2024–25, Australian Energy Regulator, 1 July 2024.

Conversely, network cost components have notably increased in all NEM regions (ranging from 7% to 16%). In NSW's Essential Energy network and South Australia, network costs now represent a higher proportion of electricity bills than wholesale costs.[495] Network costs in South Australia have increased across all customer types and are largely driven by the recovery of previous under-recoveries of allowed distribution revenue, inflation and a cost pass-through for the River Murray flood event.[496]

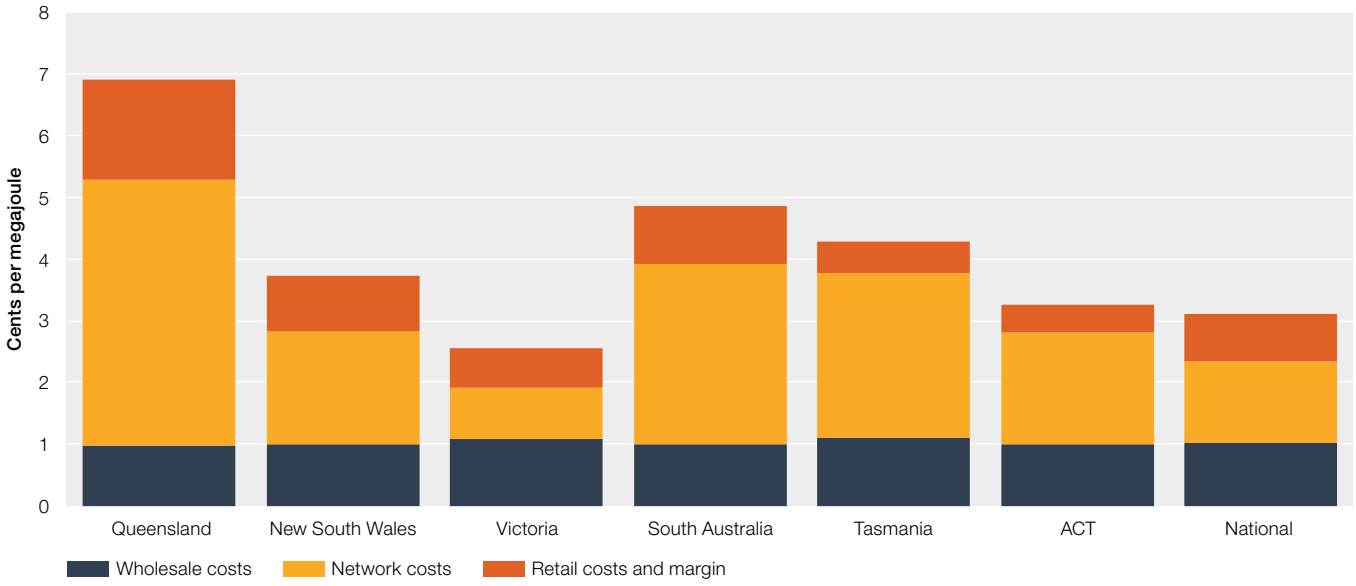
The DMO 6 decision adjusted how it calculated the retail allowance, by separately calculating retail margin and competition allowance. The DMO 6 final determination was mindful of the underlying impacts of economic conditions on energy consumers, including increased inflation, cost-of-living pressures and electricity affordability.[497]

Section 6.4 provides more detail on the outlook for retail electricity prices.

6.3.4 Components of gas bills

The composition of a retail gas bill is less transparent than it is for electricity due to the relative fragmentation of gas markets, the different regulatory arrangements applying to gas pipelines and the absence of a regulatory responsibility to periodically analyse the different cost components.[498] The most recent comprehensive data (published in 2017) show that nationally, gas pipeline charges were the most significant part of the retail gas bill, making up over 40% of a residential gas bill in that year, on average.

Figure 6.3 Composition of a residential bill – gas



Note: Data are estimates at 2017. Average residential customer prices excluding GST (real $2018–19). Percentages may not add to 100% due to rounding.

Source: Oakley Greenwood, Gas price trends review 2017, March 2018.

495 AER, Final Determination – Default market offer prices 2024–25, Australian Energy Regulator, 1 July 2024.

496 For more analysis on drivers for network cost increases in all jurisdictions see AER, Final Determination – Default market offer prices 2024–25, Australian Energy Regulator, 1 July 2024.

497 The Final DMO 6 determination did not apply a competition allowance as the AER uses CPI as the primary metric where the quarterly CPI exceeds the Reserve Bank of Australia's target range on a material and sustained basis. See AER, Final Determination – Default market offer prices 2024–25, Australian Energy Regulator, 1 July 2024.

498 Further, the NEM regions covered in section 6.3.4 differ from section 6.3.3. This is because data used by Oakley Greenwood to determine the composition of a residential gas bill included all NEM regions and national data. The AER's DMO only applies to distribution networks across Queensland, NSW and South Australia. Equivalent electricity bill component data has not been available in 2023 and 2024.

Analysis suggests that residential retail gas bill prices remained relatively steady from 2017 until 2022 (Figure 6.5), when they began to increase following the record high wholesale gas prices during 2022. Due to the historical lack of transparency in pricing in gas wholesale markets and segments of gas transportation, it is difficult to estimate the current composition of a retail gas bill with confidence. However, a range of indicators suggest that changes in both level and proportion of wholesale gas costs in retail bills since the 2017 analysis in Figure 6.3 may be material.

In June 2021, the ACCC published an analysis of gas retail bill components from 2014 to 2018, observing that retail margins up to 2018 reflected the influence of legacy gas contracts with cheap prices.[499] The ACCC anticipated that from 2021, wholesale costs and retail margins would be impacted by wholesale market conditions at the time of renegotiation, by the prices at which retailers were able to replace legacy contracts with new gas supply agreements, and by the extent of competition in the gas retail market.[500]

More recent data provided to the AER by regulated gas distribution networks (known as 'scheme' pipelines) indicates, on average, distribution costs as a proportion of a typical customer's gas bill have reduced. These now range from 23% to 54% (average 34%) for residential customers and 13% to 50% (average 28%) for small business customers.[501] However, additional transport costs are also borne by customers for pipelines whose revenue is not regulated by the AER. Prices paid to transport gas on these pipelines are instead negotiated through bilateral contracts with retailers and will impact the proportion of network costs that make up a retail gas bill.[502]

Each year, gas distribution network service providers submit tariff variation notices to the AER containing the tariffs they propose to charge customers to recover revenues for the upcoming year. On 31 October 2023, the AER released the final decision of our review of gas distribution network reference tariff variation mechanisms and declining block tariffs. The review found that it is unclear how changes in network tariff structures would affect retail gas tariffs imposed on their customers, as retailer billing pricing structures appear to differ across states and territories and retailers. It is possible that changes in how network costs are calculated may not be replicated in the calculation of retail gas pricing structures.[503]

More analysis on gas wholesale markets and regulated gas pipelines is set out in chapters 4 and 5.

499 A breakdown of retail gas bill components was provided as annual averages combining all East Coast Gas Market regions from 2014 to 2018 (see ACCC, Gas inquiry 2017–25 interim report, Australian Competition and Consumer Commission, January 2022). Data is not comparable to the breakdown of retail bill components by jurisdiction as provided in Figure 6.3, which is used to inform State of the energy market report analysis.

500 ACCC, Gas inquiry 2017–25 interim report, Australian Competition and Consumer Commission, January 2023, section 5.

501 AER analysis of access arrangement determinations available on AER website.

502 The exception to this is transport capacity sold through the Day Ahead Auction, where the price is set by an auction and regularly allocates spare capacity at $0 (chapter 4).

503 AER, Final decision – Review of gas distribution network reference tariff variation mechanism and declining block tariffs, Australian Energy Regulator, October 2023.

6.3.5 How retail prices are set

Energy retailers in southern and eastern Australia are responsible for setting prices for energy market offers. Market offers are energy contracts advertised by retailers that are actively entered into by customers. Alongside market pricing, government agencies regulate prices for electricity standing offers. Standing offers are contracts that customers are placed on by default if they do not enter into a market contract for their energy supply.[504]

Between 2009 and 2016, electricity retail price regulations were removed in Victoria, South Australia, NSW and South East Queensland following a determination by the AEMC that markets in those states were effectively competitive. However, in July 2018, the ACCC's Retail electricity pricing inquiry 2017–18 determined that customers on standing offers were paying excessively high prices, disproportionately impacting customers experiencing vulnerability and/or facing barriers to participate in the market.[505]

In July 2019, and in response to subsequent market reviews, governments commenced implementing price control mechanisms for customers on standing offers, as summarised in Table 6.1.[506]

Table 6.1 Price controls by NEM region

Region	Mechanism	Administrator	Approach
South East Queensland	Default market offer	AER	Sets a cap on standing offer electricity prices for residential and small business customers and provides a reference price for comparing offers.
New South Wales			
South Australia			
Victoria	Victorian default offer	Essential Services Commission	Sets a cap on standing offer electricity prices for residential and small business customers and provides a reference price for comparing offers.
Regional Queensland	Annual pricing proposal and government subsidy	AER / Queensland Competition Authority	Determines an annual regulated electricity price for residential and small business customers to enable comparison of offers. No price cap is imposed. The Queensland Government subsidises Ergon Energy so that regional customers do not pay more than customers in South East Queensland.
Tasmania	Standing offer price approvals	Office of the Tasmanian Economic Regulator	Sets a cap on standing offer electricity prices for residential and small business customers with a regulated retailer and provides a reference point for comparing offers.
ACT	Price regulation of electricity supply	ACT Independent Competition and Regulatory Commission	Sets a cap on electricity prices for residential and small business customers with authorised retailer ActewAGL and provides a reference point for other customers comparing offers.

Source: AER, Default market offer prices 2024–25 – Final determination, May 2023; ESC, Victorian Default Offer, accessed 18 August 2024; Queensland Competition Authority, Regional customers, accessed 21 August 2024; Tasmanian Economic Regulator, Pricing – Approvals, accessed 21 August 2024; Independent Competition and Regulatory Commission, Price Regulation of Electricity Supply, accessed 21 August 2024.

Gas price deregulation occurred along similar timeframes to electricity, but gas price controls have not been reintroduced. In July 2017, NSW became the last jurisdiction to deregulate retail gas prices for small customers.

504 AER, Default market offer prices 2022–23 – Final determination, Australian Energy Regulator, May 2023, accessed 5 September 2023, section 3.1.
505 ACCC, Retail Electricity Pricing Inquiry, Australian Competition and Consumer Commission, accessed 30 August 2024.
506 Price controls in Table 6.1 apply to standing offers except for regional Queensland where it applies to all electricity contracts.

Box 6.2 Default market offer

The default market offer (DMO) is the maximum price an electricity retailer can charge a standing offer customer each year based a set amount of usage.[507] DMO prices vary by customer type, including residential customers with controlled load, residential customers without controlled load and small business customers without controlled load. A customer might be on a standing offer when their market offer expires or if they have never switched to a retailer's market offer.

The scheme was introduced in 2019, following concerns raised by the ACCC that standing offer contracts:

- were not working as an effective safety net
- were unjustifiably expensive, with retailers having incentives to increase standing offer prices as a basis to advertise artificially high discounts
- penalised customers who had not taken up a market offer, making them a form of 'loyalty tax'.

The DMO prices also act as a reference against which retailers must compare their market offers to make it easier for consumers to compare offers across providers.

The AER determines DMO prices each year for residential and small business customers in NSW (Endeavour, Essential Energy and Ausgrid), South East Queensland (Energex) and South Australia (SA Power Networks). The scheme caps how much retailers can charge in their standing offers, but it does not cap customers' bills. The DMO scheme provides a fallback for those who do not engage in the market and has reduced unjustifiably high standing offer prices.

6.3.6 Prohibition of Electricity Market Misconduct (PEMM) laws

In June 2020 the Australian Government introduced further price protections for electricity. Under Part XICA (which relates to prohibited conduct in the energy market) of the *Competition and Consumer Act 2010*, retailers are required to pass on decreases in the costs of electricity to small customers where they have experienced sustained and substantial reductions in their underlying costs of procuring electricity. Part XICA also prohibits certain behaviour by market participants in relation to access to electricity hedging contracts and spot market bidding.

The ACCC is responsible for investigating contraventions of Part XICA and published guidelines in May 2020, noting that it will routinely monitor developments in costs as part of its Electricity Monitoring Inquiry, as well as considering complaints received that relate to reductions in relevant costs.[508] The ACCC closely monitors the electricity sector's compliance with its obligations under the *Competition and Consumer Act 2010*, the Australian Consumer Law and the Electricity Retail Code, including taking enforcement action against companies for non-compliance.

On 10 June 2024, the Treasurer established a review of the effectiveness of Part XICA. The ACCC anticipates engaging in the review, which must include consideration of:

- any impacts on electricity market performance, including market efficiency, equity, reliability, affordability, emission reduction and investment outcomes
- any other factors relevant for an assessment of the effectiveness of the amendments on the Australian electricity sector and economy.

507 Customers on standing offers may pay more than the DMO price if they use more electricity than the annual usage amount assumed when determining the DMO.

508 ACCC, Guidelines on Part XICA – Prohibited conduct in the energy market, Australian Competition and Consumer Commission, 11 May 2024.

6.4 Retail energy prices

Retail electricity prices remain historically high despite some easing of wholesale electricity costs in the NEM since the record high prices in winter 2022 (chapter 2, Figure 2.3). As wholesale price fluctuations tend to be reflected in future retail contracts, there is usually a time lag between changes to spot prices and retailers' experienced costs due to retailers' aggregate hedging behaviour.[509]

Price volatility in wholesale electricity markets has risen dramatically in the last few years. The potential for more frequent high-priced events in the future remains high while our generation sources transition to a renewables-based system and sufficient firming resources such as batteries and demand-side participation are fully integrated (chapter 2, section 2.3.1). For now, wholesale markets remain vulnerable to supply or demand shocks; challenges include reliability issues with ageing coal-fired generators, reliance on gas-powered generation as southern domestic gas production winds down, and the increasingly peaky shape of consumer demand.

Similar to electricity, 2022 was a volatile year for retail gas prices. Despite a downward trend following the high prices experienced in mid-2022 (chapter 4, Figure 4.2), wholesale prices remain historically high. However, seasonal spikes in mid-2023 and mid-2024 were much smaller compared with the same period in 2022. Wholesale gas cost increases can take longer to flow through to retail prices compared with electricity. With anticipated southern supply constraints, retail gas prices may face upward pressure.

Retail energy costs may also face upward pressure due to inflation and increased costs in managing debt for residential and small business customers. For electricity, costs associated with meeting the AEMC's recommendation to accelerate deployment of smart meters to 100% of small customers by 2030[510] could also result in higher retail costs. Further information about retail costs will be provided in the AER's forthcoming Annual retail markets report 2023–24, which will be released in November 2024.

6.4.1 Retail electricity price movements

In electricity markets, electricity bills for customers increased in all regions in 2023–24 (Figure 6.4). Across all regions, electricity customers on standing offers typically paid more for their energy than customers on market contracts, with material differences between standing and market offer customer bills in NSW and Victoria.

Being on a market contract does not guarantee that a customer will receive the lowest possible energy prices because there is a large price range across these offers. However, customers on a market contract typically pay lower prices compared with those on a standing offer.

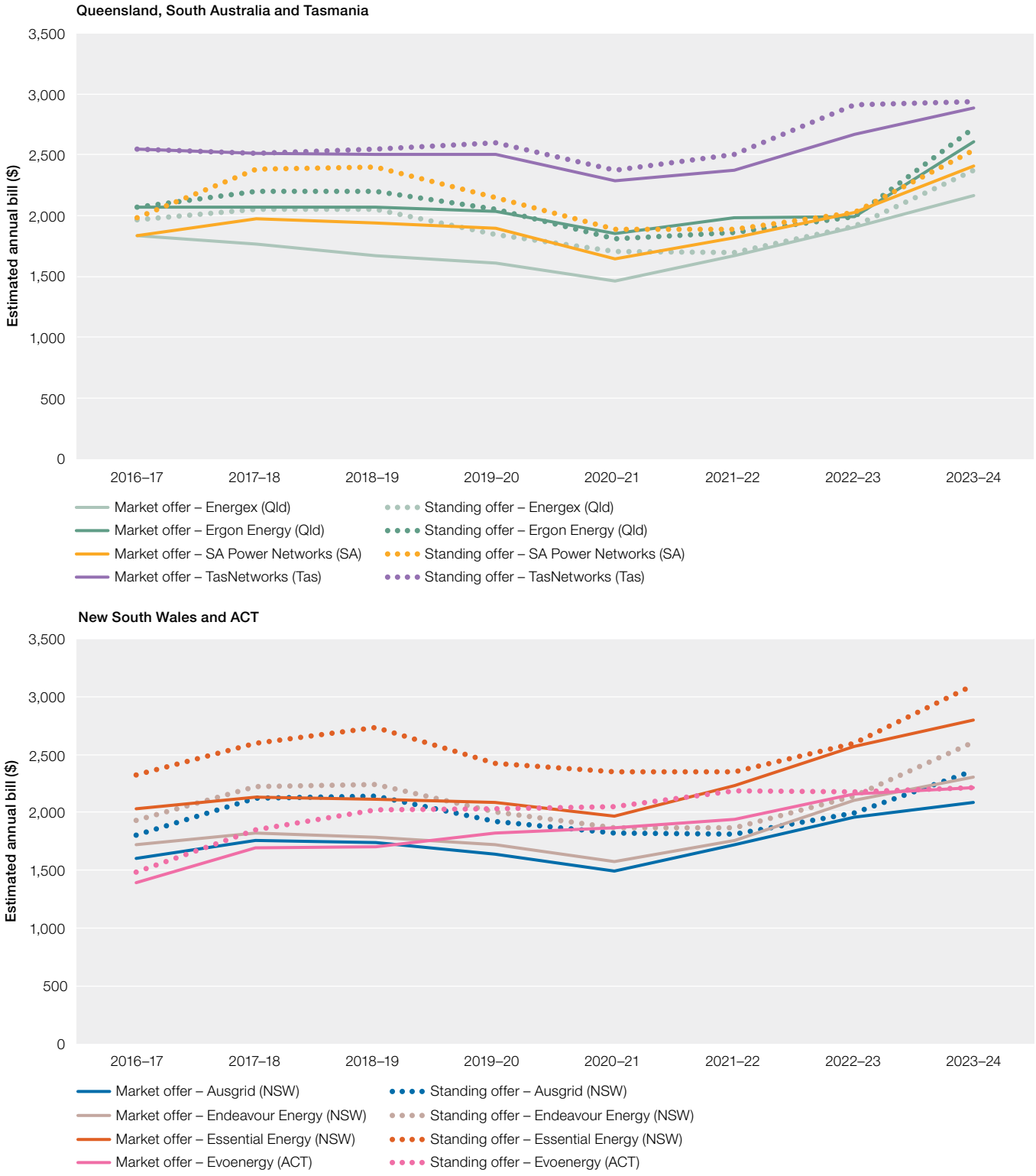
The AER's electricity network revenue determinations for the current regulatory period (2025–29) are estimated to increase retail energy bills for residential households by 0.2% per year on average across all NEM regions (chapter 3, section 3.10). The most significant driver of this increase is the forecast costs to replace assets reaching the end of their life and increased costs of electricity transmission infrastructure, which are passed on to distribution network service providers to recover from their customers (chapter 3, section 3.13.2). In coming years, the impact of higher inflation and costs of capital will also flow through to network costs. With new jurisdictional scheme costs, such as the NSW Renewable Energy Zones, and previously under-recovered distribution revenues in some regions, network costs are likely to maintain upward pressure on electricity prices.

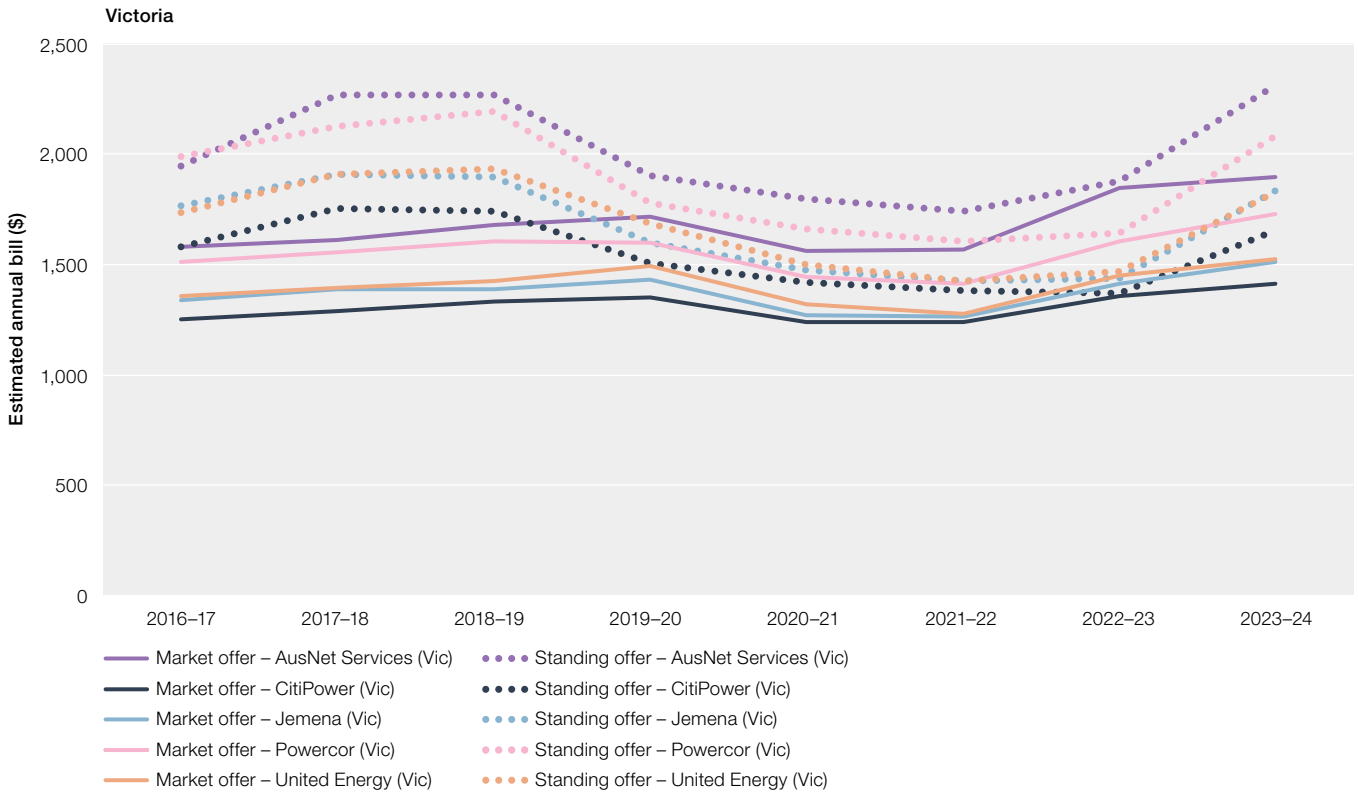
Overall changes in retail energy prices are difficult to predict, with uncertainty over whether lower wholesale energy prices in the future will be enough to offset the increased network costs.

509 ACCC, Inquiry into the National Electricity Market report – November 2022, Australian Competition and Consumer Commission, accessed 11 September 2024, pp. 12–13.

510 AEMC, Review of the regulatory framework for metering services, Australian Energy Market Commission, 30 August 2023.

Figure 6.4 Electricity bills for customers on market and standing offers





Note: Ergon Energy's standing offer prices are set by the Queensland Competition Authority (QCA). TasNetworks' standing offer prices are set by the Office of the Tasmanian Economic Regulator (OTTER). Standing offer prices on the Victorian distribution networks are set by the Essential Services Commission (ESC). Evoenergy's standing offer prices are set by the Independent Competition and Regulatory Commission (ICRC). Energex, SA Power Networks, Ausgrid, Endeavour Energy and Essential Energy's standing offer prices are set by the retailers (capped at DMO). Based on single rate offers for residential customers and average consumption in each distribution area. Average consumption for 2020–21 has been applied to all periods. Some offers listed may not be available to all customers in a distribution area. The AER will update its analysis on more recent offers in the Annual retail performance report 2024. On Ergon Energy's network a few market offers are available and some offers are restricted to specific geographic areas.

Source: AER analysis using offer data from Energy Made Easy (AER) and Victorian Energy Compare (DELWP). Consumption based on Economic benchmarking regulatory information notice (RIN) responses.

6.4.2 Retail gas price movements

Despite some easing of wholesale electricity costs following the significant market events of winter 2022, average prices remain high compared with historical levels in several regions (chapter 2, Figure 2.3). Gas bills for customers on market and standing offers increased in every jurisdiction, except Queensland, compared with the previous year. In Queensland, market offers decreased marginally while standing offers increased to a smaller extent than in other regions (Figure 6.5).

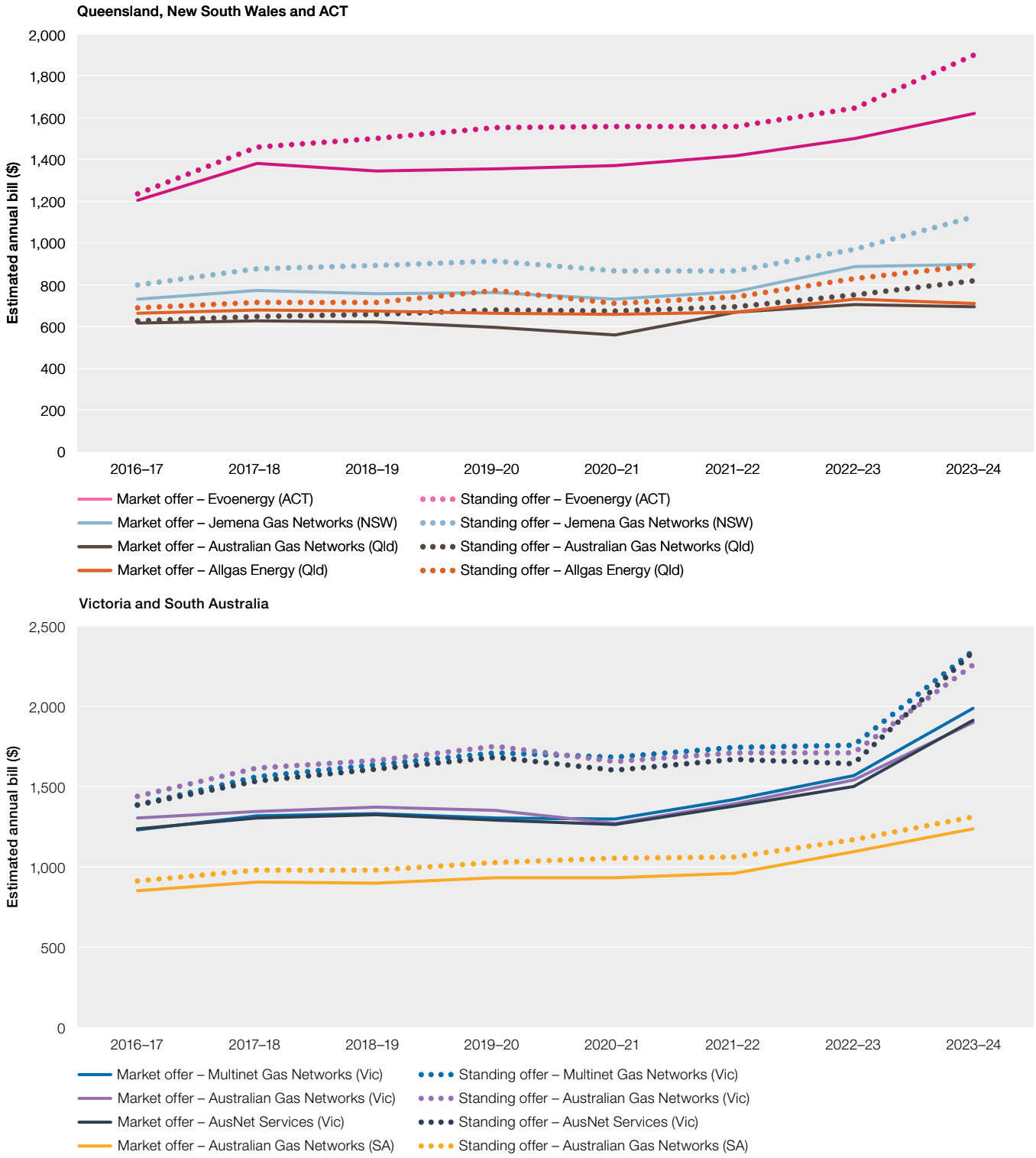
Estimated annual customer bills in 2023–24 ranged from $693 in Queensland to $2,344 in Victoria, where customers use significantly more gas (section 6.5). Standing offer prices for gas were also higher across jurisdictions, with significant increases seen in Victoria, the ACT and NSW, and smaller increases in Queensland and South Australia (Figure 6.5).[511]

Colder weather from late May 2024 drove up southern demand compared to the previous year when weather conditions were milder. Due to the significant changes in demand driven by cold weather in the April to June quarter, contracted gas pricing saw an increase impacting regions with high domestic users of gas. Customers may see increases from August to October 2024 in their gas costs when billing cycles are due for completion (Figure 6.5).

Beyond 2024, there are concerns for the sufficiency of domestic supply as southern production begins to reduce. Combined with state governments implementing policies to phase out residential gas use as part of Australia's net zero by 2050 commitments, the outlook for retail gas prices remains subject to considerable uncertainty.

511 Estimated annual customer bills for generally available flat rate offers, by distribution company.

Figure 6.5 Gas bills for customers on market and standing offers



Note: Based on offers for residential customers and estimated consumption in each jurisdiction.

Source: AER analysis using offer data from Energy Made Easy (AER) and Victorian Energy Compare (DELWP). Consumption based on Frontier Economics report to the AER, *Residential energy consumption benchmarks*, December 2020.

6.5 Energy use

Consumers' energy costs are split between fixed charges and charges based on how much energy consumers use. Usage charges are the largest component of energy bills for most households.[512] A consumer's energy use significantly impacts energy affordability (section 6.6). Energy use varies by household size, how energy efficient the house is, appliance quality, heating and cooling needs and lifestyle. Some consumers use both electricity and gas, and others only use electricity. This means that a consumer's use of electricity or gas on its own may not be indicative of their total energy consumption.

Residential customers in Tasmania use the most electricity (per customer) in the NEM. Key drivers of greater electricity and gas use are climate (with greater heating requirements in some jurisdictions) and the penetration of gas as an alternative fuel. In Tasmania, very few households use gas. Most households in Victoria have both electricity and gas connections, resulting in the lowest average household electricity consumption.

Customers in colder climates tend to use the most gas (such as those in Victoria and the ACT). Gas use in these jurisdictions is 6 to 7 times higher in winter than over summer.[513] Queensland customers use the least gas due to having a warmer climate.

Over the past 10 years, the overall amount of electricity that residential consumers have demanded from the NEM has decreased. This is largely driven by households using electricity generated by rooftop solar PV systems. As at 30 June 2024, rooftop solar provides over 20 GW of registered capacity connected to the NEM, equivalent to 25% of generation capacity. This makes rooftop solar the fuel source with the highest registered capacity across the NEM (chapter 2, Figure 2.14).[514]

Improved energy efficiency of new homes and appliances is also contributing to reducing grid demand. Minimum energy efficiency ratings for new residential houses were first introduced in 2004 through the Nationwide Housing Energy Rating Scheme (NatHERS) and energy efficiency ratings for appliances were introduced in 2012 through the Greenhouse and Energy Minimum Standards (GEMS).[515]

NatHERS takes into account differences in climate – Australia is divided into 69 separate 'climate zones' created using average temperatures in that area. The climate zone is a required input into the calculation of a home's energy efficiency rating so that a similar rating for 2 houses in different climate zones equates to similar levels of energy use for heating and cooling.[516]

As part of the AER's consultation on its Retail guidelines review, stakeholders noted that energy use by some consumers in off-grid remote areas in Queensland, South Australia, Northern Territory and Western Australia is increasingly being driven by temperature extremes.[517] This means their energy use is likely much higher than the regional averages. Many of these customers are on prepayment meters (also referred to as 'card-operated' meters) and are more vulnerable to harm if their electricity is disconnected during an extreme temperature event.

512 Most energy offers include usage charges as well as a fixed supply charge. Some offers also include membership fees or additional charges for metering.

513 Frontier Economics, Residential energy consumption benchmarks, final report for the Australian Energy Regulator, December 2020, accessed 15 September 2022, p. 26.

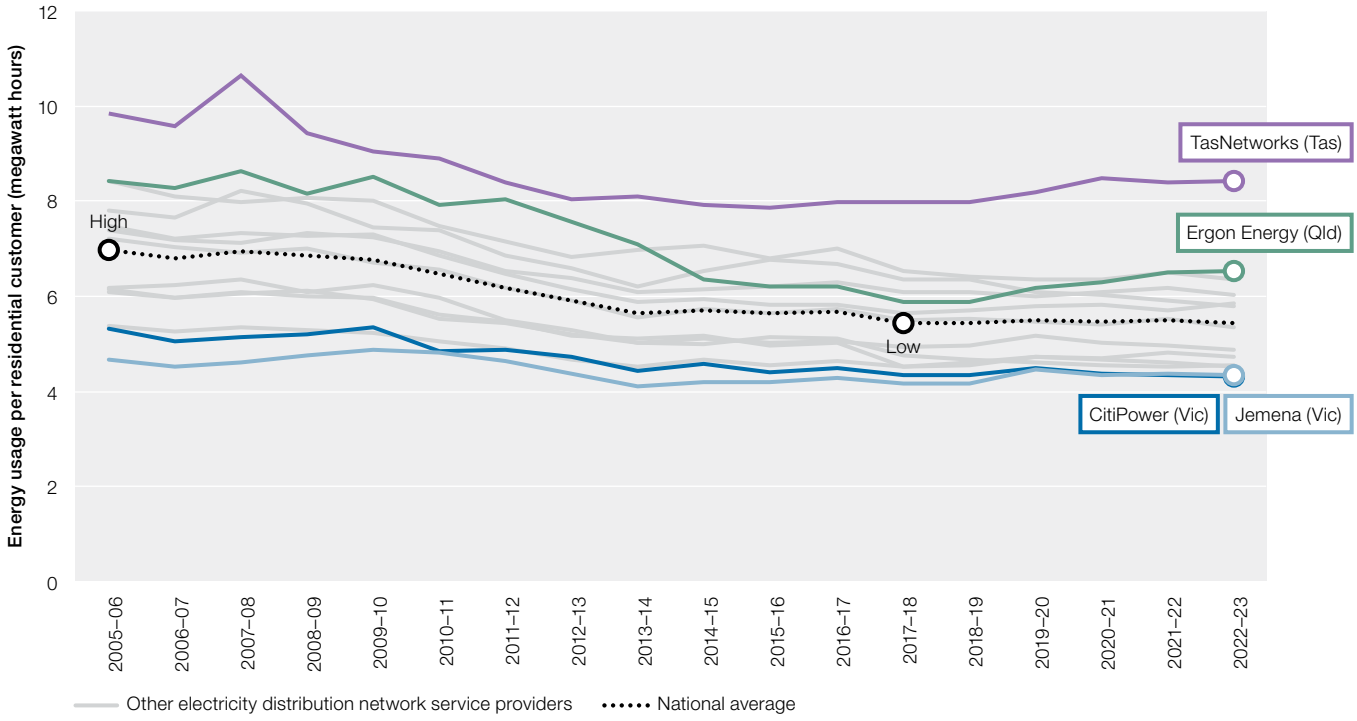
514 Capacity generated by rooftop solar is subtracted from demand (rather than traded in the NEM). With rooftop solar output records set over the summer of 2022–23, when rooftop solar reached a record 11,504 MWh, the rapid uptake of rooftop solar continues to be the major contributing factor to reduced grid demand.

515 NatHERS was initiated in 1993 by the Australian and New Zealand Minerals and Energy Council to provide a standardised approach to rating the thermal performance of Australian homes. GEMS came into effect on 1 October 2012, when the GEMS Act was established to create a national framework for appliance and equipment energy efficiency in Australia.

516 NatHERS, Climate Zones and Weather Files, Nationwide House Energy Rating Scheme, accessed 1 October 2024.

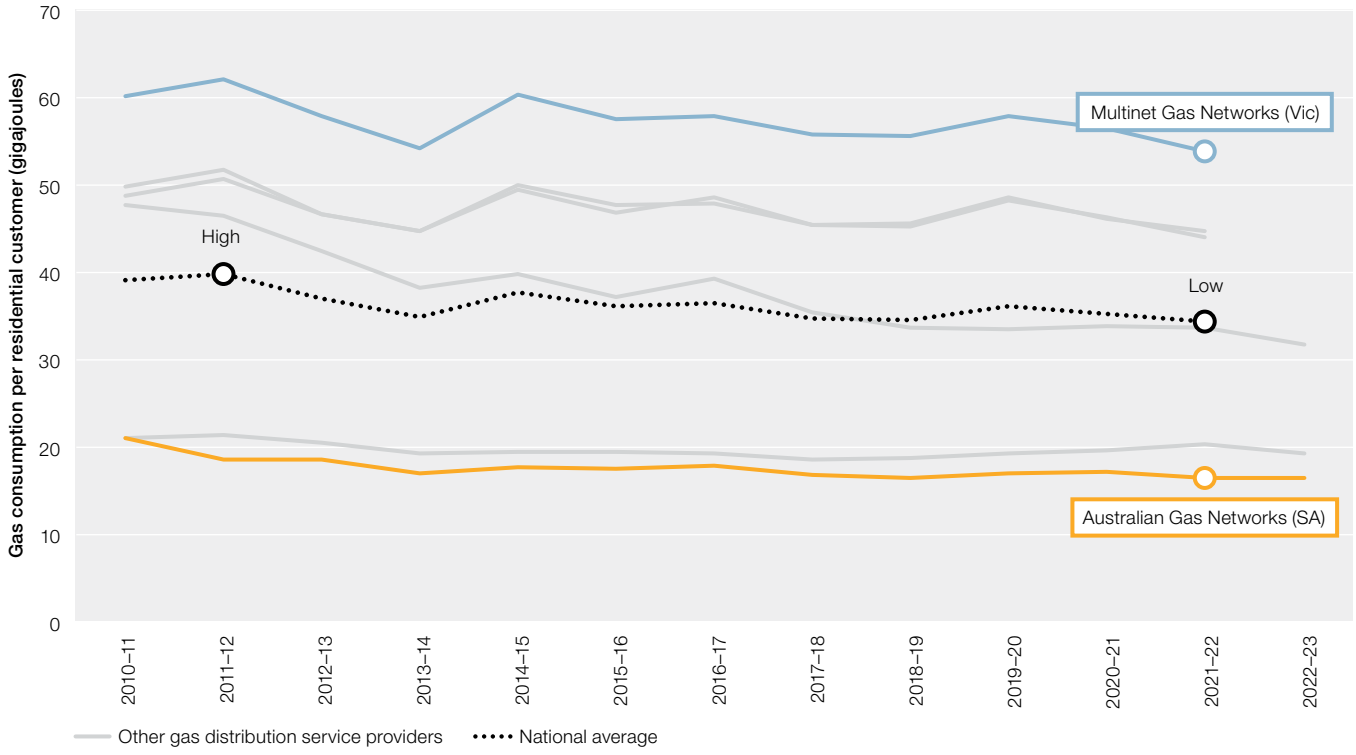
517 ANU, Submission – Retail Guidelines review issues paper, Australian National University, August 2024.

Figure 6.6 Energy use per residential customer – electricity



Source: Regulatory information notices (RIN) responses.

Figure 6.7 Energy use per residential customer – gas



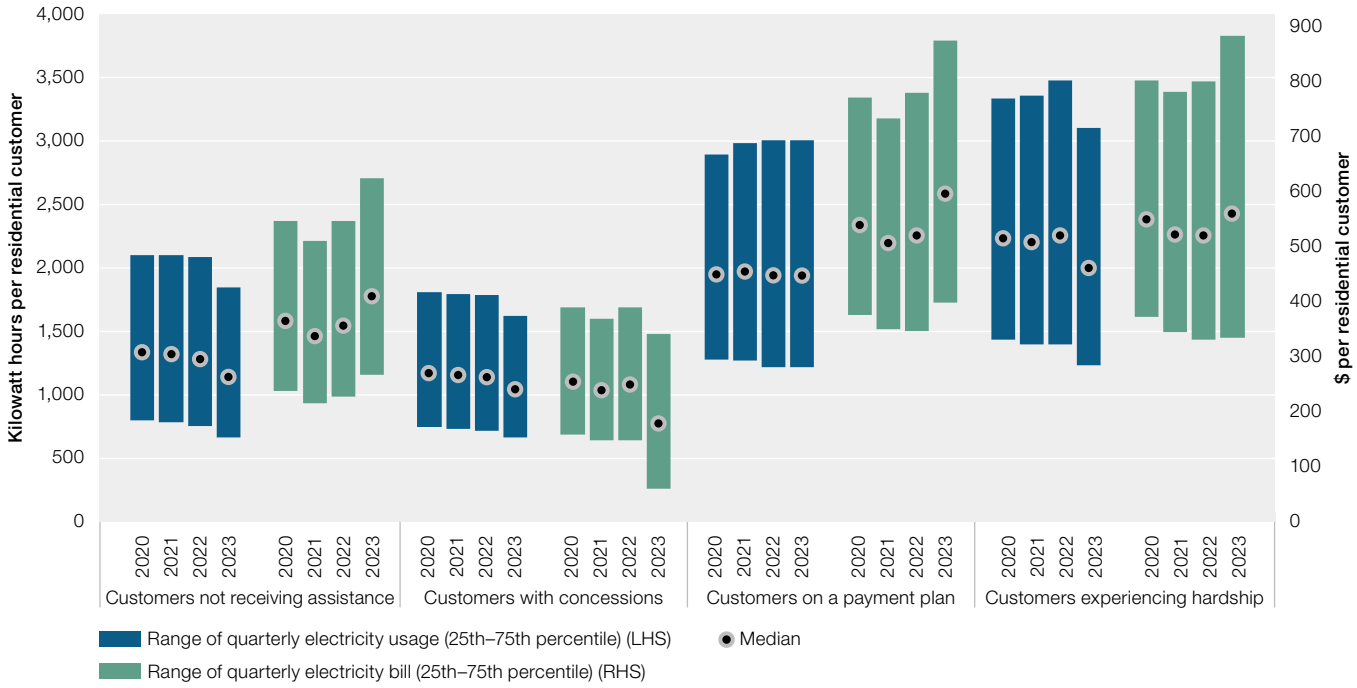
Source: Regulatory information notices (RIN) responses.

As energy markets transition to renewable energy, the reported average energy use indicators are likely obscuring a widening gap between households that have the capacity to adopt new technology or modify energy use, and those that do not. This could be due to cost, residential tenancy laws or other barriers. The former group is likely experiencing a substantial reduction in electricity use, while electricity use among other households has likely remained relatively consistent over time, and these customers may be spending more on electricity compared with 10 years ago.

Considering the main drivers of the reduction in energy use – rooftop solar and energy efficient housing – are not equally accessible to all consumers, it is not surprising that at a more granular level, a disparity in energy use across different customer types can be observed when comparing consumers experiencing financial difficulties.

Figure 6.8 shows that customers not receiving assistance[518] and those on concession use significantly less energy compared with those on payment plans and/or in hardship arrangements, who accordingly have higher bills.

Figure 6.8 Electricity use, by residential customer type



Note: Data labels show the respective range in electricity usage and electricity bills in 2022.
Source: ACCC, Inquiry into the National Market, June 2024.

518 Protections include concessions that are applied to energy bills, payment plans and hardship arrangements. Insights from this data assumes that consumers without protections have been correctly identified as not eligible for them.

6.5.1 Impact of energy efficiency of homes on energy use

The energy efficiency of homes plays a vital role in reducing emissions and the cost of energy bills. Consumers living in homes with poor thermal efficiency are using more energy and spending more on heating and cooling to stay comfortable.

There is a significant deficit in average thermal efficiency of existing homes compared with the new 7-star minimum standard. Data from NatHERS research shows that the ratings of existing homes is estimated to be less than 2 stars out of 10.[519]

Research between 2016 and 2018 found that 81.7% of new housing is designed to meet only minimum NatHERS requirements and 98.5% of existing housing stock falls below optimum economic and energy performance.[520] Improving thermal efficiency of residential housing is a key priority of the Australian Government's National Energy Performance Strategy.[521]

On 19 July 2024 the Australian Government published the Home Energy Ratings Disclosure Framework, which sets out a national approach for assessing the energy performance of homes and providing performance ratings and certificates at the point of sale or lease of a house.[522]

State and territory governments have primary responsibility for setting disclosure requirements for the energy efficiency of residential buildings. The framework aims to complement existing disclosure, improve the implementation of these schemes and encourage a consistent approach across states and territories.[523]

Studies by project partners under the Reliable Affordable Clean Energy (RACE) for 2030 program have also explored different upgrades to existing homes and the impact on energy use.[524] Under their modelling of detached 4-bedroom houses in Victoria, NSW and Western Australia, energy use was reduced by between 18% and 99% (Table 6.2) depending on which of the 4 different upgrade options were applied.

Table 6.2 Reductions in energy use for upgraded homes compared with baseline

Upgrades	Annual energy use (electricity and gas) in Victoria (kWh)	Annual energy use (electricity and gas) in NSW (kWh)	Annual energy use (electricity and gas) in Western Australia (kWh)
Baseline	12,655	9,604	9,827
Upgrade 1 – improved roof, wall and floor insulation, pipe lagging and draught sealing	8,734 (31%)	7,918 (18%)	7,603 (23%)
Upgrade 1 + Upgrade 2 – addition of ceiling fans, reverse cycle air condition and double-glazed windows	7,298 (42%)	7,815 (19%)	7,215 (27%)
Upgrade 1 + Upgrade 3 – efficient appliances, LED lighting and a clothesline to reduce the need for a dryer	5,210 (59%)	3,476 (64%)	3,577 (64%)
Upgrade 1 + Upgrade 4 – addition of solar PV and a hot water heat pump	2,169 (83%)	669 (93%)	710 (93%)
All upgrades	103 (99%)	0 (100%)	4 (100%)

Note: Examples of baseline homes include: a detached home with a usable area of 202 m^2, living area with dining and kitchen, 4 bedrooms, 2 bathrooms, a theatre room and garage; or a terraced home with a usable area of 124 m^2 distributed across 2 floors, including a living and dining room, 3 bedrooms, one bathroom, 2 balconies and a carport. Percentage in brackets is percentage reduction compared with baseline.

Source: DISER, Race for 2030, Pathways to scale: Retrofitting One Million+ homes, p. 45.

519 COAG Energy Council, Report for achieving low energy existing homes, Australian Government, Canberra, 2019.

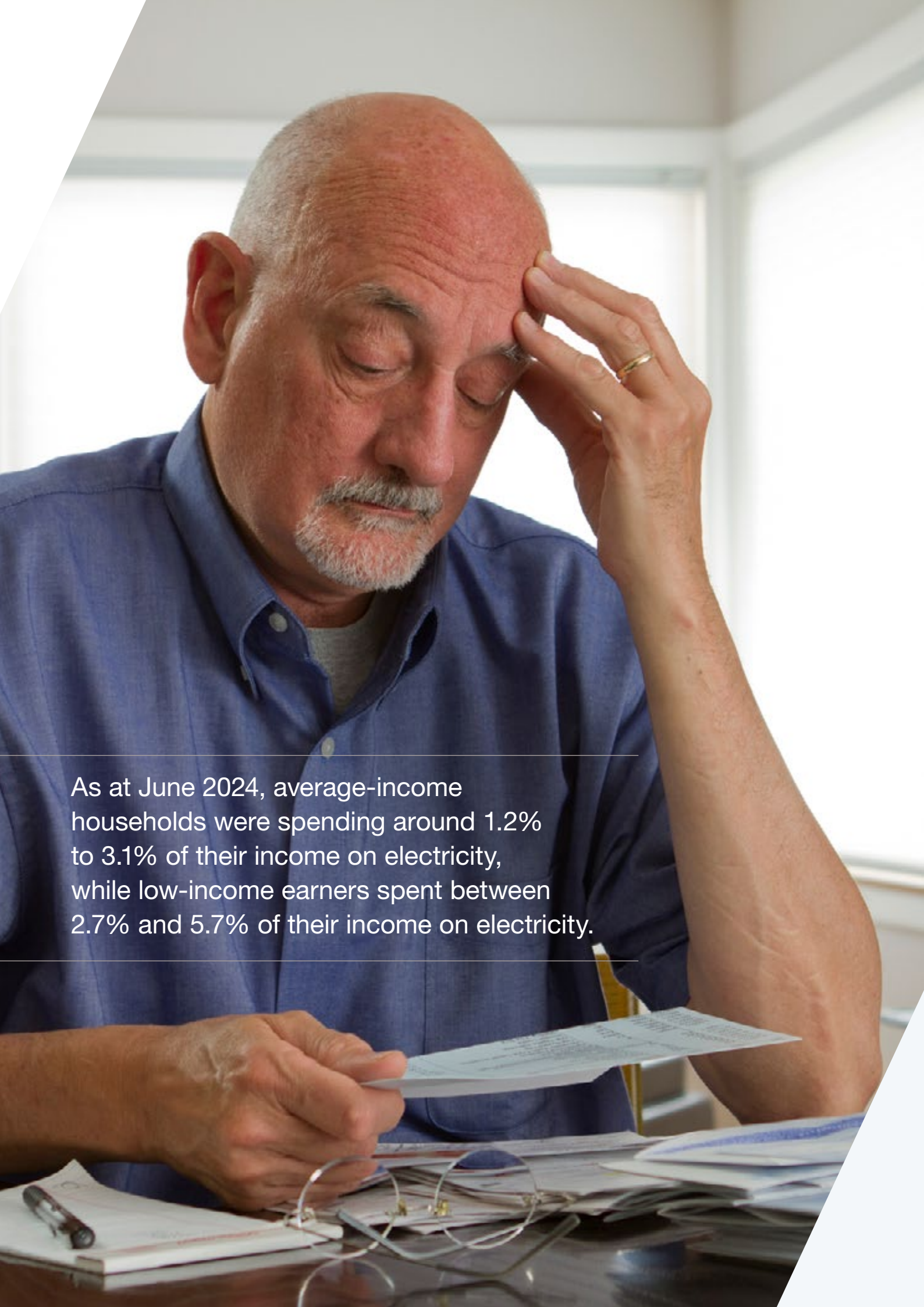
520 G Moore, S Berry & M Ambrose, 'Aiming for mediocrity: the case of Australian housing thermal performance', Energy Policy, 2019, 132:602–610.

521 DCCEEW, National Energy Performance Strategy, Department of Climate Change, Energy, the Environment and Water, April 2024, accessed 19 September 2024.

522 DCCEEW, Home Energy Ratings Disclosure Framework – Version 1, Department of Climate Change, Energy, the Environment and Water, 2024.

523 DCCEEW, Home Energy Ratings Disclosure Framework – Version 1, Department of Climate Change, Energy, the Environment and Water, 2024.

524 The RACE for 2030 Cooperative Research Centre is a 10-year, $350 million Australian research collaboration involving industry, research, government and other stakeholders.



As at June 2024, average-income households were spending around 1.2% to 3.1% of their income on electricity, while low-income earners spent between 2.7% and 5.7% of their income on electricity.

6.6 Energy affordability

Energy is an essential service. It is essential to people's daily lives, health, wellbeing and employment. An equitable energy market should provide affordable and reliable energy, be inclusive of all consumers and should not create or compound harms and barriers to participation. Energy equity, particularly affordability, remains a significant concern in energy markets.

Energy affordability is impacted by a customer's energy needs, energy contract and prices, income, living costs and ability to participate effectively in energy markets. Energy bills can be a significant burden for households even in times of relatively low energy prices. Additional strains will be felt by consumers as the broader cost of living in Australia continues to rise.[525]

Energy price increases can place significant strain on low-income households. A longitudinal study on low-income households in Australia found that a 1% increase in electricity prices leads to a 0.44% increase in energy expenditure and a 0.09% decrease in food expenditure.[526] For those near poverty, the same price increase cuts food spending by 0.2%. Energy price increases, in combination with poor energy performing homes and inadequate income support payment, is causing acute financial and social disadvantage and having tangible impacts on the physical and mental wellbeing of impacted householders.[527]

Retail energy prices paid by consumers depend on where a customer lives, the network services required to supply their energy, competition between retailers in their area, the customer's ability to identify an appropriate energy plan, and whether the customer is eligible for a concession or rebate to help manage their energy costs.

This means that affordability challenges are not split evenly across all consumer types. The evidence suggests that affordability differs substantially based on factors such as geographical location and income level. For example, retail energy prices are typically higher in regional and remote areas than in urban areas, mostly due to higher 'per customer' network costs required to operate geographically longer networks to areas with lower population density.

On the mainland, estimated annual customer electricity bills in 2023–24 ranged from $1,413 for a customer in urban Victoria to $3,102 for a customer in rural NSW.[528] This difference is likely driven by both electricity prices and energy use profiles. Regional differences are also driven by gas consumption across regions. For example, Victoria, being the highest user of gas, has the lowest proportion electricity bill and the highest proportion gas bill.

As at June 2024, average-income households were spending around 1.2% to 3.1% of their income on electricity, while low-income earners spent between 2.7% and 5.7% of their income on electricity (Figure 6.9).[529]

While this will be partly offset by the Australian Government's Energy Bill Relief Fund in 2024–25 and other cost-of-living rebates, it will be important for retailers to actively identify and support customers with challenges paying bills through payment plans and hardship programs.

Consumer protections in Victoria are under the auspices of Victoria's Essential Services Commission. Victorian data is excluded from some charts in this section because comparable data was unavailable at the time of publication.[530]

525 All 5 Living Cost Indexes rose between 3.7% and 6.2% in 2023–24, see ABS, Selected Living Cost Indexes, Australia, Australian Bureau of Statistics, 7 August 2024.

526 Science Direct, Energy poverty and food insecurity: Is there an energy or food trade-off among low-income Australians?, *Energy Economics*, July 2023.

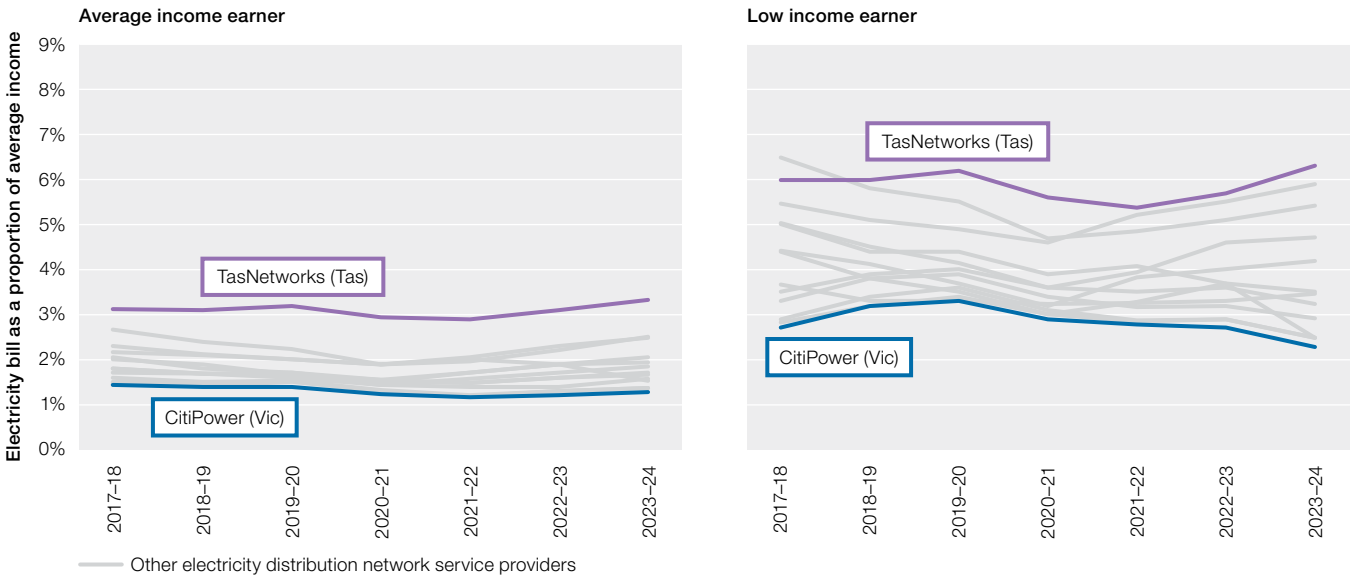
527 ACOSS, Energy and Cost of Living Snapshot – October 2023, accessed 11 September 2024.

528 Estimated annual customer bills for generally available flat rate offers by distribution company.

529 J Fry, et al. Energy poverty and food insecurity: Is there an energy or food trade-off among low-income Australians?, *Energy Economics*, vol. 123, July 2023.

530 Further information and metrics relating to consumer protections in Victoria is available at ESC, Victorian Energy Market Report – June 2024, Essential Services Commission, 27 June 2024.

Figure 6.9 Affordability of median market offers – electricity

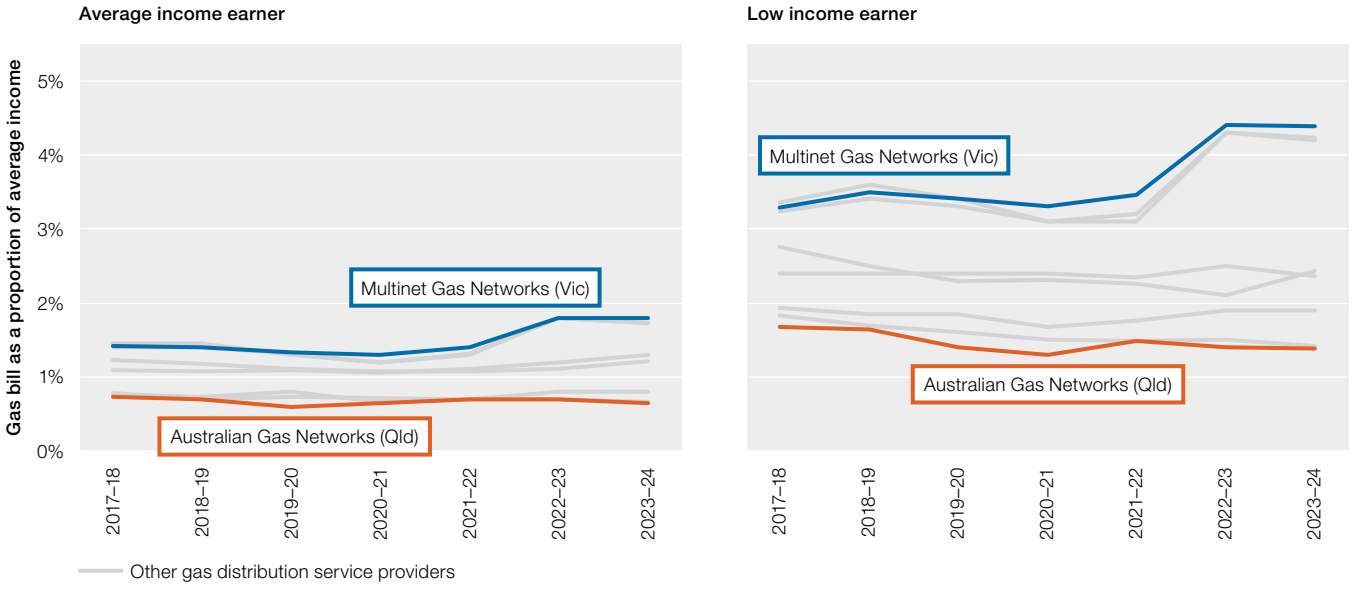


Note: Based on offers for residential customers in each jurisdiction. Average household consumption for the financial year ending June of each period was used in annual bill calculations. Proportion refers to mean disposable income. Use of average incomes across jurisdictions may overstate affordability in regional areas, where average incomes are typically lower than across the jurisdiction more broadly.

Source: Offer data from Energy Made Easy (AER) and Victorian Energy Compare (DELWP). Consumption estimates based on Economic benchmarking regulatory information notice (RIN). Income data are unpublished ABS estimates of household disposable income.

Gas bills as a proportion of income had remained static since 2017–18 in most jurisdictions, at around 0.7% to 1.8% of the average earners' income in 2022–23. Gas bills as a proportion of income have spiked for Victorian customers to 1.8% for average income earners and 4.4% for low-income earners. Because customers in Victoria use a lot more gas than customers in other regions, increased gas prices (due to both local supply and international prices) have a greater impact relative to their income, as it makes up more of their overall energy usage.

Figure 6.10 Affordability of median market offers – gas



Note: Based on single rate offers for residential customers and average consumption in each distribution area. Using mean disposable income for all and low-income households by state or territory. Use of average incomes across jurisdictions may overstate affordability in regional areas, where average incomes are typically lower than across the jurisdiction more broadly.

Source: Offer data from Energy Made Easy (AER) and Victorian Energy Compare (DELWP). Income data are unpublished ABS estimates of household disposable income. Consumption based on Frontier Economics report to the AER, Residential energy consumption benchmarks, December 2020.

6.6.1 Disparity of energy affordability between different types of consumers

Customers experiencing vulnerability[531] are likely to face additional challenges keeping energy bills low because they may be less able to implement some of the most effective means of reducing energy bills, including modifying energy use, making home energy efficiency upgrades, adopting new technologies and shopping around for better deals. As such, customers experiencing vulnerability are more susceptible to periods of high energy prices and disproportionately represented in the number of customers experiencing debt, hardship and disconnection.[532]

Consumers living in older, less energy-efficient homes could be spending significantly more on their energy use according to the *RACE for 2030 H2: Opportunity Assessment Enhancing home thermal efficiency Final Report May 2023*, which notes that retrofitting an existing Australian home and reducing home energy use by up to 9,000 kilowatt hours (kWh) per year could reduce an average home energy bill by up to $1,600 per year.[533]

Having both the autonomy and the resources to modify energy use plays an important role in energy affordability. There are 2 key aspects of this:

- In terms of energy efficiency, autonomy is an issue that affects people based on both housing tenancy (e.g. renters/owners) and housing type (e.g. apartment/house).
- Resources is a separate issue that relates to whether customers can pay the upfront costs (or have the necessary time, knowledge, capacity and equipment to research and then implement energy efficiency improvements.[534]

Autonomy also plays a role in modifying energy use in other ways. For example, consumers who have higher or less flexible energy needs because of caring responsibilities or health issues, or who are unable to shift energy use because of the nature of their work or are affected by family violence, may have less ability to respond to dynamic price signals or modify their energy use. The AER's *Annual retail markets report 2022–23* provides more in-depth assessments of affordability.[535]

6.6.2 Policy measures and regulatory reforms aimed at improving affordability

Energy price relief

In December 2022, the Australian Government launched its Energy Price Relief Plan to address energy affordability.[536] Measures under the plan included temporary and ongoing coal and gas price caps, an investment scheme to unlock investment in clean dispatchable capacity to support reliability and mitigate the risk of future price shocks, and an Energy Bill Relief Fund to provide targeted energy bill relief for residential and small business customers.

Following the Australian Government's $1.5 billion program to deliver electricity bill rebates for eligible households, an Energy Bill Relief Fund was established for 2024–25. The Fund is providing $3.5 billion to apply electricity bill rebates to Australian households and small business customers in 2024–25 to ease cost-of-living pressures.[537]

All Australian households will receive a $300 rebate and eligible small businesses will receive $325 from the Australian Government, to be paid in quarterly instalments on the electricity bill throughout 2024–25.[538]

531 In undertaking retail data affordability analysis, the AER groups customers based on income levels. However, for context in this section the AER's definition of 'customers experiencing vulnerability' is drawn from AER, Towards energy equity strategy, Australian Energy Regulator, 20 October 2022, p. 4.

532 AER, Towards energy equity strategy, Australian Energy Regulator, 20 October 2022.

533 DISER, Race for 2030, Pathways to scale: Retrofitting One Million+ homes, Department of Industry, Science and Resources, December 2021, accessed 6 September 2024, p. 31.

534 Calculation based on ECA respondents to question *How likely would you be to use smart appliances to reduce the cost of your household's energy bills?* and AER analysis of underlying data.

535 AER, Annual retail markets report 2022–23, Australian Energy Regulator, 30 November 2023.

536 DCCEEW, Energy Price Relief Plan, Department of Climate Change, Energy, the Environment and Water, accessed 16 September 2024.

537 DCCEEW, Energy Bill Relief Plan, Department of Climate Change, Energy, the Environment and Water, accessed 30 August 2024.

538 DCCEEW, Energy bill relief fund 2024–25, Department of Climate Change, Energy, the Environment and Water, accessed 6 September 2024.

In addition, the Queensland Government announced the $1,000 Cost-of-Living Rebate to support households in 2024–25.[539] The NSW Government funds rebate programs for electricity and gas customers, including NSW Family Energy Rebate, Low Income Household Rebate, NSW Gas Rebate, Life Support Rebate, Medical Energy Rebate and Seniors Energy Rebate.[540] The South Australian Government offers a range of energy rebates and concessions to support residents to manage their energy costs, such as the SA Concessions Energy Discount Offer and an Emergency Electricity Payment.[541]

Energy efficiency of homes

The Australian Government, along with state and territory governments, has been developing policies and frameworks to improve the energy efficiency of existing homes. These include:

- National Framework for Disclosure of Residential Energy Efficiency Information helps potential buyers and renters understand the energy efficiency of homes before making decisions.
- National Framework for Minimum Rental Energy Efficiency Requirements sets minimum energy efficiency standards for rental properties to ensure that tenants live in more energy-efficient homes.
- Improvements to Energy and Appliance Efficiency Programs aim to enhance the overall energy efficiency of appliances and buildings.

Several state and territory governments have introduced initiatives specifically targeting low-income households to improve their energy efficiency:

- In Victoria, the Household Energy Savings Package provides energy-efficient heating and cooling systems for low-income households and upgrades for social housing properties. It also includes a $300 Power Saving Bonus for eligible concession program recipients.
- In the ACT, the ActSmart Household Energy Efficiency Program, run by St Vincent de Paul, offers free assessments and practical advice to lower-income households to reduce their energy and water bills.
- In South Australia, the Retailer Energy Productivity Scheme provides free or discounted energy efficiency services, although it is not specifically for low-income households. Additionally, a virtual power plant project provides solar and home battery systems to eligible Housing SA tenants at no cost.

Sections 6.6.3 to 6.6.6 provide an interim update on customer debt, payment plans, hardship programs and disconnections. This data will be more thoroughly examined in the AER's forthcoming Annual retail markets report 2023–24, due for publication in November 2024.

The AER's quarterly retail performance reports provide more detail on the data and interdependencies between the different debt assistance and financial difficulty metrics provided by retailers.[542]

6.6.3 Assisting customers in energy debt

The AER's *Performance Reporting Procedures and Guidelines* define energy debt as the dollar amount owed (in arrears) to the retailer for the sale and supply of gas or electricity, excluding other services, which has been outstanding to the energy retailer.[543] The number of customers repaying debt excludes customers on hardship programs and non-active debts that retailers may still have on record. Customers with energy debt may be experiencing difficulties that have resulted in an inability to meet their bill repayments.

539 Queensland Government, Cost of living rebate 2024-25, accessed 23 September 2024.
540 EWON, Rebates and assistance, Energy and Water Ombudsman NSW, accessed 23 September 2024.
541 South Australian Government, Energy bill concessions, accessed 23 September 2024.
542 AER, Retail Performance Reporting, Australian Energy Regulator, accessed 28 August 2024.
543 AER, Explanatory statement – (Retail Law) Performance reporting procedures and Guideline, Australian Energy Regulator, 28 August 2024.

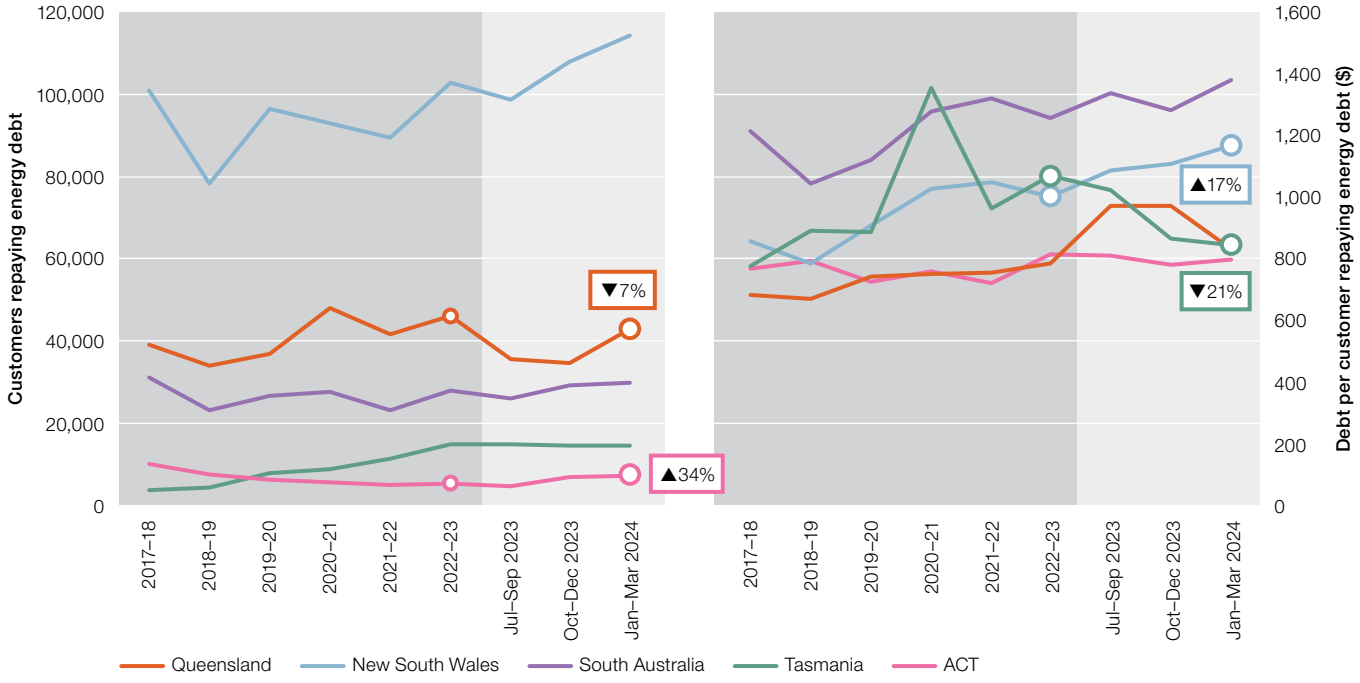
The proportion of customers in energy debt and the average level of debt provide an insight into:

- the extent to which customers are experiencing difficulty paying their energy bills
- whether customers in certain jurisdictions are more susceptible to experiencing difficulty paying their energy bills
- whether retailers are effectively assisting their customers to meet their energy debt repayments.[544]

As at March 2024[545], the overall number of customers across NEM regions with energy debt had increased by 6% since 30 June 2023, though there were mixed results by region. The biggest increases in customers with energy debt were in the ACT (34%) and NSW (11%). Queensland and Tasmania saw decreases in the number of customers in energy debt (–7% and –2%, respectively) (Figure 6.11).

Energy debt has some seasonality, with energy debt levels rising after periods of extreme temperatures. As at March 2024, our most recent data at the time of this report's development, the average amount of debt per customer increased in NSW (17%), South Australia (10%) and Queensland (6%) compared with June 2023. The ACT saw a small decrease of 2% and Tasmania saw a much more significant decrease of 21%. Queensland's hot and humid summer weather at the start of 2024 drove higher than usual demand and put upward pressure on debt levels present in March 2024. Further analysis and more up-to-date data will be provided in the forthcoming Annual retail markets report 2023–24, due for publication in November 2024.

Figure 6.11 Residential customers in energy debt



Note: Based on electricity and gas customers with an amount owing to a retailer that has been outstanding for 90 days or more. Excludes customers that have entered into hardship programs.

Source: AER, *Quarterly retail performance report, Q3 2023–24*, June 2024.

544 AER, Annual retail markets report 2022–23, Australian Energy Regulator, 30 November 2023.

545 Figures based on data from June 2023 to March 2024, annual figures to 30 June 2024 are reported in the AER Annual retail markets report.

Retailers are required to assist consumers experiencing payment difficulties in accordance with the Retail Law, Retail Rules and the AER's Customer Hardship Policy Guideline. This includes offering flexible payment options, such as payment plans and Centrepay, informing customers about government concessions and financial counselling, reviewing the appropriateness of market contracts, and providing energy efficiency strategies if required.

Retailers must tailor payment plans to customers' financial capacities and must waive late payment fees and, in some regions, early termination fees for hardship customers. While practical assistance for other consumers is limited to payment plans, prepayment meter customers experiencing difficulties must be offered a standard meter at no cost and referred to relief programs. Under certain circumstances, retailers can refuse payment plans to those who have defaulted on previous plans or committed energy-related offenses.[546]

Box 6.3 Reviewing payment difficulty protections in the National Energy Customer Framework

In our *Towards energy equity* strategy, the AER committed to considering whether improvements can be made to the National Energy Customer Framework to ensure that consumers experiencing payment difficulty receive effective assistance.

In November 2023, the AER commenced a review of payment difficulty protections to identify whether change is needed to ensure that consumers experiencing payment difficulty are proactively identified, engaged early and supported appropriately with assistance that is tailored to their individual circumstances. Through this review, the AER is also considering the consumer energy debt threshold for disconnection and opportunities to improve engagement so that disconnection is truly a last resort. As part of this, we have consulted extensively with stakeholders on:

- the effectiveness of existing protections for consumers experiencing payment difficulty, including who is eligible for these protections, what retailers must do to identify, engage with and assist consumers experiencing payment difficulty
- whether there are opportunities to strengthen protections for consumers experiencing payment difficulty, including opportunities to improve customer engagement
- the benefits and limitations of other frameworks and approaches, including the Victorian payment difficulty framework and approaches in other sectors
- the costs and benefits of potential changes to the framework, including the impacts of potential changes on retailer costs and the benefits and limitations of harmonising payment difficulty protections across the national energy market.

The AER intends to publish a report exploring the case for change and next steps in late 2024.

546 AER, Review of payment difficulty protections in the National Energy Customer Framework, Australian Energy Regulator, May 2024.

6.6.4 Payment plans

Under the Retail Law, retailers are obligated to provide payment plans to customers who they believe may be experiencing payment difficulties.[547] Payment plans allow settlement of overdue amounts in periodic instalments and are typically the first assistance offered by retailers to customers who show signs of payment difficulties, although other forms of assistance such as tariff and concession checks may also be provided. The AER's Sustainable Payment Plans Framework guides retailers on negotiating affordable payment plans with customers. The framework has been adopted by most retailers servicing small customers.

The AER monitors data on debt levels as well as the number of customers identified to be in hardship or on payment plans. While it is concerning that debt and hardship are increasing, the increase in customers on payment plans can also indicate earlier and more effective retailer engagement and may result in fewer disconnections. As at 31 March 2024[548], there was an increase in customers participating in payment plans across all NEM regions for both gas and electricity.

6.6.5 Hardship programs

The Retail Law requires energy retailers in Queensland, NSW, South Australia, the ACT and Tasmania to develop and maintain a customer hardship policy that outlines how they identify and assist customers facing difficulty paying their energy bills. The AER's Customer Hardship Policy Guideline requires retailers ensure their programs are easily accessible and include standard statements explaining how they will help customers. It puts greater onus on retailers to identify customers who may need assistance and provides broader support that is not limited to being offered a payment plan.[549]

Assistance under a retailer's hardship program can include:

- extensions of time to pay a bill and tailored payment options
- advice on government concessions and rebate programs
- referral to financial counselling services
- review of a customer's energy contract to ensure it suits their needs
- energy efficiency advice, such as an energy audit, and help to replace appliances to help reduce a customer's bills
- waiver of late payment fees.

Under the Retail Rules, retailers must take into consideration a customer's capacity to pay when establishing payment plans for hardship customers and some customers experiencing payment difficulty.

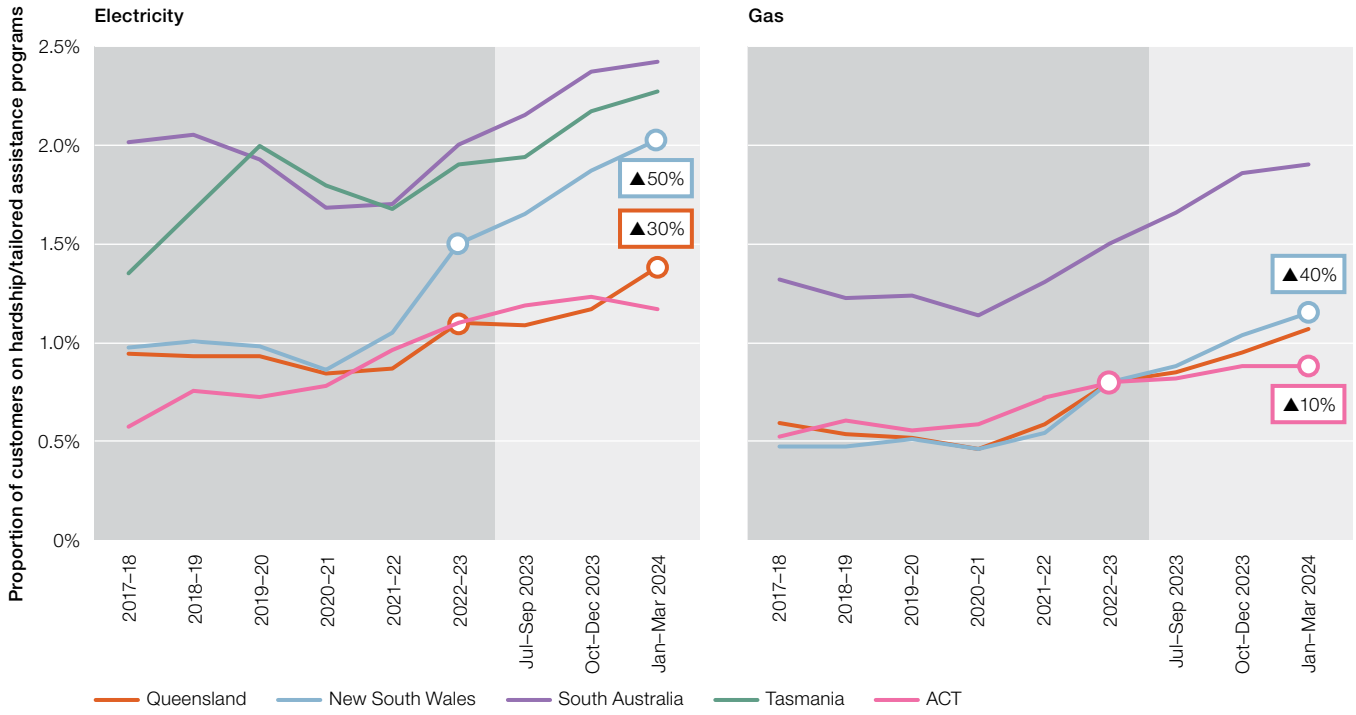
547 National Energy Retail Law (South Australia) Act 2011, Part 2, Division 7, Section 50–Payment plans.
548 Figures based on data from June 2023 to March 2024, annual figures to 30 June 2024 are reported in the AER Annual retail markets report.
549 AER, Hardship protections a right not a privilege, media release, Australian Energy Regulator, 29 March 2019, accessed 28 August 2024.

As at 31 March 2024, the proportion of residential electricity customers on hardship programs compared with June 2023 increased slightly in NSW which experienced a 0.1% increase to 1.2% (approximately 20,400 customers). South Australia had a 0.4% increase to 2.4% (approximately 3,700 customers) and Tasmania also had a 0.4% increase to 2.3% (approximately 1,000 customers). Queensland experienced a 0.3% increase to 1.4% (approximately 6,700 customers) and the ACT increased by 0.1% to 1.2% (approximately 100 customers).

The proportion of residential gas customers on hardship programs increased over the same period. NSW experienced a 0.4% increase to 1.2% (approximately 6,100 customers), Queensland experienced a 0.3% increase to 1.1% (approximately 600 customers), South Australia experienced a 0.6% increase to 1.9% (approximately 1,800 customers) and the ACT experienced a 0.1% increase 0.9% (approximately 100 customers) (Figure 6.12).[550]

However, it is notable that there was also a 28% decrease in average debt at the start of a hardship program, which may indicate that retailers engaged with customers experiencing debt more promptly and effectively compared with the previous year.[551] Analysis in the AER's forthcoming Annual retail markets report 2023–24 will provide a more complete picture of the AER's affordability metrics, including data on: customers successfully exiting hardship programs, customers excluded from hardship due to non-payment, reasons for entering the hardship program and length of hardship programs.

Figure 6.12 Residential customers on hardship programs



Note: The y axis represents % of customers in hardship and the percentage movements identified in the charts correlate with movements in percentages.

Source: AER, *Quarterly retail performance report, Q3 2023–24*, June 2024.

550 AER, Quarterly retail performance report, Q3 2023–24, Australian Energy Regulator, 28 August 2024.
551 AER, Quarterly retail performance report, Q3, 2023–24, Australian Energy Regulator, 28 August 2024.

6.6.6 Disconnecting customers for non-payment

Under the Retail Law, disconnection for non-payment of bills is a last resort option and can only occur after the strict processes set out in the Retail Rules have been followed.[552]

Disconnection is not permitted at all in certain circumstances – such as when a customer's premises are registered as requiring life support equipment, when a customer on a hardship program is meeting their payment obligations or where a customer's debt is below $300. There are also specific times during which consumers are protected from disconnection, including afternoons, evenings, Fridays, weekends, public holidays, and between 20 and 31 December. The Rules also protect customers in some jurisdictions from disconnection during an extreme weather event, and there are additional protections for customers affected by family violence.

The rate of disconnections remains significantly lower than in pre-COVID-19 years. This is encouraging as the AER's Statement of Expectations directing retailers not to disconnect small customers during COVID-19 lapsed on 30 June 2021.[553] The persistence of low disconnection rates for both electricity and gas small customers suggests ongoing behavioural change by retailers (Figure 6.13 and Figure 6.14). Where disconnection did occur, average customer debt levels at the time of disconnection were higher than in the previous year.

Customers with prepayment meters who are under the remit of the NECF also have a range of protections, including access to hardship programs and a requirement for the retailer to offer a switch to a post-pay meter if they are identified as experiencing payment difficulty. However, some jurisdictions have implemented local instruments to allow for energy retailers with customers on prepayment meters to derogate from the requirements set out under the NECF.

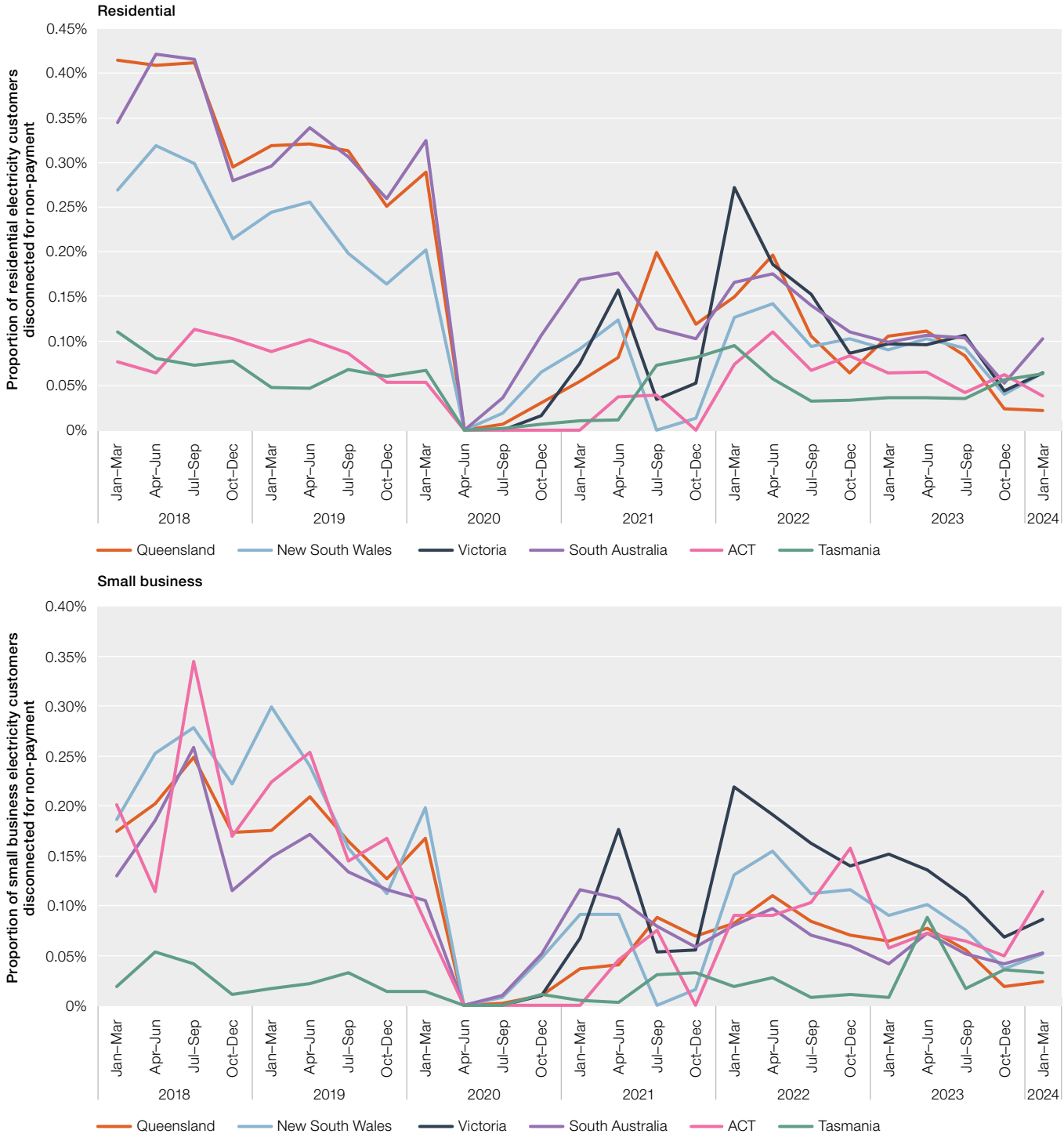
While some of those customers may have adequate protections in place via local instruments, some may not and are at much higher risk of energy insecurity. Recent data shows high rates of disconnections experienced by prepayment meter customers in the Northern Territory and South Australia.[554]

552 National Energy Retail Rules, Version 8, Part 6, accessed 6 September 2024.

553 AER, Statement of Expectations of energy businesses: Protecting customers and the energy market during COVID-19, Australian Energy Regulator, 29 June 2021.

554 Utilities Commission of the Northern Territory, Northern Territory Electricity Retail Review 2022–23, May 2024, accessed 6 September 2024.

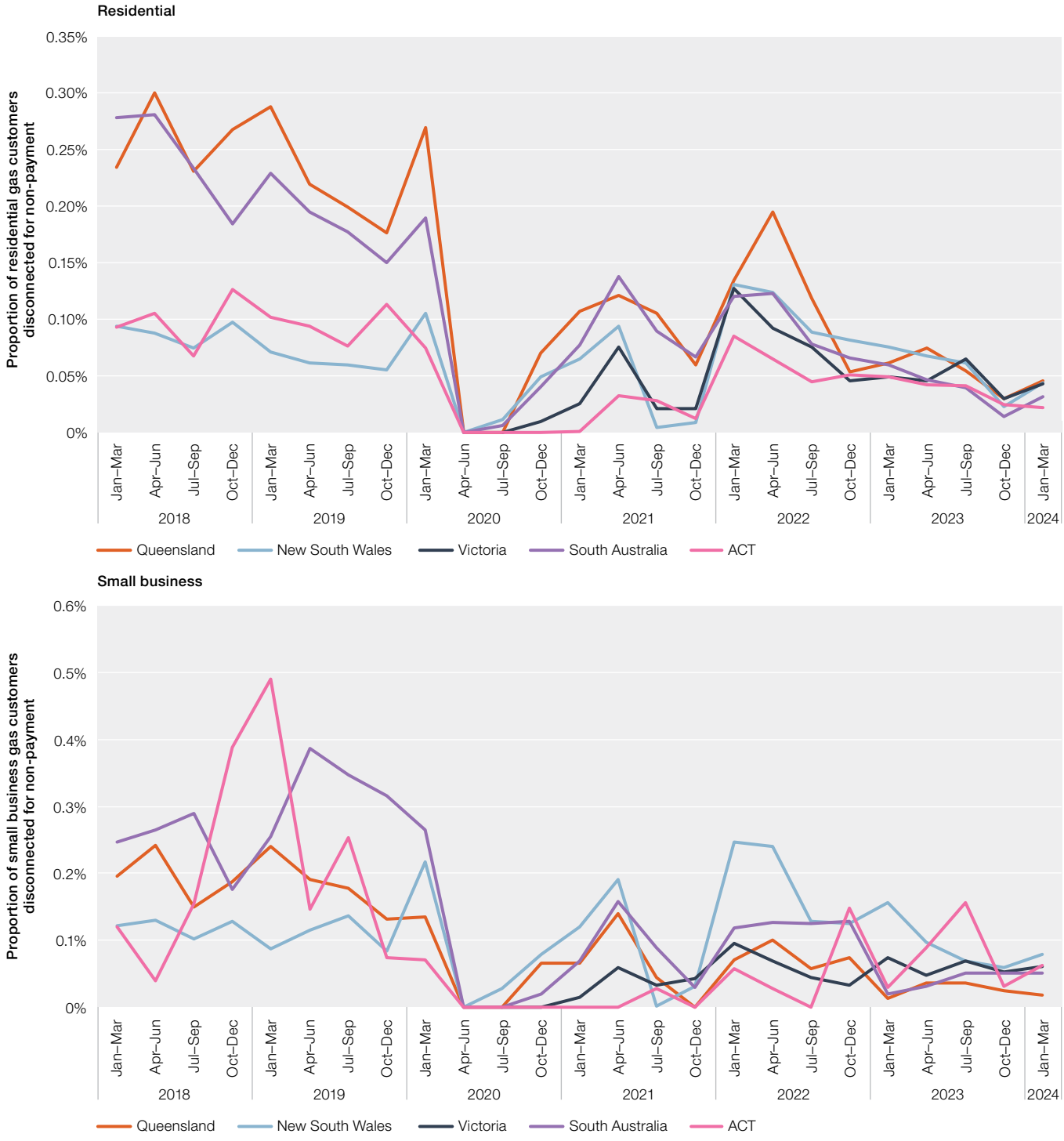
Figure 6.13 Disconnection for failure to pay – electricity



Note: Based on customers with an amount owing to a retailer that has been outstanding for 90 days or more, at 31 March 2024, for all states except Victoria, which is at 30 June 2024.

Source: AER, *Quarterly retail performance report, Q3 2023–24*, June 2024; ESC, Victorian energy market dashboard and historical data, accessed 30 June 2024.

Figure 6.14 Disconnection for failure to pay – gas



Note: Based on customers with an amount owing to a retailer that has been outstanding for 90 days or more, at 31 March 2024, for all states except Victoria, which is at June 2024.

Source: AER, *Quarterly retail performance report, Q3 2023–24,* June 2024; ESC, Victorian energy market dashboard and historical data, accessed 30 June 2024.

6.6.7 Improving our approach to consumer vulnerability

In October 2022 the AER launched Towards energy equity – A strategy for an inclusive energy market.[555] This strategy is focused on reducing barriers to participation, supporting consumers experiencing payment difficulty, ensuring the consumer voice is heard in sector reforms and improving affordability by reducing the cost to serve energy consumers.

The strategy outlines 15 actions that the AER will deliver over 3 years, in alignment with 5 core objectives:

- improve identification of vulnerability
- reduce complexity and enhance accessibility for energy consumers
- strengthen protections for consumers facing payment difficulty
- use the consumer voice and lived experience to inform regulatory design and change
- balance affordability and consumer protections by minimising the overall cost to serve.

Over the last year, the AER has made significant progress on several actions in the strategy:

- consulting on a draft toolkit to help consumer-facing energy businesses better identify and support consumers experiencing vulnerability, with the final toolkit to be published later this year
- undertaking a compliance review and evaluation research activities for the Better Bills Guideline, which was implemented in full on 30 September 2023
- commencing a review of the AER exemptions framework for embedded networks, including consultation on an issues paper
- completing extensive consultation for the Review of payment difficulty protections in the National Energy Customer Framework, including early engagement meetings with over 40 stakeholders, focus groups with 23 consumers, stakeholder workshops attended by 39 representatives from industry, consumer advocacy and community support organisations, and a listening session with 36 representatives from culturally and linguistically diverse communities.

On 13 August 2024 the AER, along with state and territory governments, provided recommendations through the Game Changer Report that the Australian Government implement a comprehensive reform package to improve outcomes for consumers facing financial hardship.[556] The package aims to address vulnerability throughout the entire energy consumer journey and recognises that vulnerability can change over time.

Key components of the package include:

- incentives for retailers to identify and assist vulnerable consumers early
- enhanced support for those with significant debt burdens to break the cycle of energy debt
- upgrades to concession and rebate systems to ensure consumers automatically receive their entitled discounts and can switch retailers without losing benefits
- improved access to financial counselling for consumers to help manage their payment difficulties
- automatic placement of hardship plan consumers on the best available offer
- debt relief for those who cannot meet their energy costs, funded by a shared industry pool and supported by financial counsellors or community organisations.

In November 2023 the Energy and Climate Change Ministerial Council decided to progress work on the sector-wide 'game changer' reforms to ensure consumers are adequately protected against potential harms arising from new energy services.[557] The CER Roadmap recognises that careful development of regulation and programs is required to ensure that the deployment and use of CER allows the distribution of benefits to all energy consumers, avoids costs to those unable to invest and ensures access, particularly for people vulnerable to or experiencing hardship.[558]

555 AER, Towards energy equity strategy, Australian Energy Regulator, 20 October 2022.
556 AER, Game Changer Report, Australian Energy Regulator, accessed 13 August 2024.
557 ECMC, Meeting Communique, Energy and Climate Change Ministerial Council, 24 November 2023.
558 DCCEEW, National Consumer Energy Resources Roadmap, Department of Climate Change, Energy, the Environment and Water, 18 July 2024.

6.7 Competition in retail energy markets

Competition in retail energy markets is necessary to stimulate innovation and ensure better quality, lower cost products and services for consumers. The AER's role in delivering consumer protections – such as monitoring and reporting on market performance, enforcement and compliance activities, provision of price comparison services, setting the default market offer reference price and regulating monopoly infrastructure – must be balanced to ensure market competition isn't unnecessarily hindered.

The ACCC's June 2018 Retail Electricity Pricing Inquiry found that retail electricity competition had not sufficiently benefited consumers. Since then, regulatory reforms have aimed to boost retailer competition in a way that benefits consumers, providing information to help them better engage with the market and compare retail offers. This could lead to more competitive prices and improved products.

Because customers of exempt sellers embedded networks may not benefit from the same customers protections available to other consumers, they may face additional barriers to accessing the benefits of retail competition. For example, switching retailers can require a significant investment of time and money and only a small number of embedded network customers (generally small businesses) have successfully transferred away from their embedded network's incumbent retailer. The AER has undertaken a range of compliance and enforcement activities to improve outcomes for customers in embedded networks, including introducing obligations to ensure embedded network customers can access hardship protections and ombudsman schemes (section 6.8.4).

Consumers experiencing vulnerability may not have the opportunity to shop around for the best market offer. It is important these consumers are not further disadvantaged by higher energy bills. As the energy system transitions to more dynamic energy use and more complex price signals, the regulatory framework will need to incentivise innovation that includes appropriate safeguards for all consumers, regardless of their level of engagement or energy literacy.

6.7.1 Market concentration

Origin Energy, AGL Energy and EnergyAustralia (collectively referred to as 'Tier 1' retailers) are the largest energy providers in Australia. Tier 1 retailers have a significant share in the residential electricity and gas markets of NSW and South Australia and a lesser, but still substantial, portion of the Queensland and Victorian markets. Although their market share continues to decline, as of March 2024, they still served at least 60% of electricity customers and 80% to 90% of gas customers (Figure 6.16).

Growth in the number of alternative (Tier 2) retailers can contribute to effective retail competition by providing a more diverse mix of offers in the market.[559] A growth in the number of Tier 2 retailers was observable from 2017 but this has slowed since winter 2022 (Figure 6.15). Tier 2 retailers continue to improve market share, but they are doing so at a slower rate.

Since the market conditions of winter 2022, smaller retailers have reported that it is harder to manage exposure to volatile wholesale electricity prices. Volatility in wholesale energy costs may subdue interest from new market entrants until wholesale prices stabilise.[560] Access to competitively priced hedging contracts had already been identified by standalone retailers as early as 2020 as a barrier to entry and further expansion.[561]

559 Tier 2 retailers include any retailer that is not Origin Energy, AGL Energy, EnergyAustralia, nor one of the primary regional government-owned retailers – Ergon Energy (Queensland), ActewAGL (ACT) and Aurora Energy (Tasmania).

560 AER, Wholesale electricity market performance report – December 2022, Australian Energy Regulator, 15 December 2022, p. 56.

561 AEMC, 2020 Retail Energy Competition Review, Australian Energy Market Commission, 30 June 2020, accessed 15 September 2022.

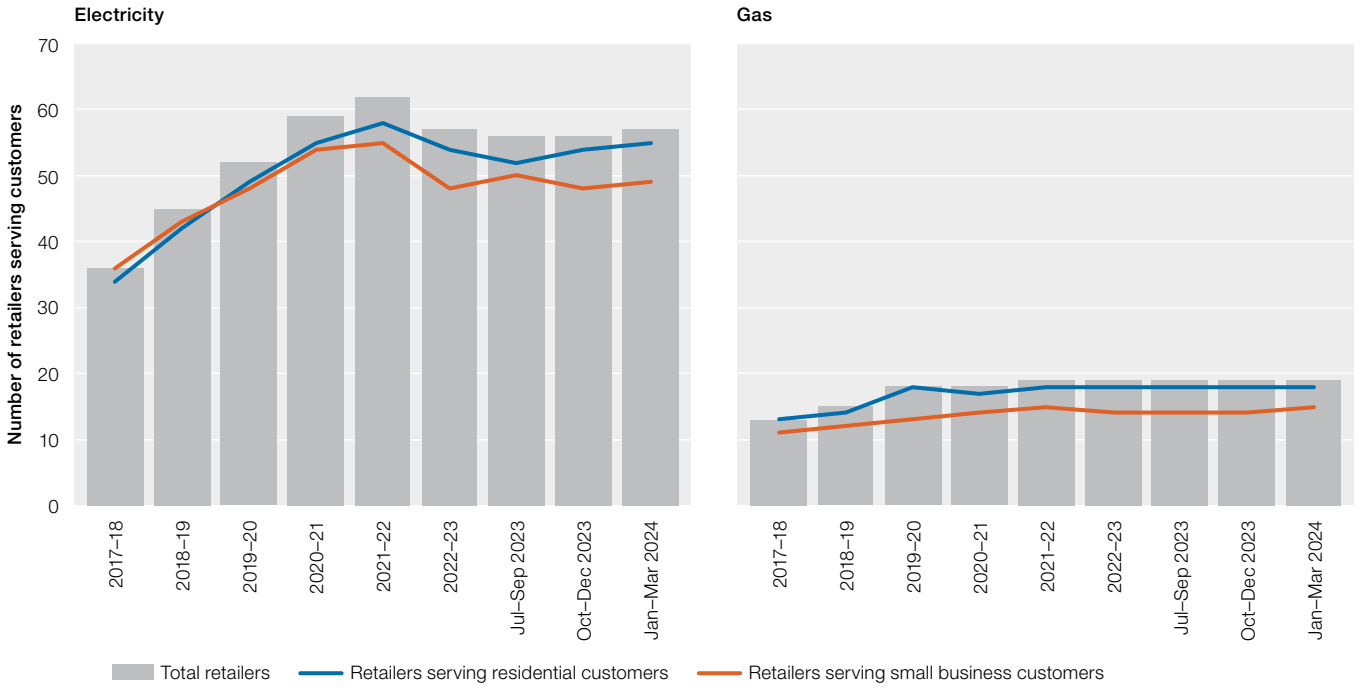
Regions with stronger levels of continuous retail price regulation are also heavily concentrated, including Ergon Energy in regional Queensland, Aurora Energy in Tasmania and ActewAGL. These primary retailers are government-owned (wholly or in part) businesses with little activity outside their home jurisdiction and were previously the sole regulated provider of retail electricity in that jurisdiction.[562] Due to a lack of competition and ongoing price regulation, the degree of market concentration in those regions remains stable (Figure 6.16).

Consumers experiencing vulnerability may not have the opportunity to shop around for the best market offer.

Gas markets are generally less competitive and have much higher levels of concentration than electricity markets given their smaller scale and persistent issues in sourcing gas and pipeline services in some jurisdictions (Figure 6.17).

The upstream east coast gas market is heavily concentrated, with 3 major LNG producers and their associates dominating it. Although the ACCC's Gas Inquiry December 2023 interim report identifies potential new supply sources held by emerging market players and smaller producers, these are impeded by various challenges.[563]

Figure 6.15 Energy market – number of retail brands



Source: AER, *Quarterly retail performance report, Q3 2023–24*, June 2024; ESC, Victorian energy market dashboard and historical data, accessed 30 June 2024.

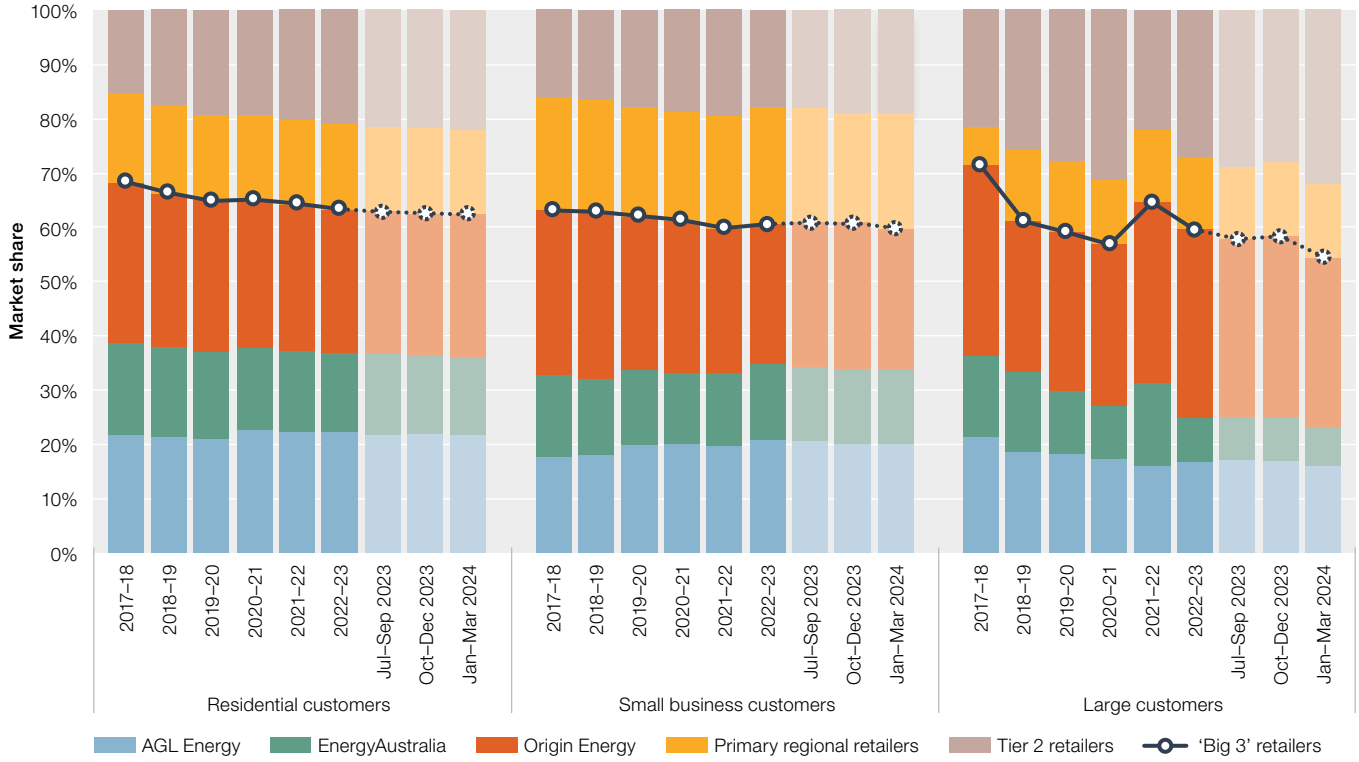
562 AER, Annual retail market report 2021–22, Australian Energy Regulator, 30 November 2022.
563 ACCC, Gas Inquiry 2017-2030, Interim update on east coast gas market, June 2024, Australian Competition and Consumer Commission.

6.7.2 Electricity

Between 1 July 2023 and 31 March 2024, the number of customers serviced by Tier 1 retailers decreased 0.16%, whereas the number of Tier 2 customers increased by 5.4%. Tier 2 retailers have increased their share of small customers in each year since at least 2016–17.[564]

While the Retailer of Last Resort (RoLR) scheme[565] continues to operate, no retailers exited the market through the scheme between 1 August 2023 and 31 July 2024. From 30 July 2024, amendments to the *National Energy Retail Law (Victoria) Act 2024* and the National Energy Retail Law (Victoria) Regulations 2024 (Regulations) give the AER the responsibility of managing RoLR events across the National Energy Customer Framework and in Victoria. From 30 July 2024, where the AER issues a RoLR notice due to the occurrence of a specified RoLR event and revokes the failed national retailer's retail authorisation, section 49B(2) of the *Electricity Industry Act 2000* (Victoria) automatically revokes the Victorian licence of that retailer.[566]

Figure 6.16 Energy retail market share – electricity



Note: All data as of 31 March 2024. Data includes customers in Queensland, NSW, South Australia, Tasmania and the ACT. Some differences may occur between annual and quarterly data to account for retailers revising their data when making their annual submission.

Source: AER, *Retail markets quarterly, Q3 2023–24*, June 2024.

In NSW, the big 3 retailers serve 75% of electricity customers, making it the most concentrated jurisdiction. Snowy Hydro (owned by the Australian Government and trading as Red Energy and Lumo Energy) serves 11% of small customers, with the remaining 14% served by other Tier 2 retailers.[567]

564 Retail customer numbers are not available prior to 2016–17.

565 The Retailer of Last Resort (ROLR) scheme allows for prompt transfer of customers to a new retailer if their existing retailer fails or loses their authorisation. This provides continuity for customers' energy supply without AEMO having to bear the risk of failing retailers defaulting on their energy purchases.

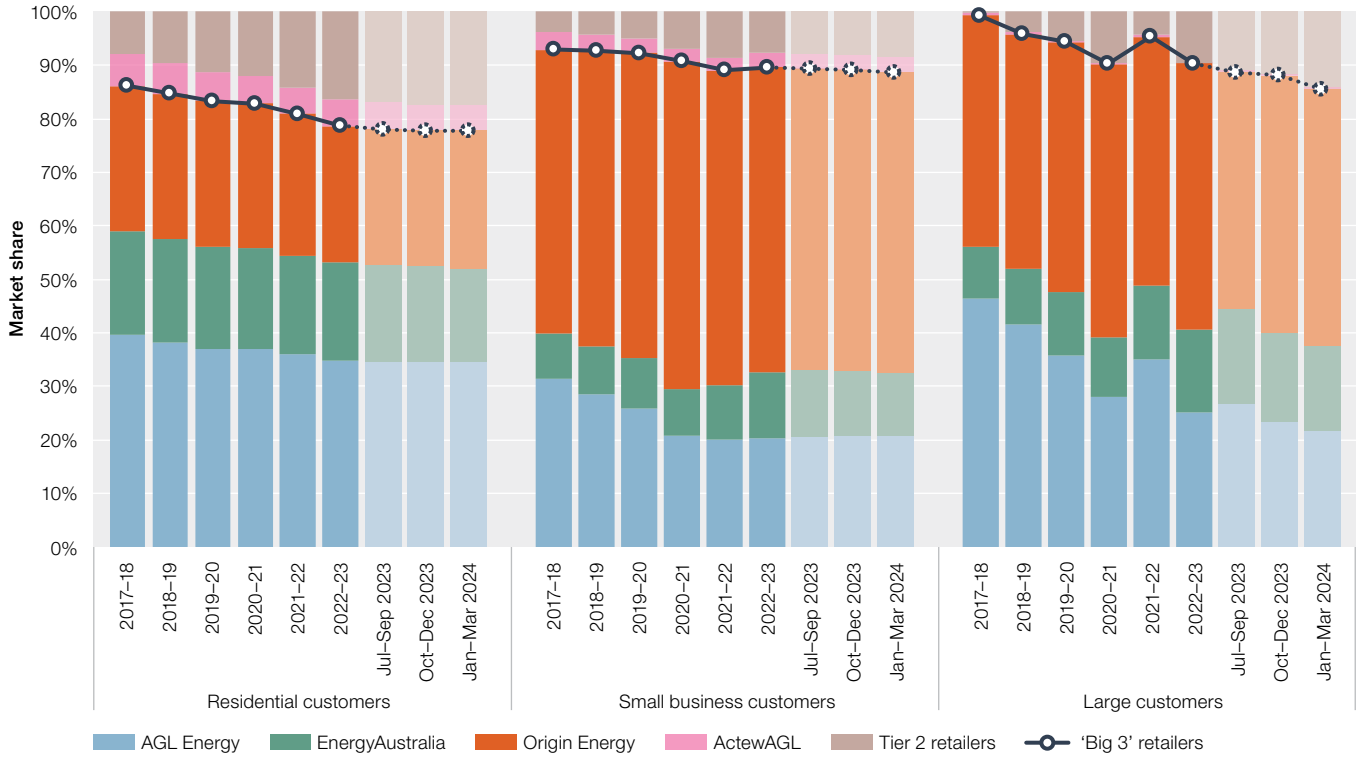
566 For more background on these amendments please see AER, AER ensures continued supply for former Maximum Energy customers, Australian Energy Regulator, 2 August 2024.

567 Use of state-wide data masks levels of market concentration within some parts of regions with multiple distribution zones (Queensland and NSW). For example, market concentration is likely to be higher in regional NSW than in Sydney.

6.7.3 Gas

As with electricity, AGL Energy, Origin Energy and EnergyAustralia are the dominant retailers in the gas market, serving just over 1.6 million residential customers (78% of a total 2.1 million).[568] In the 9 months from June 2023, the big 3 retailers' share of the small customer market decreased from 78.7% to 77.8% and over the same period Tier 2 retailers increased their share of the market.[569] In gas markets, the big 3 retailers have continued to lose their small customer market share to Tier 2 retailers since 2016–17 (Figure 6.17).

Figure 6.17 Energy retail market share – gas



Note: All data as of 31 March 2024. Data includes customers in Queensland, NSW, South Australia and the ACT.
Source: AER, *Quarterly retail performance report, Q3 2023–24*, June 2024.

568 Includes customers in Queensland, NSW, South Australia and the ACT. Does not include Victoria.
569 AER, Quarterly retail performance report Q3, 2023–24, Australian Energy Regulator, 28 June 2024.

6.7.4 Vertical integration

Vertical integration in the electricity sector refers to companies that operate in both generation and retail markets. Referred to as 'gentailers', they have been in operation for many years and include all Tier 1 providers in the NEM (AGL, Origin and EnergyAustralia), and several Tier 2 retailers that own major generation assets. Tier 1 gentailers have a significant share of the residential electricity and gas markets in NSW, South Australia, Queensland and Victorian, serving at least 60% of residential and small business electricity customers and 80% to 90% of residential and small business gas customers (Figure 6.16).

Gentailers may be able to better manage price fluctuations, theoretically reducing the need for complex financial strategies to hedge against market volatility and enabling them to offer lower prices to consumers. However, gentailers often need to employ financial strategies just as complex as pure retailers to balance their positions (being a gentailer does not necessarily mean avoiding complexities in retail markets). Gentailers can pose challenges for independent retailers who do not undertake integrated operations, because reduced trading activity in financial markets can make it tougher for them to compete as independent retailers are heavily reliant on financial hedging techniques to manage risks of price volatility. Our forthcoming wholesale electricity market performance report will provide further analysis on vertical integration in wholesale energy markets.[570]

6.7.5 Customer engagement

Between 80% and 90% of energy customers are on a market offer contract (Figure 6.18). Customers who can actively participate in retail energy markets can research market offers and enter a market contract with their retailer of choice.[571] Market contracts allow retailers to tailor their energy products, offering different tariff structures, discounted prices, carbon offsets, non-price incentives, billing options, fixed or variable terms and other features.

Customers without a market contract or whose market contract has expired are placed on a standing offer with the retailer that most recently supplied energy at their premises (or, for new connections, with the retailer designated for that area). Standing offers are intended to provide a safety net for customers unable or unwilling to engage in the market, with prescribed terms and conditions and a suite of consumer protections that the retailer cannot change (section 6.3.5).

While customers on market contracts have generally paid less than those on standing contracts, in 2022–23 prices for both market and standing contract customers seemed to be converging (section 6.4.1). However, data for 2023–24 shows this is no longer the case most regions, with standing offers increasing (relative to market offers) in all jurisdictions besides Tasmania and the ACT (Figure 6.18). The largest increases in standing offers compared with market offers was observable in Victoria (section 6.4.1). The Victorian Government regulates standing offer prices under its Victorian Default Offer, which may account for variations in pricing compared with the AER's DMO regions.[572]

Most standing offer customers have contracts with Tier 1 retailers. This reflects the position of these retailers as incumbents – the retailer that purchased the customer base at the time retail contestability was introduced – allowing them to retain customers that have never taken up a market contract and may face additional barriers to actively participate in the market. Customers on standing offers are likely to pay more for their electricity bills than those on market offers.

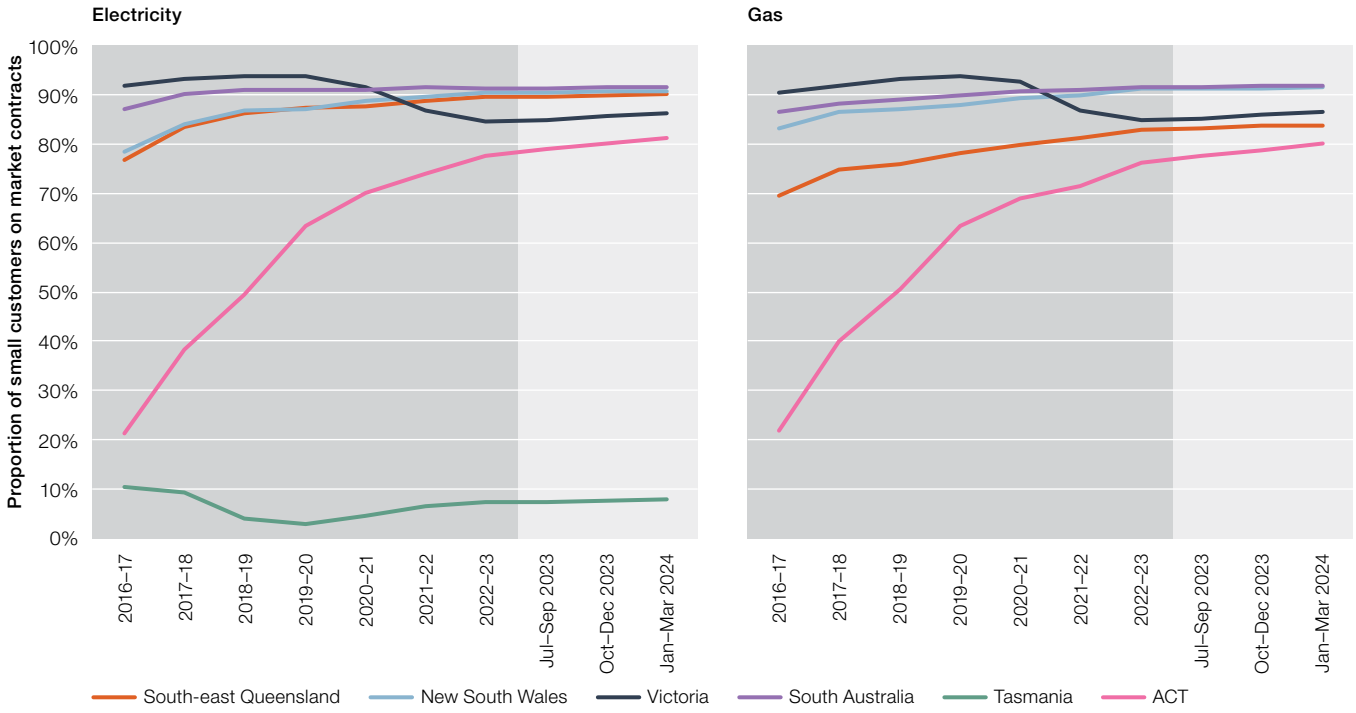
570 The report is due for publication in December and will be accessible via the AER's wholesale performance reporting page.

571 While full retail contestability applies in all regions, not all customers can access offers from a retailer other than their host retailer. Further, many customers within embedded networks are still limited to energy supply through their embedded network operator.

572 ESC, Victorian Default Offer 2023, Essential Service Commission (Victoria), 1 July 2024

However, in regions serviced by primary regional retailers, most customers are on standing offers. As partially government-owned retailers with ongoing price regulation, they have maintained strong market concentration, faced limited retail competition and have delivered relatively stable pricing for customers. As such, small customers in those areas have had less motivation and opportunity to pursue market offers. In Tasmania, new entrant retailers have offered market contracts to residential customers since early 2019, but the proportion of customers on market contracts remains much lower compared with other regions. The Tasmanian Government set standing offer prices that attracted Aurora Energy's market customers to switch back to the standing offer (Figure 6.18).[573]

Figure 6.18 Small customers on market contracts



Note: Standing and market offer shares are based on the number of small customers at 31 March 2023 except Victoria (June 2023). Queensland electricity numbers exclude customers in regional Queensland, who largely remain on standing offers.

Source: AER, *Retail markets quarterly, Q3 2023–24*, July 2024; Victorian energy market dashboard and historical data, accessed 23 August 2024.

573 Office of the Tasmanian Economic Regulator, Electricity pricing explained, accessed 18 September 2024.

6.7.6 Consumer participation

Competition in retail energy markets is intended to drive innovation, resulting in a wider range of products and services to meet different customer preferences and demands. However, for a range of reasons, many consumers face barriers to actively participate in the market and secure the best offer for their situation. This can exacerbate existing structural inequalities, whereby those who can least afford it are paying higher energy rates.

To remain on the best possible plan, customers need to continuously review, compare, renegotiate or switch market contracts to maintain better prices. For example, in June 2024 the ACCC reported that customers able to switch between market contracts benefit from accessing the best available offer and discounts to attract new customers; the median residential market offer customer pays between 5% and 10% lower effective prices than the median standing offer customer for most usage levels.[574]

A reasonable degree of energy literacy is required to identify the best possible plan. Despite the safeguards provided by standing offers and reforms to make retail energy bills easier for customers to understand section 6.3.1)[575], customer surveys regularly report that customers still find the energy market difficult to navigate.

In June 2024, Energy Consumers Australia (ECA) reported that 30% of Australians do not feel there is enough easy-to-understand information available to make informed decisions about energy.[576] Further, marketing strategies that make it difficult and time-consuming for customers to directly compare offers reinforces a lack of trust and reduces levels of engagement.

Reforms in 2019 sought to make it easier for customers to compare offers by simplifying and standardising how retailers must present offers. The reforms require advertised discounts to be quoted against a common 'reference bill', being the default market offer set by the AER (section 6.3.3).

The Better Bills Guideline, which was implemented in full on 30 September 2023, also seeks to make it easier for consumers to engage with the energy market by providing information to help them understand and compare their plan, identify whether their retailer may be able to provide a better offer, and consider options for new types of energy services (section 6.3.1).

The AER has also developed a suite of translated, shareable content for consumers who speak a language other than English.[577] The content, some of which is translated into 8 languages, provides information on:

- how to save money on energy bills
- how to get help when having trouble paying bills or if having a dispute with a retailer
- what happens if their energy provider goes out of business.

Market developments such as the rollout of smart meters and new dynamic tariffs are adding additional layers of complexity to the market, making it harder for consumers to confidently engage. Other major barriers to consider include lack of trust towards energy institutions, providers and the government, and a lack of a single source of easy-to-understand information.[578]

574 ACCC, Inquiry into the National Electricity Market – June 2024 report, Australian Competition and Consumer Commission, 3 June 2024.

575 AER, Better Bills Guideline (Version 2), Australian Energy Regulator, 28 June 2024.

576 ECA, Evidence base to support the development of an effective communications campaign for energy consumers, Energy Consumers Australia, 27 July 2023.

577 AER, Translated information to help energy consumers, Australian Energy Regulator, accessed 30 August 2024.

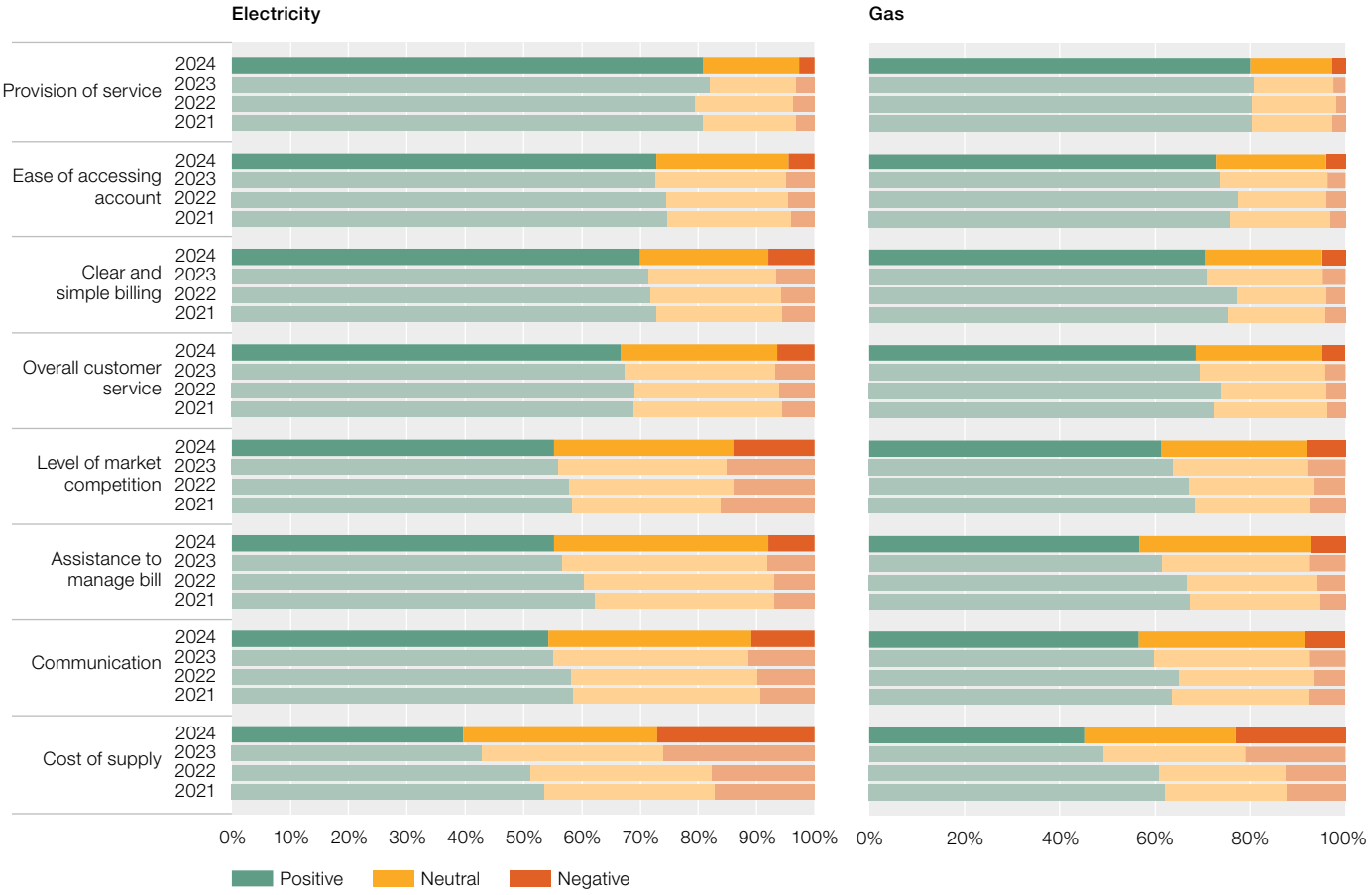
578 ECA, Evidence base to support the development of an effective communications campaign for energy consumers, Energy Consumers Australia, 27 July 2023.

6.7.7 Consumer satisfaction

A customer's level of satisfaction with retail energy markets depends on several factors and can be influenced by price, perceived value for money, reliability, customer service, confidence in engaging with the market, technology uptake, ability to switch and retailer behaviour.

Results from the ECA's June 2024 survey reported an overall increase in positive sentiment since 2022, but noted that the cost of supply was an increasing concern, with 'dissatisfaction with value for money' being one of the main reasons for customer switching (Figure 6.19).

Figure 6.19 Responses from energy consumer sentiment survey



Source: Energy Consumers Australia, *Energy consumer sentiment survey*, June 2024.

6.7.8 Consumer data right

The Australian Government is extending the Consumer Data Right (CDR) to cover the energy sector.[579] This will allow consumers to authorise their energy retailer share their historical energy use data with an accredited service provider. Giving consumers the right to safely share their data (such as their current energy deal and consumption patterns) with third parties should make it easier for them get a better deal on a range of energy products and services, while promoting competition between retailers.

Tier 1 retailers were required to comply with non-complex consumer data requests from 15 November 2022, and for complex requests from 15 May 2023. Compliance timeframes for other retailers has varied between November 2021 and May 2024, depending on the number of customers and complexity of the data request.[580]

6.7.9 Price comparison websites and switching services

The variety of product structures, discounts and other inducements can make it difficult for energy customers to compare retail offers. Due to the fundamental role shopping around has in delivering savings to consumers, some customers use comparator websites to manage the complexity and range of offers in the market. Independent price comparator websites are run by the AER and Victorian Government.

The AER operates an online price comparator Energy Made Easy (energymadeeasy.gov.au) to help small customers compare market offers. The website shows all generally available offers and has a benchmarking tool that allows consumers to compare their electricity use with similar-sized households in their area. The website is available to consumers in jurisdictions that have implemented the Retail Law (Queensland, NSW, South Australia, Tasmania and the ACT). The Victorian Government operates a similar online price comparator, Victorian Energy Compare (compare.energy.vic.gov.au).

Comparison websites and brokers can provide consumers with a quick and easy way of engaging in the market, but some services may not provide customers with the best outcomes. For example, commercial comparator websites may only show offers of retailers affiliated with the site. Commercial comparators also typically require retailers to pay a commission per customer acquired or a subscription fee to have their offers shown. These arrangements are opaque to the customer. Commissions may vary across listed retailers, creating incentives for websites to promote offers that will most benefit the comparator business rather than show the cheapest offer for the customer. Government-operated comparison sites avoid this bias by listing all generally available offers in the market.

The AER's ongoing programme of work to enhance the Energy Made Easy platform suggest that future reliance on benchmarks may diminish. While current benchmarks remain broadly useful, their relevance is expected to decrease as the market evolves and more tailored data becomes available. Given the costs and limited benefits of maintaining the benchmarks, the regulatory requirements for periodic updates may no longer be the most effective approach.

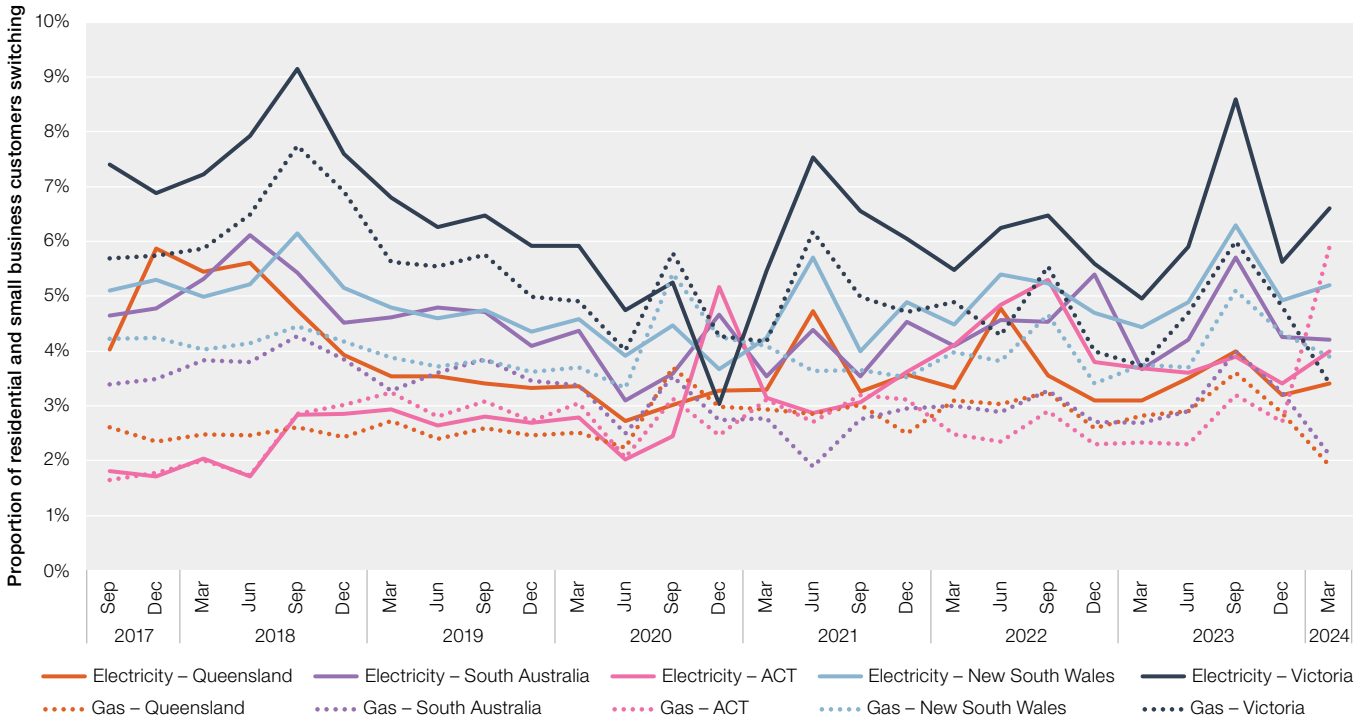
579 Australian Government, Consumer Data Right rollout, accessed 3 September 2024.
580 Australian Government, CDR in the energy sector, accessed 3 September 2024.

6.7.10 Customer switching

The rate at which customers switch retailers can indicate the level of engagement in the market. But switching rates should be interpreted with care – switching may be low in a competitive market if retailers deliver good-quality, low-priced services that give customers no reason to change. Data on switching rates does not capture customer movements to new contracts with the same retailer, so it understates customer activity in the market. Conversely, switching data captures when an existing customer moves house and signs a new contract, even if it is with the same retailer (thus overstating customer activity).

Switching rates are typically lower in gas than in electricity. This may reflect fewer retailers participating in gas, meaning less choice and fewer potential customer savings. As a secondary fuel, gas is also typically a lower cost for consumers, so it may not receive the same attention.

Figure 6.20 Switching activity – small customers



Source: AER, *Quarterly retail performance report, Q3 2023–24*, June 2024.

Reforms introduced in December 2019 aimed to make it easier for customers to switch retailer by allowing them to transfer within 2 days of a cooling-off period expiring.[581] The intention of this change was to limit retailers relying on 'save' activity (retailers contacting customers who try to switch and giving them a better offer to encourage them to stay) rather than competing for outside customers by offering better products and services, and to allow customers faster access to prices and products they want.

In many markets, engagement by even a limited number of customers can drive lower prices and product improvements that benefit all consumers. This is less true for energy markets, where retailers can easily identify and then price discriminate against inactive customers. Many market offers include benefits that expire after one or 2 years – customers who do not switch regularly may find themselves paying higher prices than necessary. As a result, a critical part of the AER and other regulators' reform agenda is supporting consumers to understand impending changes in their energy contract and helping them find better offers, either with the same or an alternative retailer.

581 AEMC, National Energy Retail Amendment (Reducing Customers' Switching Times) Rule 2019 No. 2, Australian Energy Market Commission, 19 December 2019, accessed 2 September 2024.

For example, the National Energy Retail Rules require energy retailers to notify small customers before any change in their benefits and provide advance notice of any price change.[582] In Victoria, retailers must also prominently display their 'best offer'[583] on customers' bills at least once every 100 days (except where a customer has agreed to a billing cycle greater than 100 days, in which case it is at least once during that billing cycle) along with advice on how to access it. The Better Bills Guideline has brought this requirement to the rest of the NEM jurisdictions.

At the end of a fixed-term contract, retailers are required to notify customers in writing about their options, including setting up a new contract or switching to another retailer. They must also inform customers that if they choose not to enter a new market contract, they will be switched to a standing offer.

Despite recent reforms aimed at enhancing consumer access to better offers, switching activity remains relatively unchanged so far. Observing improvements in competitive outcomes for consumers through switching data alone is challenging without incorporating other factors, such as customer satisfaction and energy affordability metrics.

6.7.11 Retailer activity and barriers to entry

Following the significant market events of winter 2022, the steady growth of new retailers entering the market slowed (Figure 6.15). The high, volatile wholesale prices and reduced liquidity in contract markets following these events likely deterred new entrants, compromising innovation and competition in the market.[584] However, a slight uptick of new retailers entering the market is evident.

While 2022 events were unprecedented, retailers have noted other barriers to entry such as the reintroduction of standing offer price caps. In South Australia, limited access to competitive risk management contracts has been a barrier to entry or expansion, with almost half of all retailers in 2020 considering that contract market liquidity in South Australia was too low.[585]

Access to reasonably priced gas and pipeline capacity have been identified as barriers to entry and expansion, particularly in Victoria:[586]

- The Pipeline Capacity Trading and Day Ahead Auction reforms that commenced in March 2019 sought to reduce these barriers by increasing transparency in the gas market and improving access to unused pipeline capacity through a day-ahead auction and a capacity trading platform. Volumes won on the DAA have been increasing year-on-year, with significant capacity regularly won at $0. The AER published a report on the effectiveness of the DAA in October 2024.[587]
- Exploring and producing gas from less certain sources can be risky and expensive due to policy uncertainties and regulatory hurdles. The ACCC has recommended several measures, including lifting bans on new gas projects, improving the speed and fairness of gas development approvals, easing the infrastructure and regulatory challenges for small producers, and better planning and competition for pipelines needed to deliver new gas supplies.[588]

582 AEMC, National Energy Retail Amendment (Notification of the end of a fixed benefit period) Rule 2017 No. 2, Australian Energy Market Commission, 7 November 2017; AEMC, National Energy Retail Amendment (Advance notice of price changes) Rule 2018 no. 3, Australian Energy Market Commission, 27 September 2018.

583 Using a customer's past usage and comparing what they pay on their current offer against the cheapest generally available offer.

584 ACCC, Inquiry into the National Electricity Market – November 2022 Report, Australian Competition and Consumer Commission, 23 November 2022.

585 AEMC, 2020 Retail Energy Competition Review, Australian Energy Market Commission, 30 June 2024.

586 AER, Wholesale gas market focus report: Day Ahead Auction, Australian Energy Regulator, 3 October 2024.

587 AER, Wholesale gas market focus report: Day Ahead Auction, Australian Energy Regulator, 3 October 2024.

588 ACCC, Gas Inquiry 2017-2030, Interim update on east coast gas market, June 2024, Australian Competition and Consumer Commission.

6.7.12 Product differentiation

In a competitive market, retailers offer a range of products and services to attract and retain customers. Energy retailers compete primarily on price. But since the introduction of standing offer price caps and restrictions around discounting, retailers are looking to differentiate their products in other ways.

Retailers can differentiate products by offering more price certainty or, alternatively, rewarding customers who are willing to be flexible in how and when they use energy. As technology improves, more products offering energy management services or linking to batteries, solar PV output or electric vehicles, including delivering additional revenue to consumers through virtual power plants, are becoming more common (section 6.9).

Some retailers also offer other incentives, such as carbon offsets, sign-up discounts and product add-ons and rewards, or they partner with other businesses. Bundling of products such as phone and internet alongside energy has also increased.

In 2023, 96% of residential customers on plans that cost more than 25% above the default rate were on plans with conditional discounts. These discounts can make it hard for customers to compare plans because they're based on varying prices. Even with large conditional discounts, customers are still paying close to the default rate and would pay more if they didn't get their discount. This suggests that these customers could benefit from switching their energy plans. The average conditional discount for this group is 29%, showing they haven't changed their plan or retailer in the last 3 years despite new rules on these discounts.[589]

6.7.13 Offer structures

Retailers package their costs (wholesale energy, network charges and environmental costs) with a retail margin and develop a range of retail offers using different pricing structures to appeal to different consumers. Retail offers include:

- Fixed charges – usually called a 'daily supply charge' or 'service charge' – which include charges for grid connection, metering, administration, billing costs and environmental fees.
- Variable charges, which are based on the amount of electricity consumed and, increasingly, the time of day that electricity is consumed – demand charges may also be included.

Electricity retailers typically use one or more of the following tariff structures for the variable charges in their offers:[590]

- Flat rate – a tariff with a single rate charged per kWh regardless of when usage occurs.
- Block retail – a tariff with a variable rate depending on the amount of electricity used in a day or over a billing period – for instance, one rate for the first 10 kWh of electricity used in a day and another rate for anything above that. Block tariffs are more commonly used by businesses than residential customers.
- Time-of-use – a tariff with a variable rate that depends on the time of day the electricity is consumed – for instance, higher pricing at peak times (typically late afternoon to early evening) and lower at off-peak times (overnight or during the day). This is used to better reflect the prices retailers pay for electricity and to encourage consumers to shift any flexible electricity use away from peak times to improve grid utilisation.

589 ACCC, Inquiry in the National Electricity Market: December 2023 Report, Australian Competition and Consumer Commission, 15 December 2023.

590 Gas offers have less variability in tariff structure, with flat tariffs typically applied. Usage charges may vary based on the overall volume of gas consumed and the time of year.

- Controlled load – a tariff typically applied to a particular appliance, such as pool pumps and hot water systems, and connected via a separate meter circuit. The appliance(s) can only be used at certain times of the day, typically during off-peak periods with electricity supply either operated by the distributor or the retailer. These tariffs are also used to reflect the prices retailers pay for electricity and improve grid utilisation but also enable the consumer to 'set and forget' consumption for the appliance.
- Demand tariff – a tariff with a variable rate based on a customer's demand (the total amount of electricity drawn from the grid at a point in time). It is intended to encourage consumers to shift any flexible electricity use to off-peak periods, or 'smooth out' electricity use. A demand tariff may include other variable elements, such as time-of-use elements and the amount consumed. Demand charges may be applied as a daily rate based on the highest demand over a certain period, or on highest demand during high demand during peak periods only. They are typically more 'cost-reflective' because it is those peaks in demand that drive up investment costs. Even one day of high use at peak times will lead to higher charges for the whole period applicable under the retailer's tariffs.
- Feed-in tariffs – credits for electricity fed into the grid by customer energy resources such as rooftop solar PV systems and, in some instances, home batteries.

A well-integrated approach to the increased prevalence of consumer energy resources could offset significant network costs into the future. To achieve this, retailers must innovate to help consumers benefit from price signals, including consumers that remain on flat tariffs.

Retailers package their offer structures to appeal to different consumers. For example, consumers with low energy use may prefer an offer with a lower fixed charge but higher usage charges, while a consumer with flexibility around when they use energy may prefer an offer with lower off-peak charges or free weekend energy use. Customers will want choices between fixed rate and time-of-use tariffs and retailers can and should provide this. All retailers are required to notify customers ahead of changes and this is monitored by the AER.

Retail tariff structures do not have to reflect their underlying network tariff structures Networks providers have recently started designing cost-reflective tariffs that have lower charges during the day – for example, 'solar soak' periods – to encourage consumers to use electricity during this time (chapter 3, section 3.8.2). However, cost-reflective retail tariffs may not be suitable for all consumers as some are unable to modify their energy use for a range of reasons (section 6.6.1).

New dynamic products are emerging as battery storage systems and electric vehicles become more affordable and as accessibility to consumer energy data improves (section 6.9). Some of these products have a time-of-use pricing structure but with rates set to encourage charging/discharging of batteries or electric vehicles at specific times. These products may also come with 'add-on' services, such as automated systems that learn consumers' electricity use patterns and charge/discharge batteries to maximise value. Some offers allow consumers to become part of a virtual power plant that aggregates multiple household solar and battery systems to provide power for network support or frequency control ancillary services or to engage in wholesale price arbitrage.

Some retailers are trialling other price structures. Fixed price or subscription tariffs, where customers pay a (yearly or monthly) fee based on their typical electricity use, focus on simplicity and bill certainty. At the other end of the pricing spectrum, tariffs that pass through to wholesale market spot prices allow consumers to dynamically interact with the wholesale market. These tariffs are best suited to consumers with battery storage who can adjust their use of grid-supplied electricity during high price periods.

Similar to conditional discounting, dynamic products could cost consumers much more if they are unable to align their energy use to the terms of the agreement. Because of this, they may only be suited to some types of consumers.

A well-integrated CER could offset significant network costs.[591] To achieve this, retailers will need to innovate to help consumers benefit, including customers that remain on flat tariffs. This will require investing in technology and strategies that meet consumer and system needs without requiring additional engagement.

6.7.14 Non-price competition

In addition to competing on price and tariff structure, many retailers offer other incentives to entice customers. Financial incentives may include credit for continuing with a plan for a minimum period, for signing up online or through a partnering business, or for referring a friend to the retailer.

Many retailers provide reward schemes that offer discounts and deals on a variety of products and services. These schemes often include non-financial benefits such as carbon offsets for electricity usage and supplementary products like digital subscriptions. Retailers are increasingly collaborating with other businesses to bundle services and attract customers seeking the convenience of a single provider. For instance, some retailers offer rooftop solar PV, battery and EV charging solutions, as well as discounts on streaming platforms, home internet and mobile phone plans.

6.8 Compliance, enforcement and customer complaints

Compliance and enforcement outcomes are a major part of the AER's regulatory toolkit. The AER seeks to ensure compliance with national energy laws so that consumers and energy market participants can have confidence that energy markets are working effectively and in their long-term interests. Compliance and enforcement work focuses on non-compliance that poses significant harm to all consumers, particularly consumers experiencing vulnerability and/or disadvantage.[592] The AER's 2023–24 compliance and enforcement priorities relating to retail markets were:

- improving outcomes for customers experiencing vulnerability, including by improving access to retailer hardship and payment plan protections
- making it easier for consumers to understand their plan and engage in the market by focusing on compliance with billing and pricing information obligations including the Better Bills Guideline.

The AER's proceedings against AGL Retail Energy Limited and 3 other subsidiaries of AGL Energy Limited (together, AGL), which commenced in the Federal Court on 16 December 2022, were finalised on 23 August 2024. The Federal Court found that AGL breached the National Energy Retail Rules by failing to notify and refund customers for overcharges obtained from Centrepay payments. The AER is seeking pecuniary penalties, declarations, implementation of a compliance program and costs.[593]

On 20 October 2023, the AER instituted proceedings in the Federal Court against CAM Engineering and Construction Pty Ltd (CAM Engineering) for allegedly failing to become a member of the Energy and Water Ombudsman NSW (EWON) scheme, in breach of the AER's Retail Exempt Selling Guideline.[594]

The AER alleges that CAM Engineering did not join EWON until 22 July 2022, despite obtaining its retail exemption on 11 March 2021 and the AER issuing numerous reminders and warnings. During this 16-month period, energy customers of the village did not have access to EWON's important dispute resolution service.

591 This includes the full range of possible sources of CER. See Australian Government, National consumer energy resources roadmap – Powering decarbonised homes and communities, 19 July 2024, accessed 8 August 2024, p. 9.

592 To see the full remit of AER's compliance and enforcement work see AER, Annual compliance and enforcement report 2023–24, Australian Energy Regulator, 26 July 2024.

593 AER, Court finds AGL breached overcharging rules in relation to Centrepay payments, Australian Energy Regulator, 23 August 2024.

594 AER, Retail Exempt Selling Guideline – July 2022, Australian Energy Regulator, accessed 28 August 2024.

Other key compliance and enforcement activities in retail markets in the 2023–24 financial year included:

- accepting a court enforceable undertaking from Trinity Place Investments Pty Ltd to contact and refund customers after it admitted to overcharging consumers for electricity by approximately $34,000 between December 2019 and January 2023
- accepting a court enforceable undertaking from 5 Origin Energy subsidiaries admitting to 1,973 breaches of the requirement to provide information packs to life support customers, with Origin undertaking to make a $1 million community-based contribution to organisations assisting people using life support equipment
- receiving payment of $135,600 for 2 infringement notices issued to Ergon Energy Queensland Pty Ltd for alleged failures relating to life support registration and deregistration obligations
- proactively reviewing retailers' family violence policies to ensure retailers are complying with new family violence protections that commenced in May 2023 under the Retail Rules
- finalising a round of spot checks of retailers' compliance with customer hardship obligations
- written communication to remind retailers of their obligations – for example, to notify customers ahead of changes to electricity prices and charges.[595]

The AER has also undertaken and progressed numerous compliance and enforcement actions to ensure a secure and reliable energy supply and that Australia's energy markets operate efficiently and competitively.[596] This includes activities relating to the wholesale markets and networks, in addition to retail markets. The AER's compliance functions cover all NEM regions, excluding the energy retail market in Victoria, which is regulated by the Essential Services Commission (Victoria).[597]

More detail on the AER's compliance and enforcement work is outlined in the Annual Compliance and Enforcement report 2023–24.[598]

6.8.1 Compliance and enforcement priorities for 2024–25

The AER has settled its compliance and enforcement priorities for 2024–25. In response to feedback from stakeholders the 5 priorities are the same as the previous year's:

- Improving outcomes for customers experiencing vulnerability, including by improving access to retailer hardship policies and access to hardship and payment plan protections.
- Making it easier for consumers to understand their plan and engage in the market by focusing on compliance with billing and pricing information obligations, including the Better Bills Guideline and tariff change notification requirements.
- Supporting power system security and an efficient wholesale electricity market by focusing on generators' compliance with offers, dispatch instructions, bidding behaviour obligations and providing accurate and timely capability information to AEMO.
- Improving market participants' compliance with performance standards and standards for critical infrastructure.
- Monitoring and enforcing compliance with reporting requirements under the new Gas Market Transparency Measures.

The AER will continue to monitor all facets of the energy market, while focusing on the priority areas, and will proactively work to improve compliance and address harm including by taking enforcement action where appropriate.

595 Other industry letters include information about providing energy plan information on energy made easy, expectations around HelpPay and expectations on hardship obligations.

596 Further information is available in AER, Annual compliance and enforcement report 2023–24, Australian Energy Regulator, 26 July 2024.

597 With the exception of the Retailer of Last Resort (RoLR) scheme, which the AER is now responsible for in Victoria.

598 AER, Annual compliance and enforcement report 2023–24, Australian Energy Regulator, 26 July 2024.

6.8.2 Life support

The AER has an enduring priority to ensure retailers comply with obligations under the Retail Law that safeguard customers requiring life support equipment. All retailers and distribution network service providers operating under the Retail Law and Retail Rules are required to comply with these obligations.

The AER has taken significant actions to enforce compliance with the life support obligations stipulated in the Retail Rules, which are crucial for protecting vulnerable customers. On 20 June 2024, the AER accepted a court enforceable undertaking from Origin Energy, acknowledging 1,973 breaches of rule 124(1)(b). These breaches involved failures to provide necessary information packs to customers with life support needs. Origin Energy's resolution included an independent review of its compliance systems and a $1 million community contribution to support affected individuals. Additionally, Origin admitted to over 5,000 breaches of the National Energy Retail Law and Retail Rules, including failures to register life support needs promptly and to provide required information.

In another enforcement action, Ergon Energy was fined $135,600 on 30 April 2024 for violating life support regulations. The infringement notices were issued due to Ergon Energy's failure to register a customer who required life support equipment and improper deregistration of a customer's premises without issuing required notices. These breaches had the potential to adversely affect customers by depriving them of necessary protections. The AER continues to monitor compliance closely, ensuring that breaches of these critical obligations are addressed with appropriate penalties and corrective measures.

6.8.3 Embedded networks

Embedded networks are smaller, localised private networks that distribute energy to multiple customers at sites such as apartment blocks, retirement villages, caravan parks and shopping centres. They operate alongside major distribution networks under a similar, but different regulatory framework. In most cases, the embedded network operator buys energy from an energy retailer and onsells it to the occupants of the site. Many consumers in embedded networks are likely to have lower incomes and be more likely to experience vulnerability. To improve outcomes for consumers in embedded networks, the AER introduced new obligations on exempt sellers under version 6 of the Retail Exempt Selling Guideline, released in July 2022.[599]

The updated guideline introduces a new hardship policy condition to ensure residential customers in embedded networks who experience payment difficulties due to hardship can access adequate support to better manage their energy bills.

To support compliance with the updated guideline, the AER:

- published a range of fact sheets clearly explaining the rights and obligations of exempt sellers and their customers[600]
- engaged widely with ombudsmen, industry and consumer groups, including through webinars and public forums, to raise awareness about issues experienced by customers in embedded networks[601]
- published translated and easy English fact sheets for small businesses and consumers, outlining their rights and protections[602]
- published practical steps that off-market customers can take if their exempt seller fails, including alternative retailer options
- wrote to all exempt sellers to inform of their obligations under the new policy and continues to monitor and address inquiries from a range of stakeholders.[603]

In November 2023, the AER commenced a review of its exemptions framework for embedded networks and published an issues paper for public consultation.[604] This review is currently ongoing. Key concerns raised by stakeholders include the inherent vulnerability of consumers in embedded networks and the disadvantage associated with challenges they may face accessing competitive energy offers.

The AER maintains ongoing investigations relating to embedded networks, including an alleged failure by an embedded network operator to join an energy ombudsman scheme and alleged failures to undertake appropriate registrations with AEMO or the AER while owning, operating or controlling an embedded network.

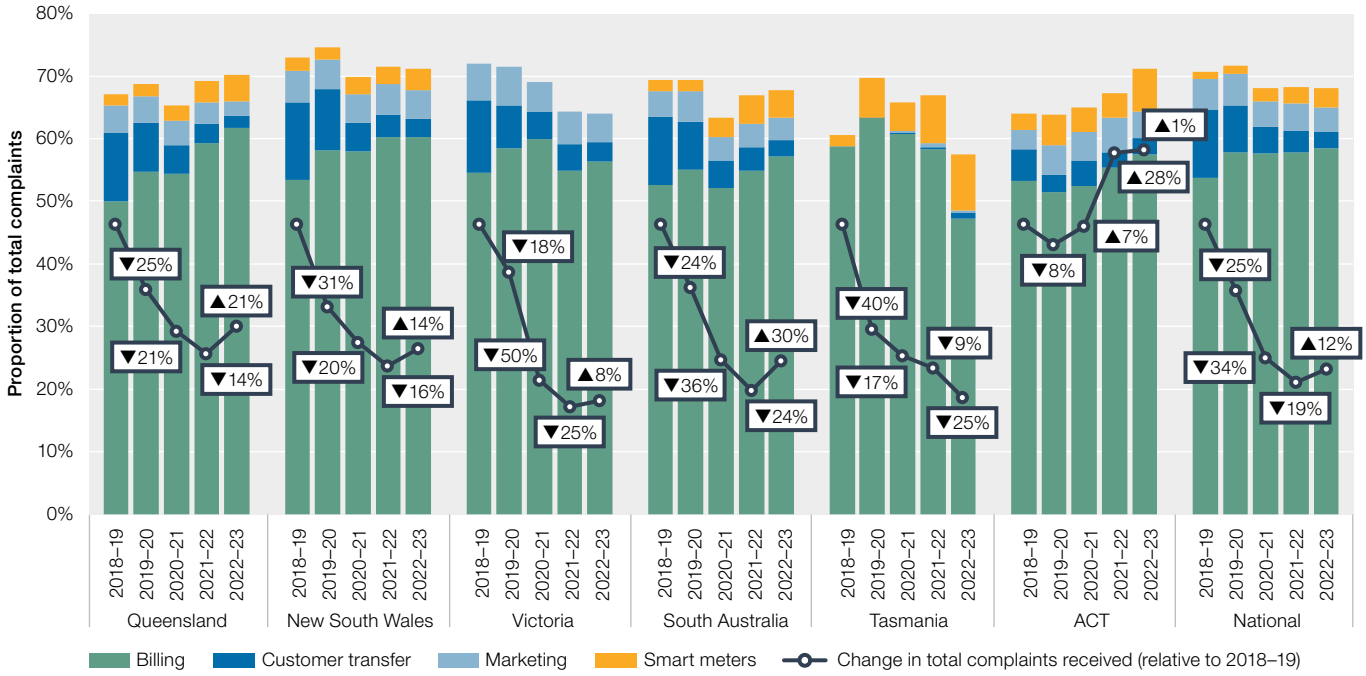
599 AER, Retail Exempt Selling Guideline, Australian Energy Regulator, 15 July 2022.
600 AER, AER releases factsheets on exempt selling, Australian Energy Regulator, 28 July 2022.
601 EWON, Embedded Networks awareness campaign, Energy & Water Ombudsman NSW, accessed 2 September 2024.
602 AER, Consumers in embedded networks, Australian Energy Regulator, accessed 30 August 2024.
603 AER, Annual Compliance and Enforcement Report 2023–24, Australian Energy Regulator, accessed 30 August 2024.
604 AER, Review of the AER exemptions framework for embedded networks, Australian Energy Regulator, 30 November 2023.

6.8.4 Customer complaints

Customer complaints can cover issues such as billing discrepancies, wrongful disconnections, the timeliness of transferring a customer to another retailer, supply disruptions, credit arrangements and marketing practices. Customers can lodge a complaint directly with their retailer in the first instance. If a customer is unable to resolve an issue with their retailer, they can then take the complaint to the jurisdictional energy ombudsman scheme, which offers free and independent dispute resolution.

The number of complaints received by energy retailers increased markedly across all jurisdictions in 2022–23 except in Tasmania, where complaints decreased by 25% (Figure 6.21). Overall, the number of complaints received by retailers across the NEM increased 12% The increase in complaints related to billing (13%) can be attributed to concern about rising and unexpectedly high bills including where tariffs changes have occured after installation of a smart meter (section 6.9.2). Other billing issues include errors, incorrect tariffs, estimation of energy use, fees and charges and back billing.

Figure 6.21 Complaints received, by energy retailers

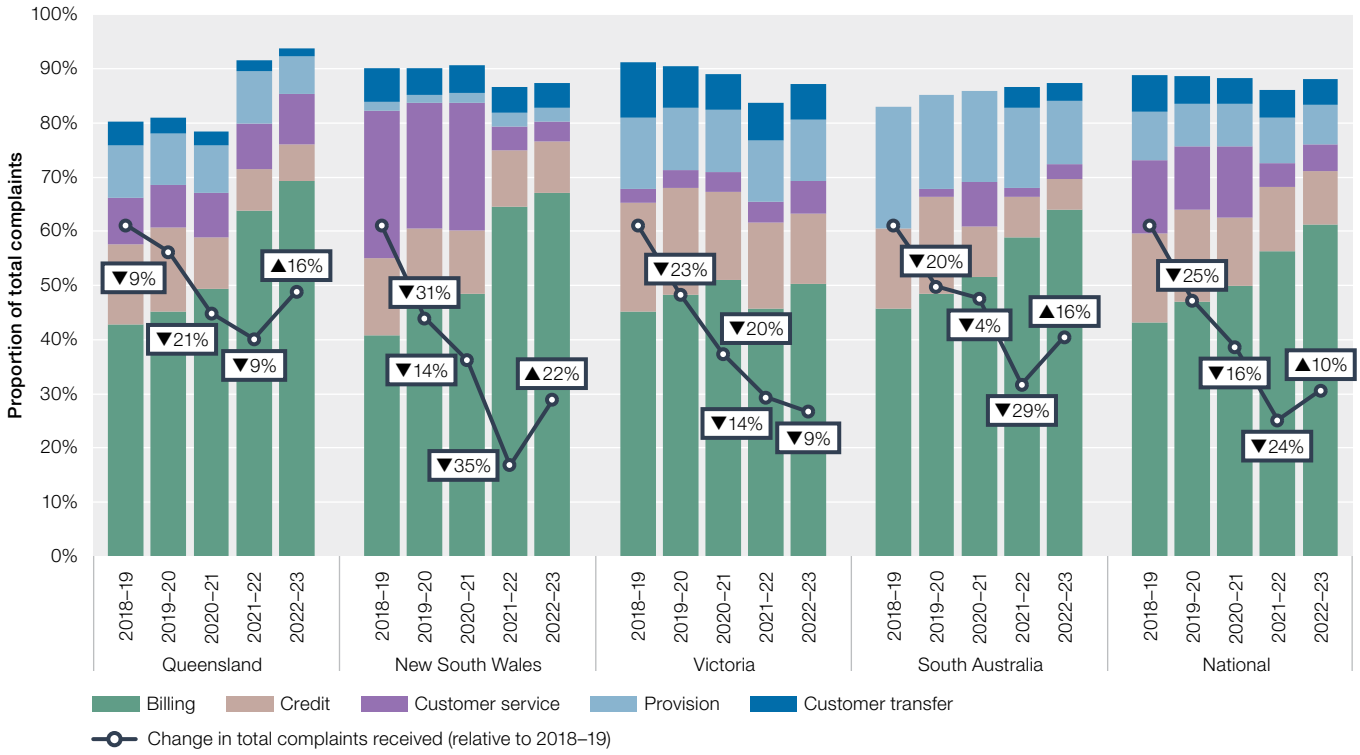


Note: Billing includes complaints about prices, billing errors, payment arrangements and debt recovery practices. Customer transfer includes complaints about timeliness of transfer, disruption of supply due to transfer and billing problems directly associated with a transfer. Marketing includes complaints about sales practices, advertising, contract terms and misleading conduct. Smart meters includes all complaints related to metering contestability. Complaints do not sum to 100% as some customer complaints defined as 'other' are not included in the above data. 'Other' complaints relate to issues outside the retailer's control – for example, complaints about price rises due to wholesale and network costs.

Source: AER, *Retail markets quarterly, Q3 2023–24*, May 2024; ESC, Victorian energy market dashboard and historical data as of 30 June 2024.

The overall number of electricity and gas complaints received by jurisdictional energy ombudsmen schemes in 2022–23 increased in all regions, except for Victoria (Figure 6.22). Because ombudsmen schemes require customers to raise complaints with their retailer in the first instance, assessing retailers' complaint data in conjunction with ombudsman complaint data can provide an indication of the effectiveness of retailers' dispute resolution outcomes.

Figure 6.22 Complaints received, by jurisdictional energy ombudsmen



Note: Annual change in total complaints data includes all cases recorded by ombudsman schemes for electricity and gas industries. Annual change in total complaints data includes enquiries and complaints in relation to energy retailers, distribution networks and embedded network operators. Specific complaint type data includes all cases recorded by ombudsman schemes for electricity, gas and water industries. The proportion of water related complaints is immaterial.

Source: Annual reports by ombudsman schemes in Queensland, NSW, Victoria and South Australia.

Cost-of-living pressures continue to significantly influence consumer sentiment in the energy market, with concerns about affordability and trust remaining high since the 2022 energy market disruptions. Many consumers, particularly those under financial stress, find it difficult to access necessary support, and tend to choose immediate relief options like rebates over long-term solutions such as energy-efficient appliances.[605]

605 ECA, Energy Consumer Sentiment Survey, June 2024, Energy Consumer Australia, accessed 27 August 2024.

6.9 Adapting to the changing energy market

As the NEM transitions to clean energy, Australian governments are collaborating under the National Energy Transformation Partnership to help transform energy systems to achieve economy-wide net-zero greenhouse gas emissions by 2050.[606] Energy consumers are an integral part of the transition.

Over the past 2 decades, rooftop solar has become the gateway technology to an emerging suite of consumer energy resources (CER). Many consumers have benefited from rooftop solar, home batteries electric vehicles and participating in virtual power plants.

The AER defines CER as distributed energy resources that are owned or leased by residential and small-business consumers (or groups of consumers) that:

- generate or store electricity
- can alter demand in response to external signals,
- includes consumer loads that are flexible and efficiently optimised either through automation or direct behavioural response.[607]

The AER's Consumer energy resources (CER) strategy 2023 aims to support consumers to own energy resources and use those resources to consume, store and trade energy as they choose. The CER strategy articulates AER's objectives and actions to achieve consumer benefits from CER in relation to network integration, efficient signals and incentives, consumer empowerment and safeguards and standards.[608]

The Australian Government has developed a national CER roadmap to coordinate and optimise CER uptake, put downward pressure on overall system costs and bills, and broaden access to CER (Box 6.4).[609] This roadmap seeks to unlock economic opportunities associated with the transition at least-cost to consumers, while ensuring a reliable, affordable, clean energy supply is available to all Australian households, businesses and communities. An update on progress towards CER integration is provided in Table 6.3.

Energy retailers and energy service providers are offering an increasing array of products and services to unlock the value of CER.[610] Incentives for charging vehicles during off-peak times and increasing the value of home energy storage systems through price arbitrage[611] will encourage broader consumer engagement in CER. On the grid-side, appropriate integration of CER can help manage minimum and peak demand and provide crucial system services while balancing the need for investment in network upgrades, large-scale generation and energy storage.[612]

The AER will continue to work with government and market bodies to protect and empower consumers throughout the transition, and to implement measures to help all Australians to realise the benefits such as downward pressure on prices and a more reliable, clean energy supply.

606 DCCEEW, National Energy Transformation Partnership, Department of Climate Change, Energy, the Environment and Water, 12 August 2022, accessed 6 September 2024.

607 AER, Consumer energy resources strategy, Australian Energy Regulator, 3 April 2023.

608 For more information see AER, Consumer energy resources strategy, Australian Energy Regulator, 3 April 2023.

609 DCCEEW, National Consumer Energy Resources Roadmap, Department of Climate Change, Energy, the Environment and Water, accessed 6 September 2024.

610 AEMC, AEMC unveils new rules to boost consumer energy resource benefits, media release, Australian Energy Market Commission, 15 August 2024.

611 Price arbitrage refers to purchasing energy at times of low cost and selling it back to the grid during periods of high pricing.

612 DCCEEW, Consumer Energy Resources Roadmap, Department of Climate Change, Energy, the Environment and Water, accessed 13 August 2024.

Box 6.4 National Consumer Energy Resources (CER) Roadmap

2024

- Interoperability standards developed to ensure CER devices work as intended, can communicate with each other and maintain cybersecurity.
- Draft National Energy Equity Framework delivered to increase the understanding of vulnerability and hardship in Australia's energy system.
- Costs and benefits of improving voltage management examined to lead to lower costs for consumers.
- Options identified for harmonising CER connection processes, including EV chargers.

2025

- Options developed to enable consumers to export and import more power to and from the grid.
- Removal of barriers to enable bidirectional electricity flow from and to EVs enabled with vehicle-to-grid technology, to allow consumers with EVs to send back to their home or the grid.
- Distribution levels markets roles and responsibilities defined.
- Roles and responsibilities for distribution level power system operations defined.
- Energy reform package for consumers facing hardship implemented: improves outcomes for consumer who cannot access the market.
- Backstop mechanisms in place: emergency response to ensure operational security.

2026

- Voluntary CER cyber standards and technical specifications available: ensures CER devices are safe from cyber threats.
- Consumer protections stabilities: to increase consumer trust.
- Communication framework and strategy ensure CER benefits are understood by all consumers.
- National regulatory framework for CER operational sets enforces CER standards.

2027

- Data sharing arrangement inform planning and enable future markets: to enable consumer participation.
- Secure communication systems established a national entity to manage public key infrastructure to operate and manage authentication of CER communications.
- New market offers and tariffs structure enabled: allow consumers to extract greater benefits.
- More equitable access to CER benefits: policies in place.

2028

- Further consumer protections delivered: to increase consumer trust.
- New consumer support: to empower consumers in high CER future.

2030

- CER are integral part of Australia's secure affordable and sustainable electricity systems.[613]

Table 6.3 outlines some of the key areas of progress in relation to the CER Roadmap.

613 Content adapted from DCCEEW, National Consumer Energy Resources Roadmap, Department of Climate Change, Energy, the Environment and Water, 18 July 2024. The reference to the smart meter rollout in the Roadmap was originally targeted for 2029, whereby all homes would be fitted with a smart meter. However, due to stakeholder concerns about negative customer experiences due to retail tariff changes following smart meter installation, this timeframe has been extended and will be finalised when the AEMC releases the final rule in November 2024.

Table 6.3 Progress towards CER integration

Reform area	Progress
Update governance and compliance arrangements for technical standards to ensure CER technologies can effectively integrate with the NEM and communicate across different parties within the market, including AEMO, electricity distribution network service providers and retailers. Effective governance of standards helps to promote integration of consumer energy resources, as well as system security and reliability.	The AEMC has published a final report with recommendations for implementing CER technical standards, including their regulation by jurisdictions and energy market bodies.[614] DCCEEW has developed a CER Roadmap and is progressing a CER technical standards workstream.[615]
Provide policy direction and advice on the implementation of flexible export limits, allowing export limits on consumer energy resources to be varied based on available network capacity.	On 31 July 2023, the AER released a set of priority actions for flexible export limit implementation, focusing on 4 themes of increased consistency across jurisdictions, increased transparency, stronger governance and increased consumer understanding.[616]
A draft change to allow aggregated consumer energy resources (CER) to be scheduled and dispatchable in the National Electricity Market (NEM). The draft also aims to address unscheduled price-responsive resources by. Including a short-term incentive payment to drive participation in dispatch. Introducing a monitoring and reporting functions to understand the forecasting challenges and errors from unscheduled price-responsive resources.[617]	On 25 July 2024, the Australian Energy Market Commission (AEMC) made a draft determination for a preferable draft electricity rule (and no draft retail rule) in response to a rule change request from AEMO. The draft rule introduces a monitoring and reporting obligation for AEMO to identify the presence and issues created by increased unscheduled price-responsive resources.[618] The AER will then assess the efficiency implications and costs associated with these issues.
A change to the electricity rules to allow consumers to engage a separate provider for their CER (such as EV charging, solar panels and/or battery devices), and facilitate the active participation of consumer energy resources and flexible demand in the provision of market services.	On 15 August 2024, the AEMC introduced a rule to enable: • large customers to engage multiple energy service providers to manage and obtain more value from their CER • energy service providers to separate and manage 'flexible' CER from 'passive' loads (such as fridges and lights) for small and large customers, leading to more options for consumers • customers to use in-built measurement capability in technology such as EV chargers, eliminating the need for separate meters.[619]
Review the consumer protections framework to ensure it remains fit for purpose in a transitioning retail energy market in which consumers can purchase new energy services (e.g. load management and virtual power plant services) that go beyond traditional retail services.[620]	On 20 December 2023, the AER released its final advice on consumer protections for future energy services for Energy Ministers' consideration.[621] The advice presents the case for reforming the NECF to ensure it can continue to protect consumers in an evolving energy market.

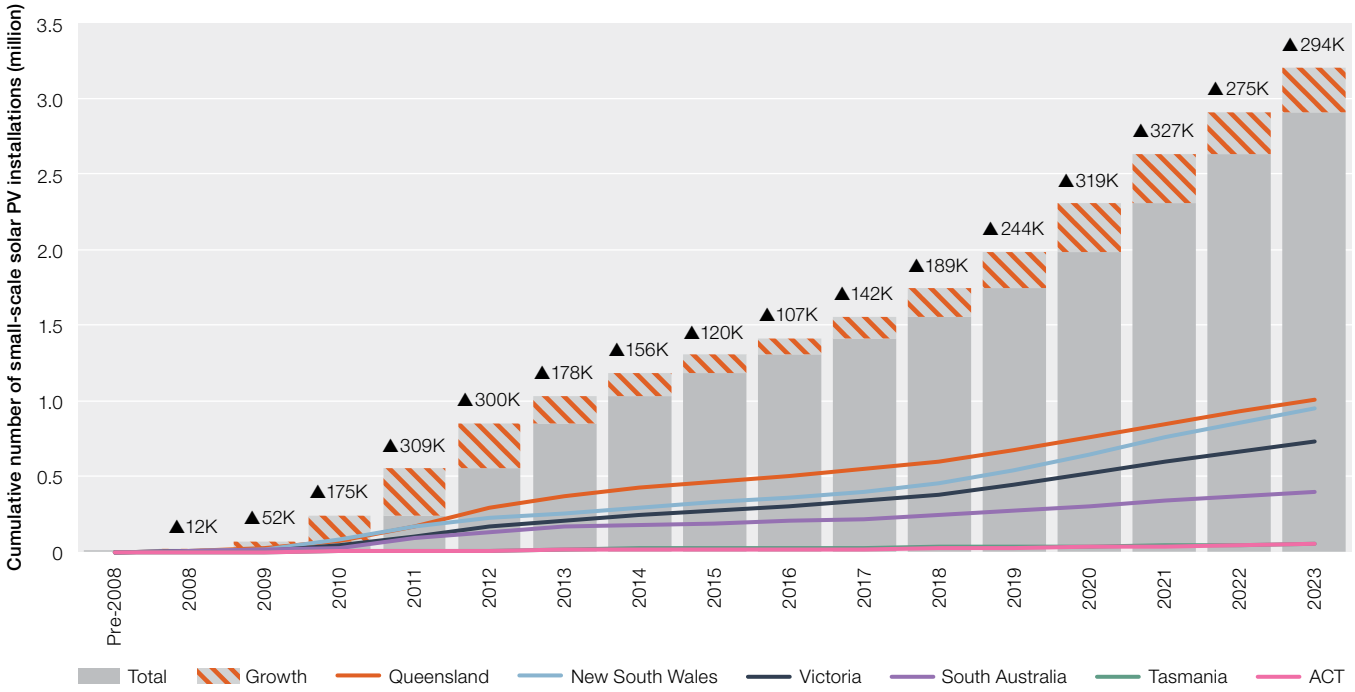
614 AEMC, Final report: Review into consumer energy resources technical standards, Australian Energy Market Commission, 21 September 2023.
615 DCCEEW, National Consumer Energy Resources Roadmap, Department of Climate Change, Energy, the Environment and Water, 18 July 2024.
616 AER, Review of regulatory framework for flexible export limit implementation, Australian Energy Regulator, accessed 2 September 2024.
617 AEMC, Integrating price-responsive resources into the NEM, Australian Energy Market Commission, 25 July 2024.
618 AEMC, Integrating price-responsive resources into the NEM, Australian Energy Market Commission, 25 July 2024.
619 AEMC, Unlocking CER benefits through flexible trading, Australian Energy Market Commission, Rule determination, 15 August 2024.
620 AER, Review of consumer protections for future energy services, Australian Energy Regulator, 9 December 2022.
621 AER, Review of consumer protections for future energy services – Final advice, Australian Energy Regulator, 23 November 2023.

6.9.1 Rooftop solar PV

The uptake of rooftop solar PV systems continues to grow across the NEM. There were over 294,000 new installations in 2023 and, as of January 2024, more than 3.2 million households and businesses have installed rooftop solar PV systems (Figure 6.23). Ongoing subsidies provided by the Australian Government and some state governments, combined with the falling costs of solar PV systems, have helped sustain the growth in new installations.

As at 30 June 2024, more than 20 GW of total installed rooftop solar capacity was registered across NEM regions, an increase of almost 3 GW from the previous year (chapter 2, Figure 2.14). This makes rooftop solar the fuel source with the highest registered capacity across the NEM (chapter 2, Figure 2.14).[622]

Figure 6.23 Small-scale solar PV installations



Note: Small-scale generation units have a capacity of no more than 100 kilowatts (kW) and a total annual electricity output of less than 250 megawatt hours (MWh).

Source: Clean Energy Regulator, *Postcode data for small-scale installations*, data as at 8 August 2024.

Consumers may sell unused electricity produced by solar PV systems to their retailer, in exchange for a feed-in tariff; generally, a flat per kilowatt hour value and not linked to the actual value of the excess electricity to the NEM. Excess solar PV generation has created network congestion, resulting in some networks setting a low limit (curtailment) to the amount of electricity that consumers can export to the grid at any time in order to avoid congestion during peak periods.[623]

622 Capacity generated by rooftop solar is subtracted from demand (rather than traded in the NEM). With rooftop solar output records set over the summer of 2022–23, when rooftop solar reached a record 11,504 MWh, the rapid uptake of rooftop solar continues to be the major contributing factor to reduced grid demand.

623 For information on solar curtailment, see Solar curtailment for minimum system demand events, SA Power Networks, accessed on 20 September 2024.

To address this curtailment, the AER has developed a guidance note to facilitate the implementation of flexible export limits.[624] Flexible export limits aim to maximise the amount of CER output that can be exported into the network while minimising the need for network augmentation to accommodate the increased CER penetration. It also seeks to ensure that distribution network service providers only curtail CER outputs when and where it is necessary to maintain network security, thereby making better use of existing network capacity and supporting greater CER participation in the NEM.

To help shape consumer behaviour to shift both demand and solar exports to more cost-efficient times of the day, the AER has administered a network tariff reform program. In April 2024 the AER approved the future use of export reward tariffs, which will reward consumers for exporting electricity when it is most needed and apply charges for exporting large amounts of solar into the grid at times when it is not needed.[625] Export reward tariffs will complement flexible export limits to support efficient integration of customer exports into the NEM. However, further actions are to be addressed in the CER Roadmap.

AEMO's ISP notes that successful integration of CER will offset up to $11 billion in network augmentation costs, and it is important that these savings are returned to consumers. Curtailment of consumers' energy exports should be minimised, and network service providers should carefully assess what investments in storage and other distribution network modifications are available to efficiently reduce curtailment of consumers' CER assets.

Pricing incentives may also be used to incentivise consumers to time their exports to when additional energy is needed in the grid, avoiding contributing to congestion during peak periods for solar generation. On 17 November 2023 the AER issued an Export limit guidance note for consultation, to provide clarity on the regulatory framework required to effectively implement export limits.[626] This provides guidance to distribution network service providers as the CER Roadmap progresses.

6.9.2 Smart meter rollout

Smart meters are essential for consumers to access CER and participate in demand response. Smart meters measure how much electricity is used at a premises and at what times. This data is shared in 5-minute or 30-minute intervals with the customer, retailer and network operator. Access to more granular data allows for retailers to charge different prices depending on when the electricity is consumed.

A well-managed smart meter rollout can help optimise the grid, resulting in fewer outages, less need for costly infrastructure upgrades, increased penetration of cheaper renewable energy and, ultimately, put downward pressure on energy bills for consumers. As with other energy transition technologies, there is risk of some users being 'left behind', unable to take advantage of innovative technologies and retail offers if the smart meter rollout does not ensure appropriate safeguards are in place to protect consumers.

In April 2024, the AEMC published a draft determination and draft rule seeking to efficiently accelerate the deployment of smart meters to all customers and achieve universal uptake by 2030.[627] In July 2024, the AEMC announced it is extending a final determination on the proposed target date of the smart meter deployment to allow for further consultation on consumer protections noting stakeholder concerns about potential negative impacts on customers following smart meter installations, such as unexpectedly high bills due to changes in tariff structures.[628] The final determination is expected in November 2024.

624 AER, Network tariff reform, Australian Energy Regulator, accessed 4 October 2024.
625 AER, Export reward tariffs and you, Australian Energy Regulator, accessed 4 October 2024.
626 AER, Export limit guidance note, Australian Energy Regulator, 17 November 2023.
627 AEMC, Draft rule determination – Accelerating smart meter deployment, Australian Energy Market Commission, 4 April 2024.
628 AEMC, AEMC extends smart meter rollout decision to consult further on consumer safeguards, media release, Australian Energy Market Commission, 4 July 2024.

To date, the AEMC has recommended the following consumer protections be implemented during the smart meter rollout:

- improved safeguards for consumers against unexpected cost increases and improved information for informed decision-making, as well as improved meter installation processes
- effective use of smart meter data, by ensuring consumers can access their own electricity use data in real time and ensuring distribution network service providers can access power quality data in their service area to better support efficient network operation and planning, for consumers' long-term benefit
- the requirement for customers to give their explicit informed consent for any changes to retail tariffs for 3 years after a smart meter is installed
- designated retailers that are required to offer all customers for which they are the designated retailer a flat tariff offer – this would be implemented by jurisdictions.[629]

Progress towards the rollout remains sporadic across NEM jurisdictions except Victoria. In Victoria, nearly all small customers have a smart meter (96% to 99% depending on customer segment and distribution network service provider) due to a mandated rollout of smart meters to households and small businesses that began in 2006. In other NEM regions the rollout is slower, ranging from 26% to 66%.[630]

Smart meters have driven a notable increase in customers on time of use and demand tariffs in South Australia and South East Queensland, rising to 32% and 17% of customers respectively by the July to September quarter of 2022 compared with the previous year.[631] A review of billing data for customers on these tariffs found that while they generally pay similar rates to those on flat tariffs, there is significant variation in actual bills and many could save money on a more suitable plan.[632] While time of use and demand tariffs can be advantageous if customers adjust their usage according to price signals, some customers may end up paying more if they cannot shift their electricity use.

The AER supports the AEMC's recent review of smart meter rules and implementation timeline to enhance customer experience and protections. The following infographic shows the core reforms required to deliver the benefits that smart meters offer.[633]

629 AEMC, Review of the regulatory framework for metering services – Final report, Australian Energy Market Commission, 30 August 2023.

630 The proportion of small customers with smart meters varies by customer segment and distribution network service provider. For the latest data see AER, Electricity DNSP Operational performance data 2006-22, Australian Energy Regulator, 7 July 2023.

631 ACCC, Inquiry into the National Electricity Market - June 2024 Report, Australian Competition and Consumer Commission, accessed 27 August 2024.

632 The AER notes that for a range of reasons, not all consumers are able to change their plan. ACCC, Inquiry into the National Electricity Market - June 2024 Report, Australian Competition and Consumer Commission, accessed 27 August 2024.

633 Note that the universal smart meter deployment target date of 2030 is currently under review, see AEMC extends smart meter rollout decision to consult further on consumer safeguards, media release, Australian Energy Market Commission, 4 July 2024.

Table 6.4 Reforms to deliver the benefits that smart meters offer

Core reforms to deliver the benefits that smart meters offer	
Accelerated deployment of smart meters	• opens new possibilities for innovative products and services, expanding customers' control of and choices around their energy use • lower costs to customers of meter reads and installations • provides for a modern, data-enabled energy system • underpins the cost-effective decarbonisation of the energy market • supports better integration of CER and a safer and more secure energy system.
Access to power quality data	• DNSPs can better manage their networks to reduce network costs for customers • saves energy, minimises network safety risks, and lifts hosting capacity.
Supporting reforms to enable the core reform program	
New customer safeguards	• protect customers from potential upfront charges and exit fees for new meters • builds social license for the smart meter acceleration program.
Improving the customer experience	• helps maintain social license for the acceleration program • ensures that customers can access the full suite of benefits that smart meters provide.
Reducing installation barriers	• supports delivery efficiencies, and therefore cost savings, in the accelerated deployment of smart meters.
Improved meter testing and inspections	• helps minimise costs for industry and customers • supports a 2030 universal smart meter deployment target.

Source: AEMC, Accelerating smart meter deployment.

6.9.3 Demand response and demand flexibility

Demand response means adjusting electricity drawn from the grid based on price changes or other signals to help maintain grid stability. When many households make small adjustments to their electricity use at the right times, it can greatly benefit the grid, which increasingly relies more on intermittent renewable energy sources like wind and solar. The benefits of demand response will progressively be seen in postponed and/or avoided network investment. However, demand response can also reduce the need for extra generation or large-scale storage to support variable wind and solar power.

Customers with smart meters can participate in demand response programs run by retailers, distribution network businesses or third-party service providers. The simplest demand response programs offer consumers financial incentives to reduce electricity consumption at certain times of the day or when they receive an alert from their retailer or network service provider.

Demand flexibility refers to more sophisticated programs that include technologies to 'orchestrate' the operation of household appliances such as water heaters, pool pumps and air conditioning as controllable, flexible loads to support grid stability. Increasingly, CER such as rooftop solar PV, household batteries and electric vehicle chargers are being included in demand flexibility. Demand flexibility can be implemented in real time in response to market signals, network constraints or generation shortfalls (price-responsive) or scheduled in advance at times of known electricity supply abundance (scheduled). However, new technologies, market processes and ways of engaging with consumers are necessary to optimise the potential benefits to the grid. The Australian Government is investing in projects that demonstrate how demand flexibility can improve systems, market integration and empower customers.[634]

Consumers are encouraged to participate in flexible demand response via 2 primary mechanisms:

- price signals and tariffs to incentivise consumers to shift consumption to reduce their energy bills
- programs that provide direct payments to consumers who shift their demand.[635]

For example, retailers may offer tariffs with lower rates during the middle of the day to align with solar generation and lower grid demand, and electric vehicle charging tariffs to incentivise charging during non-peak times. Other incentives include network two-way tariffs, which adjust charges based on energy export times, controlled load tariffs for managing specific high-consumption devices, and wholesale pricing that reflects real-time market conditions.

While the use of cost-reflective pricing through measures such as time of use tariffs makes sense, comparing, choosing and making the best use of these tariffs is challenging to some consumers due complexity.[636] The AER's Better Bills Guideline seeks to address this by requiring retailers to make it easy for customers to understand their billing and to notify customers if they may be better off on another deal.[637]

The AER acknowledges the potential consumer risks associated with cost-reflective tariffs if they are not implemented correctly, and that further work is needed to help consumers navigate more complex pricing systems. Orchestrated CER is forecast to provide 65% of the NEM's generation by 2050.[638] Therefore, it is critical the introduction of new services and participation from diverse sources like batteries and virtual power plants are suitable for all types of consumers. This will ensure that the risk is not shifted back to consumers at the same time they are providing the capital investment that is offsetting grid scale generation and network augmentation costs.[639]

634 ARENA, Flexible Demand, Australian Renewable Energy Agency, accessed 6 September 2024.
635 ECA, Supporting demand flexibility in the energy sector transition, Energy Consumers Australia, February 2023, accessed 6 September 2024.
636 ARENA, Flexible Demand State of-Play in Australia Report, Australian Renewable Energy Agency, accessed 30 August 2024.
637 AER, Better Bills Guideline (Version 2), Australian Energy Regulator, 30 January 2023.
638 Energy Decarb Pty Ltd, Energy Decarb Submission to the Australian Energy market Operator's (AEMO) Draft 2024 Integrated System Plan (ISP), 16 February 2024.
639 ARENA, Flexible Demand State of Play in Australia Report, Australian Renewable Energy Agency, accessed 30 August 2024.

6.9.4 Home batteries and electric vehicles

Battery storage and smart appliances enable consumers to optimise their electricity use, reducing the amount of power they need to withdraw from (and inject into) the network. As the global shift to renewable energy progresses, battery storage is increasingly vital to address the intermittency of sources like wind and solar. In Australia, the mix of renewables in the NEM is increasing and reached a record high of 72% in October 2023.[640] Placing batteries near homes with high rooftop solar use helps cut down on transmission costs and reduces energy losses during transport.

The rate of home battery installations in Australia is increasing each year. The Clean Energy Council estimates that in Australia, roughly 56,000 home batteries were installed in 2023, up from around 43,000 in 2022 and 37,000 in 2021.[641] The estimated total number of home battery installations as at 30 December 2023 was 254,550 systems.[642] With approximately 3.2 million Australian homes having rooftop solar as at 30 December 2023, this means fewer than one in 13 solar-equipped households have batteries. AEMO sees a significant opportunity in encouraging solar households to install and coordinate battery storage systems to enhance intra-day load shifting at a household level, helping to optimise the grid and keep downward pressure on energy costs.[643]

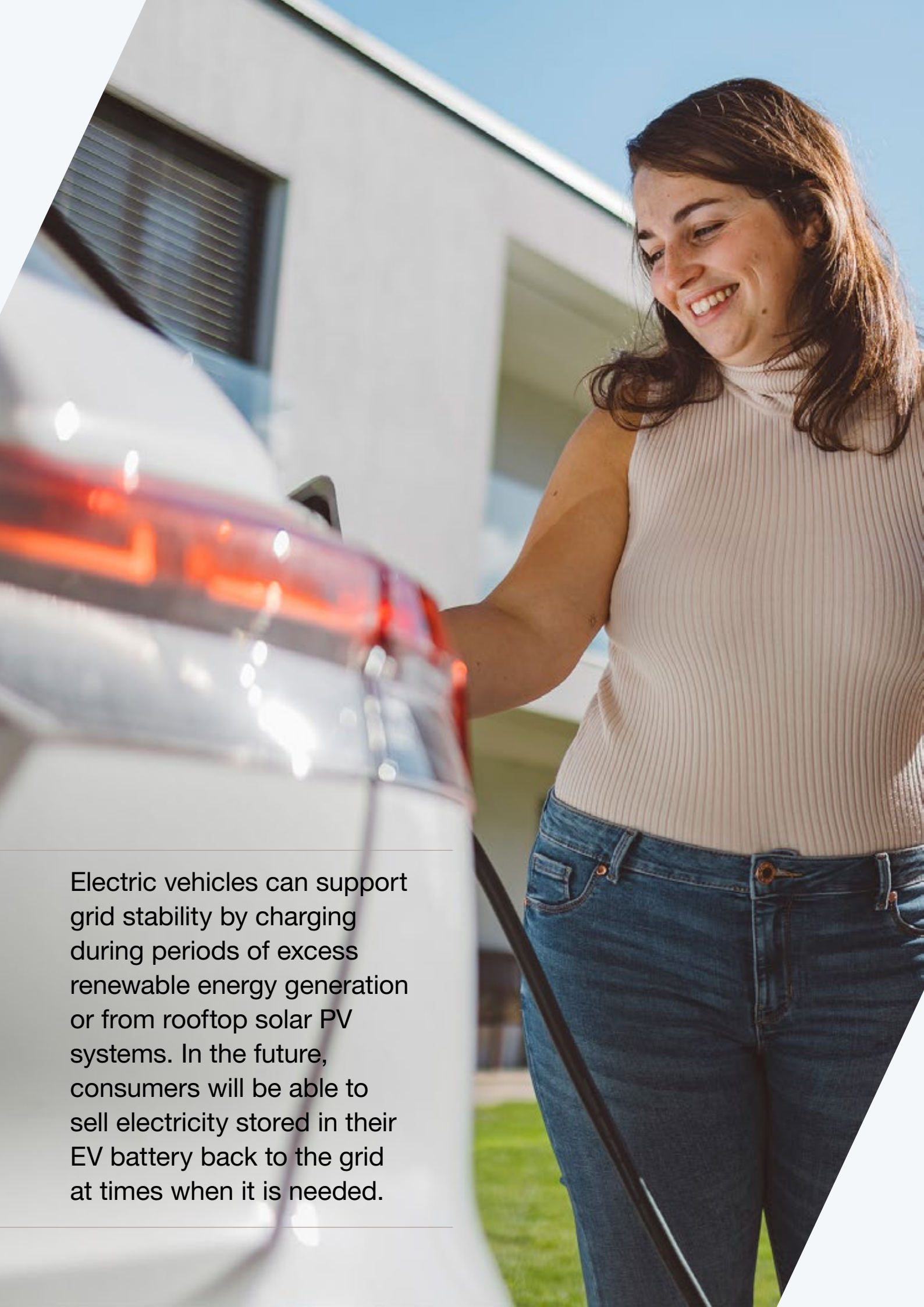
Electric vehicle (EV) uptake in Australia has been slower than in other developed countries but is beginning to accelerate as costs fall and charging infrastructure is expanded. New EV purchases in Australia more than doubled in 2023, compared with 2022, with the total number of EVs on Australian roads now exceeding 180,000. Almost 99,000 electric vehicles were sold in Australia in 2023, up from around 40,000 in 2022 and 21,000 in 2021.[644]

Similar to household batteries, there is an opportunity for electric vehicles to support grid stability by sending and selling electricity back to the grid at times of high demand/low supply. 'Vehicle-to-grid' (V2G) technology has been largely non-existent in the Australian market, but benefits have been demonstrated in small trials internationally. As a result, the Australian Government has funded $2.73 million towards V2G trials.[645] V2G can benefit customers with EVs by sending electricity from their EV battery back to the grid at times of peak demand for a credit. Because EVs also provide transport, enabling V2G technology may provide consumers with an alternative to purchasing both an EV and a home battery, reducing upfront costs.

While the Australian EV market has a long way to go to align EV adoption with our climate targets, the nation is heading in the right direction. This is in large part due to the support the Australian Government and state and territory governments have given for the adoption of electric vehicles and the recognition the role this technology has to play in achieving emission reduction targets.

In April 2023, the Australian Government launched its first National Electric Vehicle Strategy to boost EV adoption through collaboration on national standards, data sharing, affordability, infrastructure development, fleet procurement and education. A key component of this strategy is the upcoming New Vehicle Efficiency Standard to be finalised in 2024, which aims to lower CO_2 emissions by promoting fuel-efficient and electric vehicles. Additionally, in April 2023 a $39.3 million funding initiative was announced to expand Australia's EV charging network, with 117 new fast-charging sites planned for national highways.

640 AEMO, Quarterly Energy Dynamics Q4 2023, Australian Energy Market Operator, 25 January 2024.
641 CEC, Clean Energy Australia 2024, Clean Energy Council, 13 March 2024.
642 Sunwiz, 2023's record-breaking battery market in charts, accessed 11 September 2024.
643 AEMO, Integrated System Plan 2024, Australian Energy Market Operator, 26 June 2024, accessed 11 September 2024.
644 Electric Vehicle Council, Australian Electric Vehicle Industry Recap 2023, accessed 30 August 2024.
645 ARENA, Realising Electric Vehicle-to-Grid Services, Australian Renewable Energy Agency, accessed 6 September 2024.



Electric vehicles can support grid stability by charging during periods of excess renewable energy generation or from rooftop solar PV systems. In the future, consumers will be able to sell electricity stored in their EV battery back to the grid at times when it is needed.

6.9.5 Community-scale batteries

Community-scale batteries[646] are an emerging energy storage solution with much greater capacity than a single home battery, but significantly less than a grid-scale battery system. Community-scale batteries allow participating consumers to send any excess electricity generated from their rooftop solar to the community-scale battery system for storage and later use during peak times. Consumers without rooftop solar may also participate and use the stored energy at peak times to help lower energy bills.[647]

With typical storage capacities of around 100 kW up to 5 MW, a single community-scale battery system could serve up to several hundred nearby homes and small businesses.[648] Community-scale batteries may also benefit the market more broadly with the potential to play an integral role in Australia's transition to a decentralised, lower emissions grid.[649]

Community-scale batteries are regulated under the National Electricity Law (NEL) and National Electricity Rules (NER), and the National Energy Retail Law (NERL) and National Energy Retail Rules (NERR). They are also regulated under jurisdictional energy laws in some states and territories and may be required to comply with additional AEMO and AER requirements, depending on the system's location, technical features and operating model.[650]

In the NEM, the most common form of community-scale batteries are 'in-front-of-the-meter' systems connected to the main grid. Those batteries may be owned by the local distributor, local council, community group, retailer or other third party. However, there are also 'behind-the-meter' systems, which are connected behind a customer's existing grid connection point and generally co-located with other CER. These can be owned by individual customers, businesses or third-party service providers.

The Australian Government is delivering a $200 million grant program in recognition of the multiple benefits community-scale batteries can unlock.[651] A number of state and territory programs and trials are also underway.[652] Retailers are increasingly participating in community-scale battery schemes as the asset owner or in partnership with a distribution network service provider, and several retailers have been conditionally approved to receive Australian Government funding to develop and install community-scale batteries across NEM regions.[653]

Notwithstanding the potential for community-scale batteries to unlock significant value through lower bills for participating customers, improved grid stability and contributing to Australia's emissions reduction targets, current barriers include:

- the cost of batteries, which remains higher than the market anticipated several years ago
- limited access to revenue streams such as capacity schemes and frequency controlled ancillary services
- lack of consumer awareness and knowledge
- limited dynamic tariff structures.[654]

646 Also defined as 'neighborhood batteries' and may be referred to as 'energy-as-a-service' as part of a broader suite of technological solutions.

647 More information is available from Energy Innovation Toolkit, a service operated by the AER in collaboration with AEMC, AEMO, ARENA and the Essential Services Commission, accessed 11 September 2024.

648 Brattle Group, prepared for ECA, Unlocking the Value of Community-Scale Storage for Consumers, Energy Consumers Australia, November 2023, accessed 12 September 2024.

649 ARENA, Implementing Community-Scale Batteries, Australian Renewable Energy Agency, December 2020, accessed 12 September 2024.

650 Australian Government, Energy Innovation Toolkit, accessed 11 September 2024.

651 DCCEEW, Community Batteries for Household Solar program, Department of Climate Change, Energy, the Environment and Water, accessed 12 September 2024.

652 For example, the Victorian Government's 100 Neighborhood batteries program and the South Australian Government's emPowering SA program, accessed 11 September 2024.

653 DCCEEW, Community Batteries for Household Solar program, Department of Climate Change, Energy, the Environment and Water, accessed 12 September 2024.

654 Brattle Group, prepared for ECA, Unlocking the Value of Community-Scale Storage for Consumers, Energy Consumers Australia, November 2023, accessed 12 September 2024.

The AER is supporting further trials to overcome barriers and unlock the benefits. On 3 February 2023, the AER published a final decision to grant a class waiver that would enable distribution network services providers to lease battery capacity to third parties for batteries funded under the Australian Government's Community Batteries for Household Solar Program, subject to certain controls and criteria.[655] The AER also published a Guidance note for market participants.[656]

The AER, in partnership under the Energy Innovation Toolkit, has also provided a hypothetical case study of the development of a community-scale battery.[657] The case study seeks to identify and unpack some of the key regulatory issues that a proponent may encounter in development a community-scale battery system, including national, state and territory regulations.

6.9.6 Standalone power systems

Standalone power systems generate and distribute electricity but are not physically connected to the main grid. Standalone power systems can serve an individual or community (microgrids) and usually consist of renewable generation units, battery storage and back-up generation. Improvements in energy storage and renewable generation technology are enabling more customers to take up this form of energy supply.

Standalone power systems can have several benefits over a grid-connected system, including:[658]

- improved reliability for customers who are currently connected to the grid by relatively poor performing overhead lines
- lower network costs for all NEM customers compared with the alternative solution of replacing and maintaining long stretches of overhead lines or providing expensive underground alternatives
- being more environmentally friendly when standalone power systems use renewable generation.

Following a rule change by the AEMC in 2022, the integration of standalone power systems into the NEM has become more feasible through 'DNSP-led SAPS'.[659] The rule change allows standalone power systems to be treated as part of the network, ensuring that customers receive the same protections and services as those with grid connections, despite being disconnected from the physical grid. This shift aims to enhance service delivery and cost-effectiveness for remote and off-grid customers.[660]

In some regional and remote areas, standalone power systems are increasingly becoming a viable alternative to traditional grid infrastructure. These systems typically include renewable energy sources, battery storage and backup generators, and can serve individual homes or small communities. Recent implementations in Bulahdelah and Moruya showcase their cost-effectiveness compared with maintaining extensive power lines. The Bulahdelah system, featuring a 10.6 kW solar array, a 16 kWh battery and a 15 kVA diesel generator, illustrates how these off-grid setups provide the same level of service as grid-connected systems while reducing maintenance costs and offering significant savings as infrastructure expenses rise and system costs decline.[661]

655 AER, Distribution ring-fencing class waiver for batteries funded under the Community Batteries for Household Solar Program – February 2023, Australian Energy Regulator, accessed 12 September 2024.

656 AER, Guidance note - Distribution ring-fencing class waiver for batteries funded under the Community Batteries for Household Solar Program – February 2023, Australian Energy Regulator, accessed 12 September 2024.

657 Australian Government, Energy Innovation Toolkit, accessed 11 September 2024.

658 AER, Updating instruments for regulated stand-alone power systems, Australian Energy Regulator, August 2022, accessed 13 September 2024.

659 AEMC, National Electricity Amendment (Regulated stand-alone power systems) Rule 2022, Australian Energy Market Commission, 17 February 2022.

660 One step off the grid, Networks embrace stand-alone power as solar and batteries beat out poles and wires, accessed 30 August 2024.

661 One step off the grid, Networks embrace stand-alone power as solar and batteries beat out poles and wires, accessed 30 August 2024.

6.9.7 Towards an inclusive energy transition

Broadly, and in the longer term, all customers are and will continue to benefit from well-managed CER integration into the NEM. Increased rooftop generation puts downward pressure on energy costs and fewer greenhouse gas emissions will improve public health and environmental outcomes. However, consumers able to purchase and effectively operate CER assets will generally experience the benefits of lower bills sooner than those unable to do so.[662] There is a risk this could worsen equity gaps between consumers (section 6.6). To offset this, additional support is required for consumers experiencing barriers to engagement.

These barriers could arise through factors such as not having the literacy or numeracy skills to navigate the energy market, dealing with ill physical or mental health, or having limited financial resources or autonomy over their energy use. Consumer groups and governments are implementing strategies aiming to improve consumer equity in relation to increasing CER integration in the NEM.

On 10 August, ECA published its report *Stepping Up: A smoother pathway to decarbonising homes*.[663] The report recommends enhanced and coordinated planning across all tiers of government to avoid worsening the gap between households that can actively participate in transitioning energy markets and those that cannot. This would include measures such as:

- encouraging customer uptake of electric vehicles to leverage the ability for electric car batteries to optimise the grid and reduce energy prices
- reducing barriers for apartment dwellers and renters to electrify their homes
- carefully planning for the decline of household gas use, ensuring safeguards are in place for consumers less able to transition as prices likely escalate.[664]

Under the CER Roadmap, the Australian Government has established a CER Working Group and several CER Taskforce-led projects. The aim of these projects is to ensure continued strong uptake of CER and emerging products, such as virtual power plants, by providing a safe and fair market for CER and ensure the benefits are shared with all consumers regardless of their ability to engage with the market.[665] The CER Roadmap articulates 3 national reform priority areas:

- extending consumer protections for CER
- more equitable access to the benefits of CER
- provision of information about CER to empower consumers.

Under the CER Roadmap, several projects have been developed to support these priority areas. Projects will be delivered by the CER Taskforce in collaboration with the AER, ECA, AEMC, DCCEEW and an Energy Transformation Enablers Working Group.[666]

On 25 July 2024, the AEMC self-initiated a review to consider the role of electricity pricing, products and services to support the diverse needs of customers.[667] Part of the review includes the role of CER, in the context of the CER Roadmap, in realising the benefits of CER for all energy consumers, including those without CER. As retail markets are the main interface between consumers and energy markets, the AER will continue to implement strategies such as *Towards energy equity* to identify and support consumers with diverse needs (section 6.6.7).[668]

662 There are some exceptions to this, such as the SA Government's Virtual Power Plant program, involving installations of rooftop solar and home battery systems on Housing SA homes at no cost to tenants, with all Housing SA tenants able to access lower electricity rates under the program. See DEM, South Australia's Virtual Power Plant, Department for Energy and Mining, accessed 6 September 2024.

663 ECA, Stepping Up: A smoother pathway to decarbonising homes, Energy Consumers Australia, accessed 2 September 2024.

664 ECA, Stepping Up: A smoother pathway to decarbonising homes, Energy Consumers Australia, accessed 2 September 2024.

665 DCCEEW, National Consumer Energy Resources Roadmap, Department of Climate Change, Energy, the Environment and Water, 18 July 2024.

666 For further information about these projects, see DCCEEW, National Consumer Energy Resources Roadmap, Department of Climate Change, Energy, the Environment and Water, 18 July 2024.

667 AEMC, Electricity pricing for a consumer-driven future, Australian Energy Market Commission, 25 July 2025.

668 AER, Towards energy equity – a strategy for an inclusive energy market, Australian Energy Regulator, 20 October 2022, accessed 6 September 2024.

Consumers in a vulnerable situation are more likely to face multiple barriers compared to other consumers. These households could live in thermally poor housing and experience trade-offs between the cost of their energy bills and maintaining comfortable heat levels in their homes. This balance can inhibit their access to pay for upfront for energy upgrades to improve their home's thermal efficiency, to reduce future bills.[669] With these challenges, these households may not be well-placed to absorb the full benefits of developments including dynamic tariffs for energy bills and smart meters.

The Australian Government is partnering with state and territory governments to deliver the $300 million Social Housing Energy Performance Initiative under the Household Energy Upgrade Fund; one step towards retrofitting existing homes across Australia.[670]

The AER's vision is that consumers can own and use CER to consume, store and trade energy as they choose in support of the broader long-term interest of all energy consumers. The AER will continue to work with the Australian Government and state and territory governments to progress these reforms through the taskforce and stakeholder reference groups.

669 DISER, Race for 2030, Pathways to scale: Retrofitting One Million+ homes, Department of Industry, Science, Energy and Resources, December 2021.

670 DCCEEW, National Energy Performance Strategy, Department of Climate Change, Energy, the Environment and Water, April 2024, accessed 19 September 2024.