



Power Move

Fair and affordable electrification for Australian households and small businesses

Energy Consumers Australia (ECA) is the independent national voice for household and small business energy consumers. We advocate for a fair, affordable, and reliable energy system – one that meets everyone’s needs and leaves no one behind on the journey to net zero.

Acknowledgements

Energy Consumers Australia would like to thank everyone who provided valuable feedback on drafts of the report. ECA is responsible for the views expressed in this report, including any errors or omissions.

Energy Consumers Australia respectfully acknowledges the Traditional Owners of Country throughout Australia. We recognise their connection and continuous care for the lands and waters where we live, learn and work.



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Table of contents

1	Executive Summary	2
2	Key findings and recommendations	4
2.1	Findings	5
2.2	Recommendations	10
3	Navigating the switch	12
4	Regulatory frameworks and policies	32
5	Recommendations	46
5.1	Recommendation 1	47
5.2	Recommendation 2	49
5.3	Recommendation 3	50
5.4	Recommendation 4	51
5.5	Recommendation 5	52
5.6	Recommendation 6	53

Contents



The time to help households and small businesses transition off the gas network and adopt efficient electric appliances is now.

Efficient electric appliances are cheaper, healthier, and better for the environment. As gas demand declines, consumers who remain on the gas network – particularly those who face barriers to electrification – face mounting costs and risks without a clear government-led plan for the future of gas networks.

As Australia prepares to play a leading role at COP31, governments at all levels must work together to deliver an equitable transition for all household and small business consumers.

While international conflicts and gas prices increase globally, a long-term risk threatens all gas users in Australia, driven paradoxically from the benefits of electrification. All likely future scenarios project that most households and small businesses will leave the gas network.¹ The Australian Government's Future Gas Strategy states, "households and small businesses will have, for the most part, electrified by 2050."² As fewer people remain connected, the fixed costs of gas networks will be spread across a shrinking group, driving up prices for those who remain connected.

Regulators, consumer advocates, and even most gas network businesses see this future as being likely. Indeed, regulators have allowed energy networks to collect more money from consumers now to avoid networks losing money down the road as consumers leave and gas pipelines become stranded. CSIRO modelling commissioned by Energy Consumers Australia shows that without intervention, the network component of household gas bills will more than quadruple by 2050, and total bills will escalate dramatically.³

Every time a consumer buys a new gas appliance, they effectively tie themselves to the existing gas network for another 10-20 years, and it is quite likely that within that timeframe, the cost of simply getting the gas from the wellhead to one's house will become economically prohibitive – irrespective of the cost of the gas itself.

This phenomenon creates a risk that consumer assets – the millions of gas water heaters, cooktops and furnaces in homes and businesses themselves – will become stranded.

While the most effective approach might be to ban the purchase of new gas appliances – as the government has done for general purpose incandescent lightbulbs and other products – there is limited policy appetite at present to reduce choice for consumers. Combined, these factors portend a potentially dire future, particularly for those households and businesses who are most at risk – those who lack the full agency to decide which appliances they use. Renters and those in apartments often cannot control which appliances they use. Low-income consumers and many small businesses face significant conversion costs they cannot cover without additional support.

To help address these challenges, in 2025, ECA proposed four changes to the National Gas Rules to help protect consumers and ensure that households and small businesses pay a fair and affordable price for gas as long as they use it.⁴ But we have always known that changing the gas rules alone would not be sufficient: we need more government action.

Even in the ACT and Victoria where the policy direction is clearer, governments have not adequately planned for or engaged with the question of how to address the future of an \$11 billion gas network that will become largely unused in 25 years. In the absence of a clear answer to this question, consumers remain the default funders of the energy transition and will continue to bear an overwhelming and unfair share of costs and risks.

This report outlines the incontrovertible evidence that gas consumers face significant risks, because efficient electric appliances are a better choice for Australia from all perspectives. It calls on governments of all levels to actively plan an equitable and orderly exit from gas for households and small businesses, and to show national and global leadership on electrification by developing a National Electrification Roadmap that ensures an equitable transition for all.



01 Executive Summary

Households and small businesses face escalating gas bills as demand declines

According to the Australian Energy Market Operator (AEMO), Australian household and commercial gas use is expected to decline 79% by 2045 and to be largely non-existent by 2050 as households and businesses electrify and leave the gas network.⁵

Households and small businesses pay more than 90% of gas distribution network costs.⁶ As more people leave the network, these fixed costs will be recovered from a smaller number of consumers, driving gas bills higher for those who remain on the network.

CSIRO modelling commissioned by ECA shows that without intervention, the network component of household gas bills will more than quadruple by 2050, driving a dramatic escalation in total bill costs. A typical household gas consumer in South Australia, for example, faces a 64% increase in their total gas bill in a decade's time and a 265% increase by 2050.⁷

With cost-of-living pressures and concerns about energy prices already high, global conflicts and supply constraints further threaten to drive sharp, unpredictable spikes in the cost of the gas itself, which could further increase gas bills. This increases the urgency and benefit for consumers of electrification.

About this section

The findings and recommendations in this report draw on Energy Consumers Australia's recent research and analysis demonstrating the fundamental issues facing consumers on the gas network.

As gas demand declines, gas consumers face mounting costs and risks that must be addressed, and going all-electric will provide broad benefits to consumers and the environment. Our analysis also points to the growing need for governments to take action to set clear policy direction on electrification and the future of the gas network. There are clear risks to consumers that cannot be managed by the market alone or through current regulatory settings.

This report builds on existing work, including:

- Four rule changes we proposed to the Australian Energy Market Commission (AEMC) to amend the National Gas Rules to make them more fit for purpose to manage the risks to consumers in a declining gas network.¹⁵
- Modelling from Dynamic Analysis on the Jemena gas network in NSW and the AGN gas network in South Australia, highlighting the limitations and risks to consumers of network cost recovery approaches, and the increasing benefits of electrification as gas bills rise.¹⁶

- Findings from our surveys of energy consumers highlighting how households use gas and their attitudes towards electrification.¹⁷
- Case studies exploring barriers to small business electrification.¹⁸

Other work funded by Energy Consumers Australia's Grants Program, such as the *Balancing Act* report from the Brotherhood of St Laurence (BSL) and Gill Owen Scholarship recipient Dr Glen Currie's report, *Comparing the Californian energy transition with Australia*, highlights the potential for strategic decommissioning – phased electrification and disconnection of parts of the gas network – and lessons Australia can learn from other countries.¹⁹

The report is aligned to existing, evidence-based policy recommendations in the Roadmap for efficient and electric homes²⁰ and the Efficient Electric Homes Market Acceleration Plan,²¹ and analysis and data from other organisations referenced throughout the report.

02

Key findings and recommendations



Electrification can unlock significant long-term bill savings for households and small businesses

The good news for consumers is that moving off gas to efficient electric appliances offers significant savings to households and small businesses on their energy bills over time.

Our analysis of the South Australian gas network shows, for example, that switching from gas to efficient electric appliances alone can save consumers \$500 per year on their energy bills today, increasing to \$750 per year by 2035 as gas bills become more expensive.⁸ For Victoria, the Gas Substitution Roadmap and modelling by Renew indicate that existing dual-fuel households without solar can save between \$1,480⁹ and \$1,900.¹⁰ In NSW, modelling indicates that a typical Sydney household can save between \$812 and \$936 per year by transitioning to efficient electric appliances.¹¹

Improving energy efficiency and adding electrified transport increases these savings further. Our *Stepping Up* report found that by 2030 the average difference in total energy costs, including transport, between a typical fossil-fuelled home and an all-electric home (without solar and a battery) will be around \$2,250 per year. Households that install solar and a battery will make additional savings on top of that.

However, the ability to access these savings is unevenly distributed, as consumers face different barriers. For many homeowners, the primary hurdle is financial, driven by the upfront costs of new electric appliances and necessary electrical upgrades. While this capital constraint is significant, it can often be managed either through government financial support or by planning to replace gas appliances at its natural point of failure.

A distinct, structural barrier exists for the 40% of households who rent or live in multi-unit buildings. Unlike owner-occupiers, these consumers lack the agency to independently upgrade their home's energy infrastructure due to split incentives with landlords and strata regulation. Small businesses also face complex operational, capital and commercial leasing constraints. These structural hurdles are often harder to resolve than upfront appliance costs, yet they have received comparatively less policy attention.

Without a clear plan and dedicated assistance to overcome these barriers to electrification, these households and businesses will be left absorbing an escalating share of network costs they cannot avoid. Consumers in vulnerable situations who may not be able to afford these costs will be hardest hit.

Gas network rules are not fit for purpose to manage the transition

The rules governing gas networks, and the costs they are allowed to recover from consumers, do not reflect the reality of declining gas demand. The regulatory framework was designed for a growing network and still assumes ongoing growth in gas connections, assets, and long-lived investments.

This leads to unnecessary spending on the network and unfair cost recovery arrangements as networks seek to manage the risks of their assets becoming stranded – and ultimately higher bills for gas consumers. To help address these risks, ECA proposed a series of rule changes in 2025 that are currently being considered by the AEMC, alongside rule changes proposed by the Justice and Equity Centre.

These rule changes aim to minimise unnecessary capital spending, limit cost recovery practices that add to consumer bills, and require long-term planning for the future of gas networks. One of our rule changes – which prevents socialising new gas connection costs among existing consumers and instead requires new connecting customers to pay the cost of connection upfront – has already been approved by the AEMC to come into effect on 1 October 2026. This one rule change alone will avoid hundreds of millions of dollars being added to gas networks' regulated asset bases and being recovered through gas consumers' bills.

The AEMC is currently consulting on the remaining rule changes. While we hope the AEMC will make necessary changes that will benefit consumers, some of its early directions risk exacerbating pressures. The AEMC is proposing changes that it says, “may result in more capital recovery being brought forward and today's gas consumers facing higher prices”.¹²

However, there are limitations to what can be achieved through changes to the rules by the AEMC and through economic regulatory decisions by the Australian Energy Regulator (AER). Broader policy questions, like how and when to decommission parts of the gas network and how to equitably share the transition costs among consumers, networks, investors, and taxpayers, need to be addressed by governments.

The AEMC itself and the AER have explicitly recognised these limits and the increasingly important role for governments to be active participants in managing gas network decline and ensuring costs and risks do not unfairly fall on consumers, particularly on those who face the greatest barriers in getting off gas.

This underscores the need for governments to step up and take charge of the transition, rather than allowing the situation for consumers to gradually worsen.



There is an urgent need and opportunity for Australia to set out a national roadmap for household and small business electrification...

Electrification is the least-cost pathway to decarbonisation and is expected to save money for most households and small businesses over time. But consumers are not being given the information they need to make decisions about their future energy use: only 21% of households tell us they understand what the transition will mean for them.¹³

Consumers need a clear signal that their homes and businesses will run on electricity. This signal should come as soon as possible and be unequivocal to give consumers clarity, urgency and time to act. With a clear direction of travel on electrification, consumers can feel confident to make long-term investment decisions, industry can invest in products and skills and governments can align policies toward a common goal. Without this signal, consumers may purchase new gas appliances today without knowing the risks, locking themselves into the gas network for another 10 to 20 years. Over this timeframe, as a shrinking customer base drives up network charges, running these appliances will become increasingly unaffordable, effectively turning them into stranded assets long before they need replacing.

There are positive signs that Australia is increasing its ambition on electrification, but there is not yet a clear plan for electrification with coordinated action from all levels of government, in partnership with consumers and industry. Ahead of COP31 Australia has an opportunity to take a world-leading approach to electrification by developing a National Electrification Roadmap and setting ambitious household electrification targets.

Consumers need to be supported to transition off the gas network when it is relatively easy for them to do so. Those least able to act on electrification need targeted supports to ensure no one is left behind in the transition.

Targets should include making all new household and small commercial buildings all-electric by 2028, all existing social and community housing by 2035, all rental homes by 2040 and all homes by 2050 – if not sooner. Targets provide a goal to work toward and should encourage earlier action by jurisdictions, industry and consumers. For example, electrification of new buildings can happen immediately, and Victoria has proven that it can be implemented quickly.¹⁴

While these national targets are intended to serve as aspirational milestones, they are essential for providing a clear, unified direction of travel across the energy sector. By establishing an overarching national roadmap, the Australian Government empowers state and territory governments to develop the specific, binding jurisdictional legislation, transition policies, and funding mechanisms required to execute the transition locally. To ensure accountability and track ongoing progress against these targets, regular public reporting and interjurisdictional coordination must be actively managed through the Energy and Climate Change Ministerial Council (ECMC).

Consumers need to be supported to transition off the gas network when it is relatively easy for them to do so, by making homes built today all-electric and replacing gas appliances when they fail with efficient electric alternatives. Those least able to act on electrification need targeted supports to ensure no one is left behind in the transition.

...and actively plan for the future of the gas network

Households and small businesses face mounting costs and are bearing an unacceptable and unfair share of the costs and risks as gas networks decline.

The ACT and Victoria have led the way in declaring that the future will be all-electric, but other states lack a clear policy direction, leaving consumers without clear information to make long-term decisions about their energy needs.

Nowhere in Australia have governments adequately planned for or engaged with the question of how to address the future of an \$11 billion gas network that will become largely unused by households and small businesses within 25 years. Delaying or not engaging with these decisions is costly. In the absence of a clear answer to this question, consumers remain the default funders of the energy transition and will continue to bear the overwhelming share of costs and risks.

Regulators and rule-makers have sought to grapple with this issue but recognise the limits of their own roles and are increasingly identifying the need for governments to make the legislative and policy changes needed to support an orderly and fair transition. While primary responsibility for the network sits with state and territory governments through jurisdictional legislation, the Australian Government must also ensure coordination through the proposed National Electrification Roadmap, consistent with the electrification targets we have recommended and the national net zero target.

Governments need to be active participants in managing the future of the gas networks to ensure consumers alone are not left holding the bill. A structured, coordinated exit plan is the only way to protect household and small business consumers from bearing the escalating cost of an unplanned transition.



Fair and affordable electrification

01



Establish national targets and a clear direction on household and small business electrification

The Australian Government should:

- Set ambitious electrification targets that aim to ensure electrification of all new households and small commercial buildings by 2028, all existing social and community housing by 2035, all rental homes by 2040 and all homes by 2050, if not sooner.
- Develop a National Electrification Roadmap that sets out a plan for achieving targets collaboratively across all jurisdictions.

State and territory governments should:

- Develop or align jurisdiction-based targets and plans to ensure they are at least as ambitious as those set out in the National Electrification Roadmap.

The Australian Government and state and territory governments should regularly report against the targets and plan publicly. The Energy and Climate Change Ministerial Council should coordinate nation-wide action to meet these targets.

02



Support consumer decision making on electrification

The Australian Government and state and territory governments should take action to signal electrification to consumers at key decision points:

- Mandate that landlords install efficient electric appliances when a gas appliance fails in rentals.
- Introduce clear labelling of the bill and emissions impacts of gas appliances at point of sale.
- Remove or prohibit rebates, incentives or subsidies to purchase new gas appliances where they are eligible under state-based schemes or offered by gas networks.
- Mandate disclosure of energy performance ratings of properties at point of lease and sale.
- Reform strata legislation to support electrification in multi-unit dwellings.
- Support tradespeople (electricians, plumbers) and strata and property managers to be champions of electrification.

03



Lower the cost of electrification

The Australian Government and state and territory governments should implement policies and review existing programs to ensure all Australians are supported with the upfront costs of electrification and energy efficiency upgrades, including to:

- Provide grants and direct finance options for low-income households or illiquid homeowners.
- Expand the Social Housing Energy Performance Initiative (SHEPI) to retrofit all social and community housing to be fully electric and high performing.
- Provide rebates on efficient, electric appliances.
- Provide targeted support for small business electrification.

Future of the gas network

04



Plan for an orderly and fair transition off the gas network

State and territory governments must actively plan for the transition by:

- Ensuring all new household and small commercial buildings are all-electric.
- Signalling a clear end date for gas for households and small businesses.
- Providing support to reduce the cost consumers face when disconnecting from the gas network.

The Australian Government should work with state and territory governments to develop plans for the future of gas and align them with net zero targets and a National Electrification Roadmap.

05



Plan for how the costs of the transition from gas will be funded

State and territory governments must actively plan for how gas network costs will be shared fairly between consumers, networks and their investors, and taxpayers through the transition. The current approach assumes consumers will continue to fully fund the costs and risks of the transition off gas by default.

The Australian Government should engage with state and territory governments to plan for these costs and consider initiating an independent inquiry (for example by the Productivity Commission or another appropriate body) to ensure these issues can be considered holistically at a national level.

06



Explore strategic decommissioning of the gas network

State and territory governments should begin actively exploring and taking a lead role with networks in planning strategic decommissioning of sections of the gas network. This approach can reduce costs and risks for consumers and network investors alike.

State and territory governments and ECMC should also lead legislative amendments to remove existing barriers to strategic decommissioning.

The Australian Government should work with state and territory governments to explore options for decommissioning and align decommissioning plans with net zero targets and a National Electrification Roadmap.



Opportunities and risks as households and small businesses transition off gas

How households and small businesses currently use gas

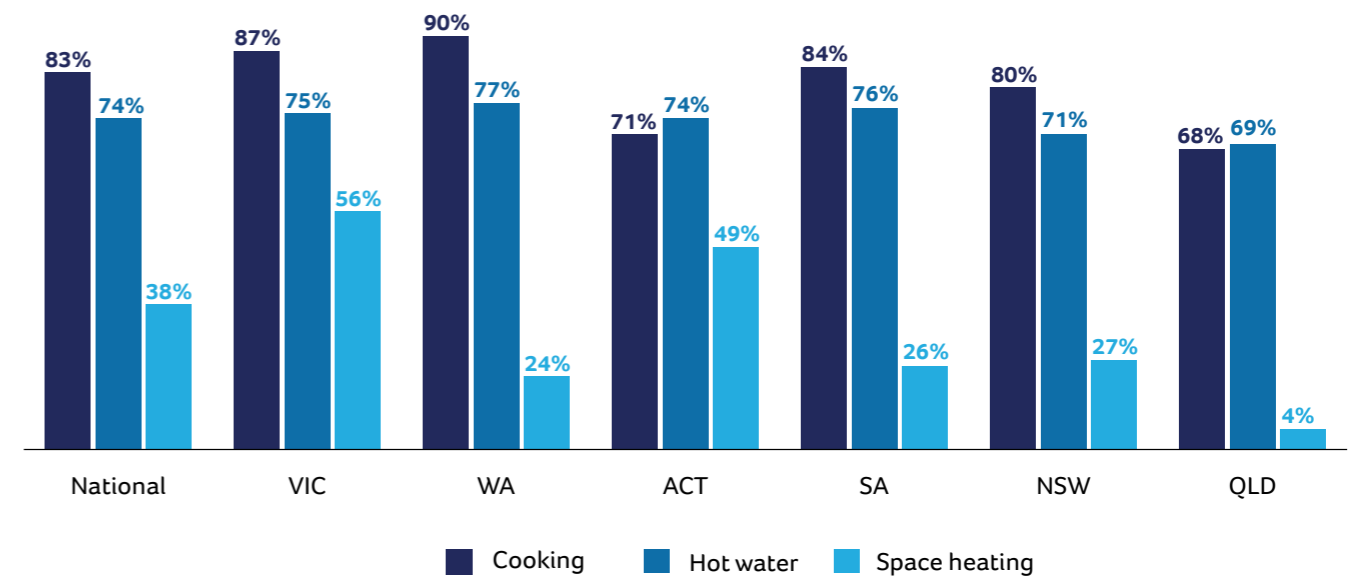
Households use gas for three main purposes: to cook, heat water, and to heat their homes. This varies significantly across states and territories, as shown in **Figure 1**.

Our consumer surveys show that, nationally, one in four households with gas say they use it for all three purposes.²² A similar proportion say they only use gas for one of these purposes, suggesting that many households using gas may face relatively low barriers to full electrification. Our survey findings are further detailed in our 2025 report on how households use gas and their attitudes to electrification.²³

While **Figure 1** shows that gas cooking is the most common use among those with household gas connections, **Figure 2** shows that cooking accounts for only a small fraction of total household gas use.

Household use of network gas varies across the country. This disparity means that the urgency of the gas transition, and the risk it poses to consumers, is not uniform. The policy challenge is dependent on a jurisdiction's relative exposure to gas, which is driven by how many households are connected to the network and how much gas they use (**Table 1**).

Figure 1 – Gas appliance use by households who report using gas*

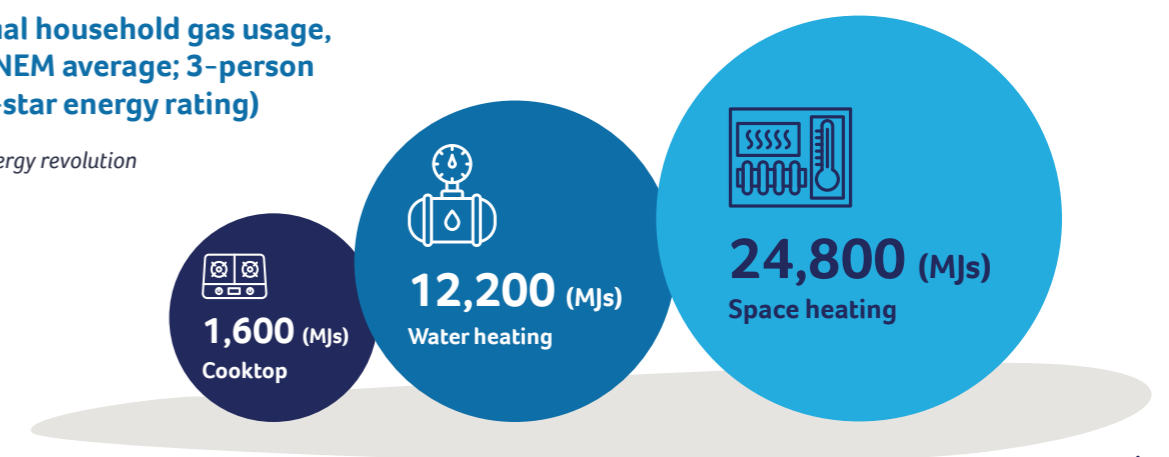


Source: ECA, *How households use gas and their attitudes towards electrification, February 2025*²⁴

*TAS and NT are excluded due to low sample size in the survey.

Figure 2 – Annual household gas usage, by service (MJ; NEM average; 3-person house with a 3-star energy rating)

Source: AEMC, *The energy revolution in our homes, 2025*²⁵



03 Navigating the switch



Table 1 – Network gas use in Australian homes (data as of June 2023)

Jurisdiction	National	ACT	VIC	WA	SA	NSW	QLD	TAS	NT
Proportion with mains gas (%)	49.5	79.4	77.2	69.3	58.8	45.6	10.1	4.9	1.2
Average use (GJ per year)	29.5	31.7	46.6	13.5	16.3	20	9.5	28.4	10.8

Source: Energy Networks Australia (ENA), *The role of Australia’s gas distribution networks*²⁶

While national targets are needed to set the destination, government interventions must be tailored to the specific exposure and risk profile of each individual jurisdiction.

Gas distribution networks are price regulated in the Australian Capital Territory, New South Wales, South Australia, Victoria and Western Australia – meaning gas network prices are set by regulators through a formal process that determines the amount gas distributors can recover from gas consumers over a 5-year period. Gas distribution networks in Queensland, Tasmania and the Northern Territory, which have significantly fewer consumers using gas, are not price regulated. The regulator is the AER, except in Western Australia where the network is regulated by the Economic Regulation Authority.

The risks examined in this report primarily relate to jurisdictions where gas distribution networks are price regulated. The National Gas Law (NGL) requires that regulated service providers be given a reasonable opportunity to recover their efficient costs. As demand declines, networks are adjusting their regulatory proposals to ensure they recover all their investments by charging existing gas consumers more.²⁷ Ultimately, this shifts the financial risk of falling gas volumes directly back onto the shrinking base of remaining consumers.²⁸

In the context of declining gas use, a direct tension arises between protecting consumers from rising prices and ensuring networks can recover costs.

Gas networks regulated as natural monopolies are insulated from some of the competitive pressures that would otherwise face comparable businesses in industries undergoing a transition to alternative technologies. Regulators are therefore tasked with managing a problem the law and its rules were not designed for: how to fairly recover the costs of long-lived gas network infrastructure as the customer base shrinks.

In the context of declining gas use, a direct tension arises between protecting consumers from rising prices and ensuring networks can recover costs.

Household and small business gas demand is in long-term decline

Many households and small businesses are moving away from gas. Those with the financial means and agency to do so are navigating this shift gradually, replacing individual gas appliances with electric alternatives. Others are leaving the gas network altogether by disconnecting or abolishing their gas connection. Either way, the direction is clear: gas is playing a smaller role in everyday energy use for households and small businesses.

This shift is not happening in a vacuum. Australia is on a legislated path to net zero emissions by 2050. The network gas piped into our homes and businesses is primarily methane, a potent greenhouse gas that produces carbon dioxide when burned. Phasing it out is therefore an unavoidable part of Australia’s response to climate change. Recognising this reality, many governments, businesses and households have already made long-term investment decisions for years. Long-term modelling consistently points in the same direction: gas use in households and small businesses will decline substantially in the next 25 years.

In its forecast for the Integrated System Plan (ISP), CSIRO projects that, “gas use in the residential and commercial sectors approaches zero by 2050” in all scenarios.²⁹ CSIRO notes that the results are, “consistent with similar decarbonisation scenario modelling studies.”³⁰ The Australian Government’s Future Gas Strategy states, “households and small businesses will have, for the most part, electrified by 2050.”³¹

These trends are no longer just forecasts: they are reflected in real-world decisions. Across the National Electricity Market (NEM), the pace of new household gas connections has slowed in recent years.³² AusNet, a major Victorian gas network, has stated that property developers active in their service area expect “around 85% of [new housing] lots...to be all-electric,” even though many of these lots had planning permission to use gas.³³ While this highlights a strong voluntary market shift, the transition will soon be universal in the state, with Victorian policy requiring 100% of new residential builds to be all-electric from January 2027.³⁴

Jemena, which operates Australia’s largest gas distribution network across NSW, is also forecasting customer numbers to decrease from 2028 due to slowing construction rates, changing building practices, and electrification trends.³⁵ Notably, this decline is happening despite the absence of any state-wide policy on gas connections or appliances in NSW.

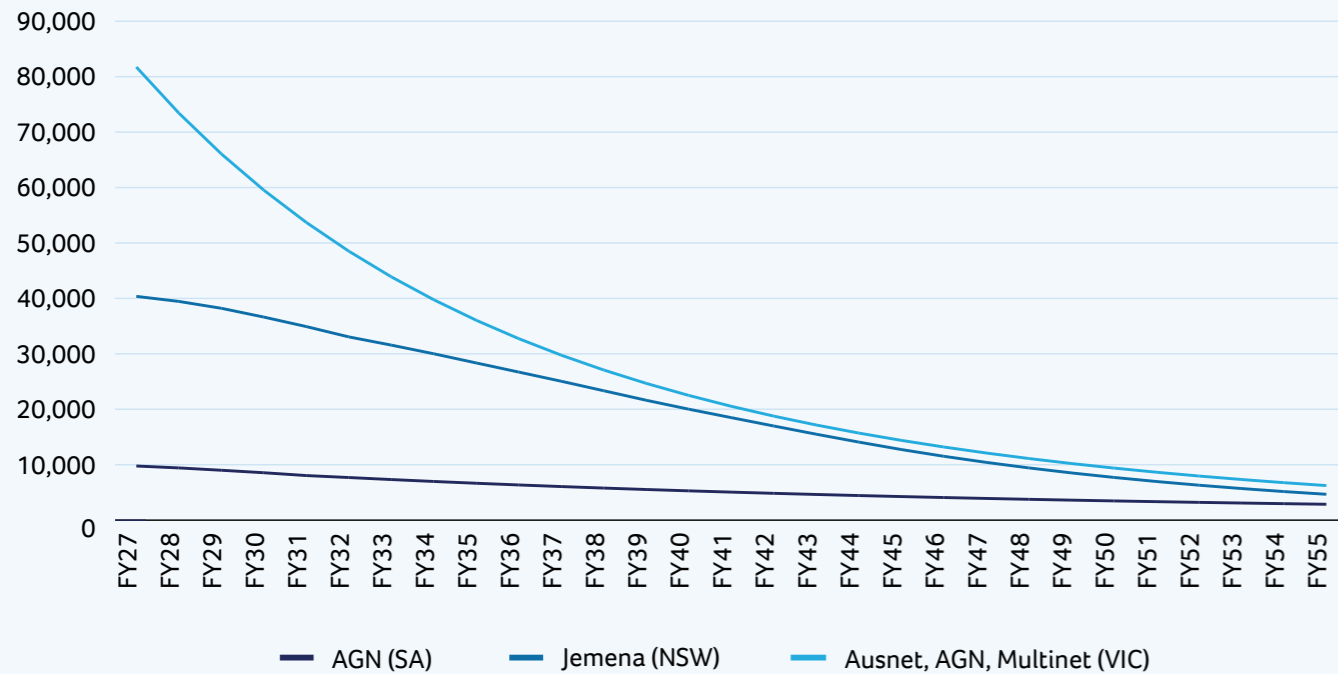
Over the past year, residential data on gas connections suggests slowing or declining connections growth. Small business customers are showing a clearer state of decline, as every state and territory recorded a drop in small business gas customers in the last financial year, shrinking by 3.5% overall.³⁶ Gas use per customer is declining. At a national level, the trajectory of the gas network shows clear structural decline.

AEMO’s 2025 Gas Statement of Opportunities confirms this shift, noting that “residential and small commercial [gas] consumption is also forecast to slightly decline in the short term, with more significant levels of electrification in the medium to longer term, in line with a transition to net zero emissions goals.”³⁷ AEMO forecasts household and small business gas consumption to fall 79% over the next twenty years, despite significant population and economic growth.³⁸

Long-term modelling consistently points in the same direction: gas use in households and small businesses will decline substantially in the next 25 years.



Figure 3 - Residential and commercial gas consumption forecasts for VIC, SA and NSW (terajoules)



Source: Combined ECA analysis show high-level trends based on VIC gas networks' reported annual information responses through compound annual growth rate and Dynamic Analysis modelling on AGN and Jemena Gas Access Arrangements³⁹

Figure 3 shows the decreasing demand for gas out to 2055, using gas networks' demand forecasts for NSW and SA and the actual reported connections and demand for VIC, and extrapolating this trend to 2055.

The precise pace of decline will vary but the overall direction is no longer in doubt. Households and small businesses are using less gas, and some are leaving the gas network entirely. The federal government and all state and territory governments have committed to net zero by 2050 or earlier, and electrifying households and small businesses are particularly cost-effective emission reduction strategies with net economic benefits. The key question for governments is not whether the transition will happen, but whether governments will step up to plan and manage an orderly transition or whether the consumer risks we have highlighted will be allowed to play out with growing consequences for the consumers left behind.

History demonstrates that these conversions can happen more rapidly than anticipated. For example, during the shift from gas to electric lighting in the UK early last century, gas declined by 80% over two decades once electricity emerged as a cheaper, safer, and healthier alternative.⁴⁰

The transition away from gas may be even easier because the alternative is already in every home. We do not need to invent new technologies or build new grids. Consumers already use electricity every day, so switching is just an incremental step rather than a fundamental change in behaviour.

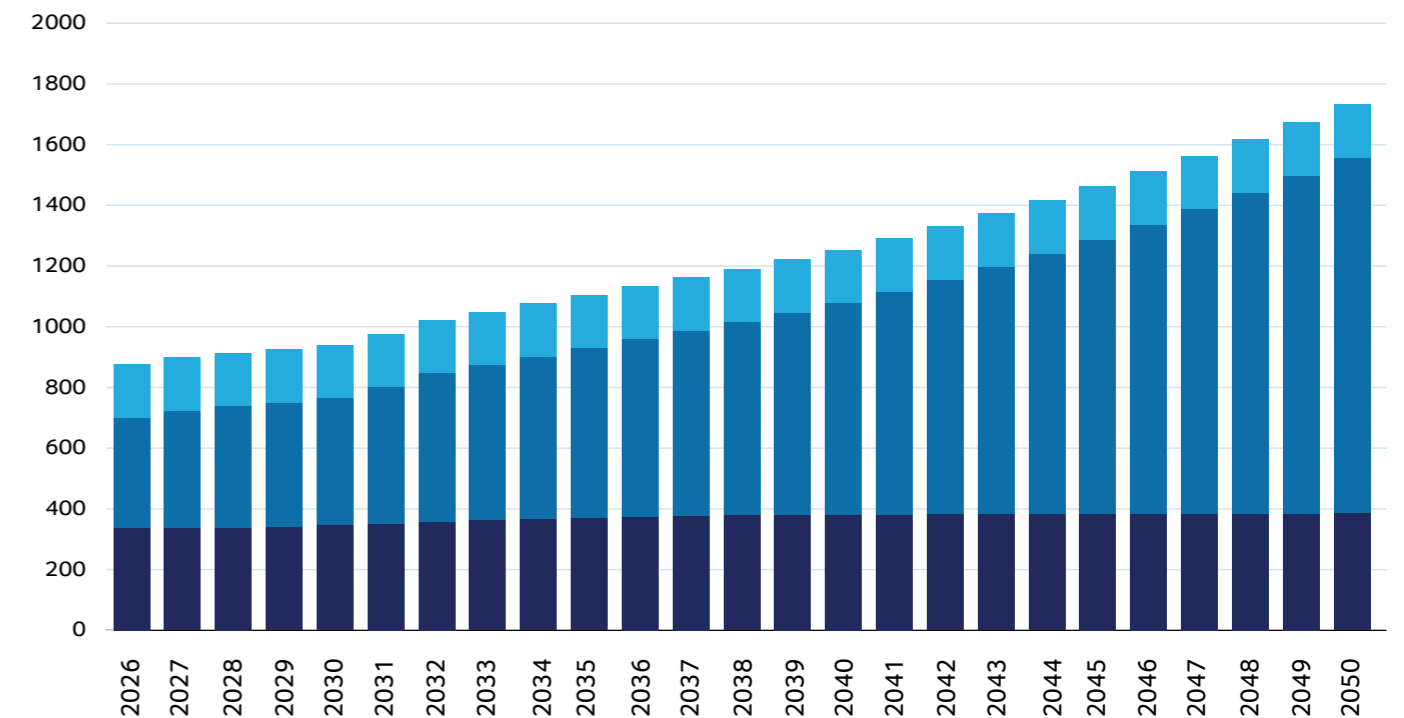
The key question for governments is not whether the transition will happen, but whether governments will step up to plan and manage an orderly transition.

Consumers who remain on the gas network face mounting costs

Households and small business gas network users pay 90% or more of gas distribution network revenue today⁴¹ even though their gas usage accounts for a much smaller portion of overall gas consumption.⁴² As consumers switch from gas to electricity, there are fewer and fewer gas consumers remaining to pay for the largely fixed costs to operate and maintain the gas network and the costs of past investments in building and growing the gas network.

In a 2023 report for Energy Consumers Australia, CSIRO modelled the impacts on household energy bills under the 2022 Integrated System Plan's 'step change' or central planning scenario. The modelling shows that the network component of household gas bills will more than quadruple – from roughly \$280/year in 2023 to \$1,170 in 2050.⁴³ This modelling suggests that network costs already form the largest component of gas bills and will rise to more than two-thirds of the total bill by 2050.

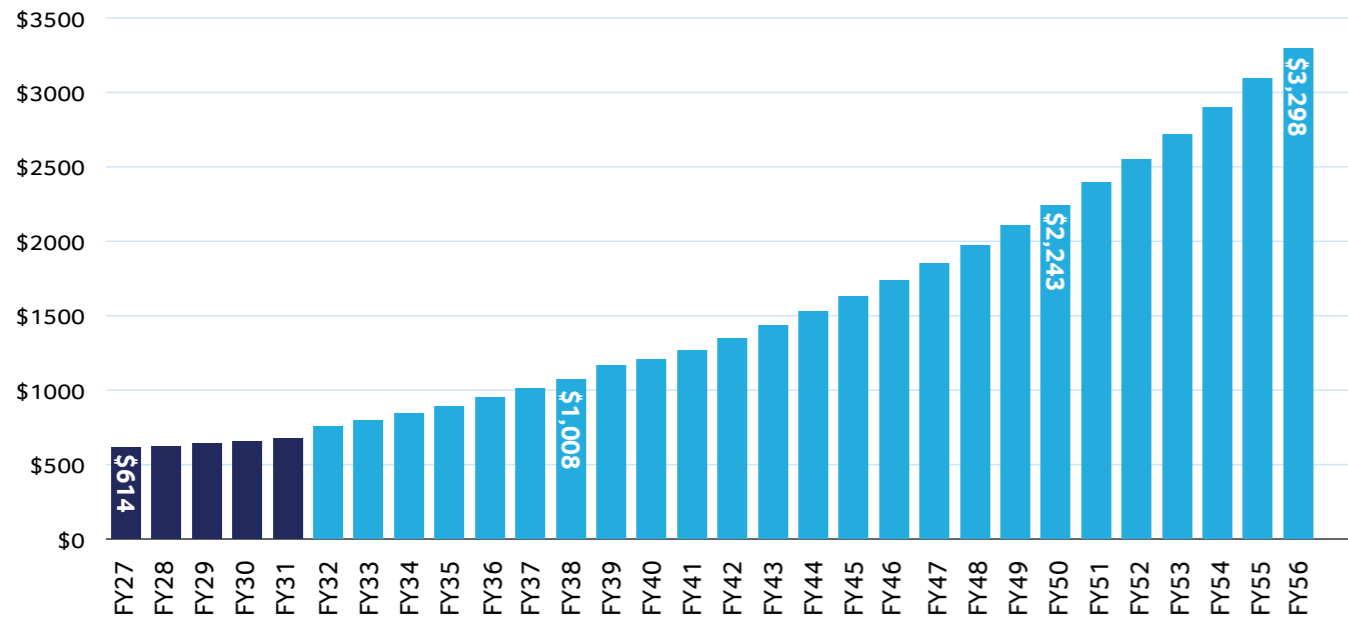
Figure 4 - Projected national average annual household gas bill with decreasing customer numbers (\$)



Source: CSIRO, Dynamic Analysis and ECA, Consumer impacts of the energy transition: modelling report, July 2023

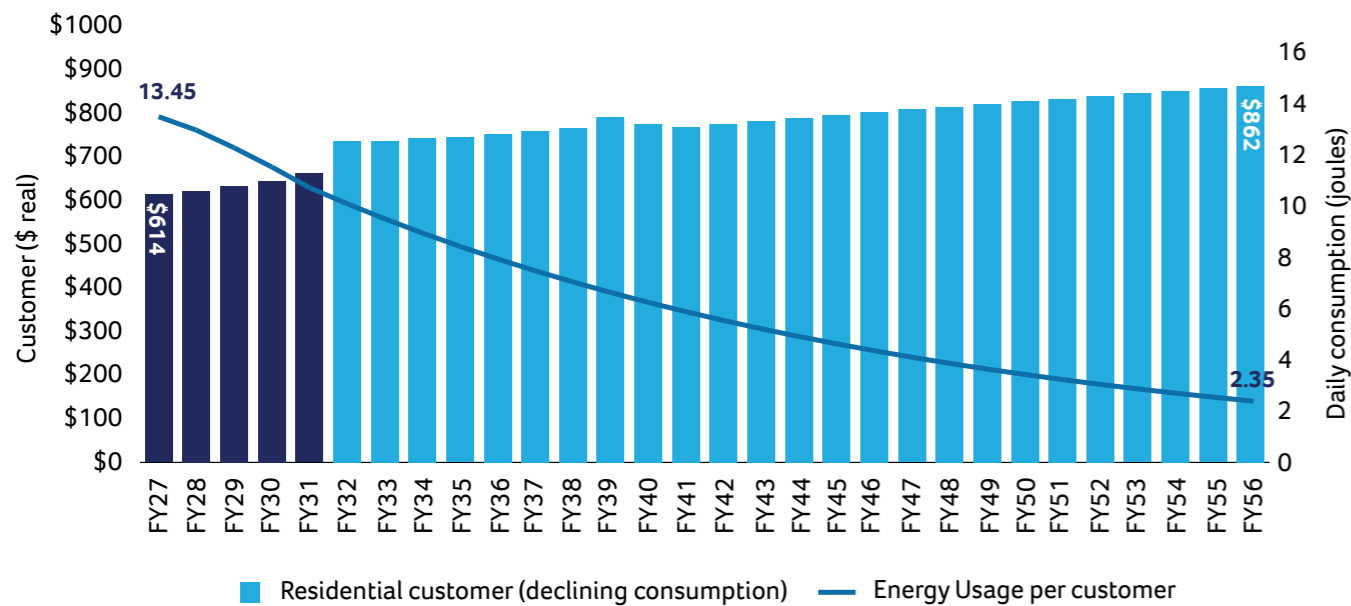
The modelling shows that the network component of household gas bills will more than quadruple – from roughly \$280/year in 2023 to \$1,170 in 2050.

Figure 5 - Typical AGN (SA) residential customer – gas network bill – 13.5GJ consumption (\$, real 2026)



Source: Dynamic Analysis modelling based on AGN (SA) proposed access arrangement

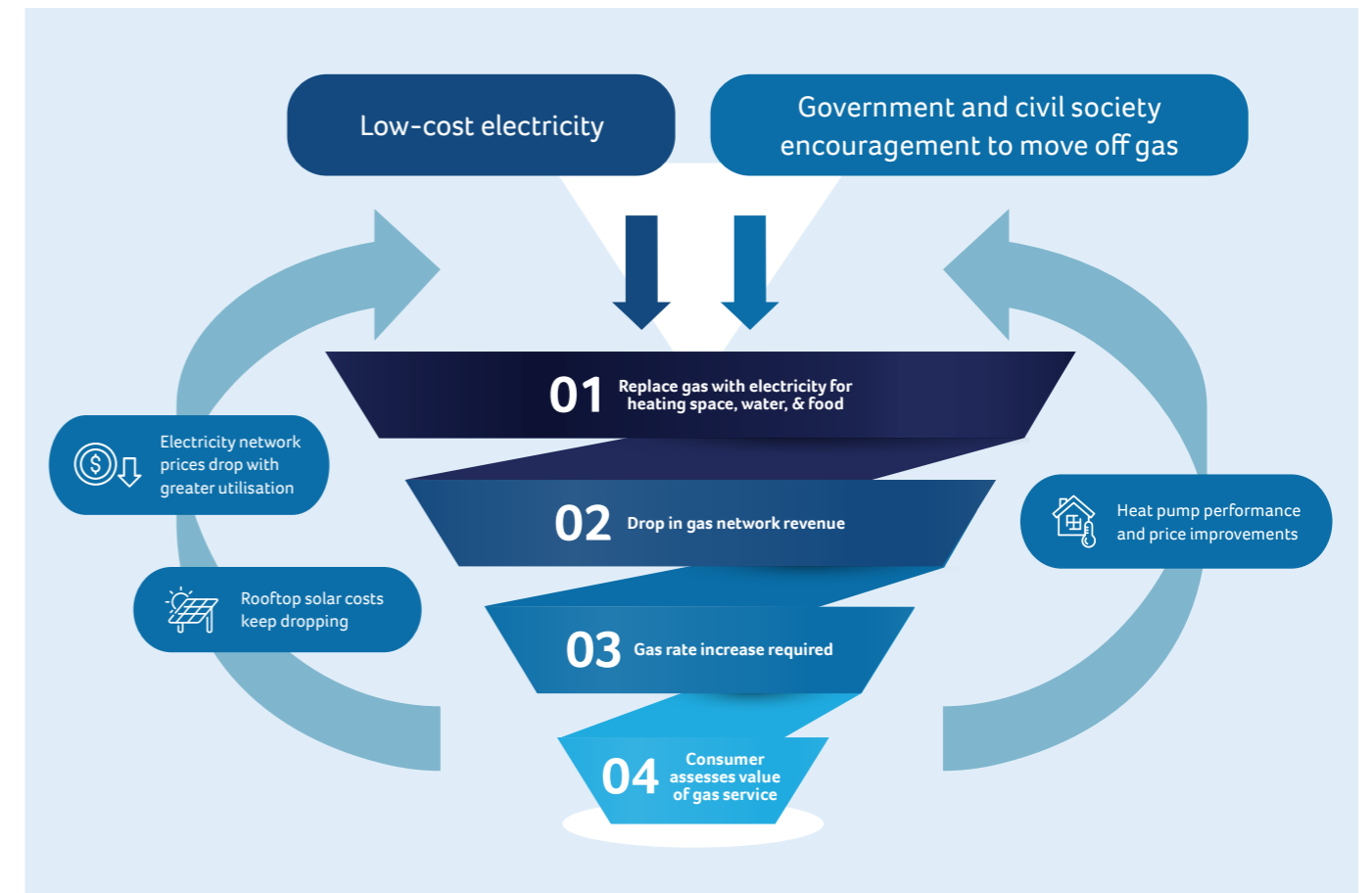
Figure 6 – Typical* AGN (SA) residential customer – gas network bill – declining gas consumption (\$, real 2026)



Source: Dynamic Analysis modelling based on AGN (SA) proposed access arrangement.

* Typical residential customer is defined with the median for residential usage forecasts

Figure 7 - Vulnerable consumers who remain on the gas network face a vicious cycle in which they will face increasing prices



These projections assume, as demand trends indicate, that many consumers will leave the network. Those who remain will face escalating bills, even if they reduce their gas use.

Modelling on the South Australian gas network undertaken by Dynamic Analysis for Energy Consumers Australia reinforces this point. Modelling results are shown in light blue and 5-year network forecasts in dark blue. **Figure 5** shows that customers who keep their gas use constant will see their bills rise rapidly – by 64% in a decade’s time and 265% by 2050.

In contrast, **Figure 6** models a hypothetical household that reduces its gas consumption by around five per cent per year (on average), in line with network demand forecasts to reflect appliance-by-appliance electrification. This modelling shows that even if a customer uses less gas, their gas bill still rises in real terms. Those who cannot electrify and continue to use gas for all three main purposes will be hit hardest by price rises.

This dynamic creates a reinforcing cycle. Rising prices encourage some consumers to leave the network. As they do, costs are spread across an even smaller customer base, placing additional pressure on those who remain.

The precise timing and pace of the decline in gas demand is unknown. If gas consumers are especially price responsive and additional support is provided to go all-electric, the decline could happen more quickly. If electricity prices remain high or increase and fewer consumers than expected adopt rooftop solar (reducing the prices they pay for electricity), then the decline may happen somewhat less dramatically.

As the Grattan Institute notes, “[t]he risk of this ‘death spiral’ increases, the longer governments delay” setting a clear direction for the future of gas.⁴⁴ We outline our recommendations for government action on the future of gas networks in section 5 of this report.

Renewable gases are not a realistic option for households and small businesses

Some jurisdictions are exploring whether renewable gases, particularly hydrogen and biomethane, can provide an enduring alternative to fossil gas for households and small businesses. Unfortunately, there is substantial evidence that renewable gas is not a viable solution for these consumers. It is unlikely that transitioning to renewable gases will provide better outcomes for household and small business consumers or slow declining gas demand.

Hydrogen may play a role in Australia’s energy future to help decarbonise industries that cannot easily electrify. Significant public and private investment are already being directed towards developing this opportunity. However, for households and small businesses, hydrogen is not a viable solution (see **Box 1**).⁴⁵

Unlike hydrogen, biomethane can be used without any modification to the existing gas network or existing gas appliances. However, its role is constrained by how much biomethane can be produced to replace Australia’s gas consumption.

The Victorian Government identifies in its Industrial Renewable Gas Guarantee that electrification is the least cost alternative for household fossil gas use and will ensure any renewable gases are reserved for the most hard-to-abate industries. Its Directions Paper says: “Victoria’s household energy consumption will be gradually decarbonised by electrification” while “renewable gases [will] be deployed where there is no feasible decarbonisation alternative.”⁴⁶ The ACT’s Integrated Energy Plan also acknowledges renewable gases will only be used for some “niche applications.”⁴⁷

Box 1: Overview of renewable gas options for households

Hydrogen: the wrong fuel for homes

- More than fifty independent studies concluded that hydrogen is 4-5 times less efficient and not recommended for heating buildings.
- It cannot replace gas “in heating or consumer appliances above a 5 to 20 percent blend without enormous costs and disruption.” All consumers would have to replace all their appliances before the gas network converts to operating on 100% hydrogen, an enormous logistical challenge.
- Hydrogen is harder to contain and cannot currently be scented with odorants to alert residents to leaks.
- Hydrogen should be reserved for “hard-to-abate” heavy industries and export, not used in kitchen stoves.

Biomethane: not enough to go around

- Australia’s total biomethane potential is, at best, less than 25% of current gas demand; some estimates put it as low as 3%.
- Limited supplies will be swallowed up by heavy industry where electrification is impossible or very difficult and overall economic value add for the energy use is much higher.
- Because supply is so low and industrial demand is so high, biomethane will never be cost-competitive with electricity for average households.

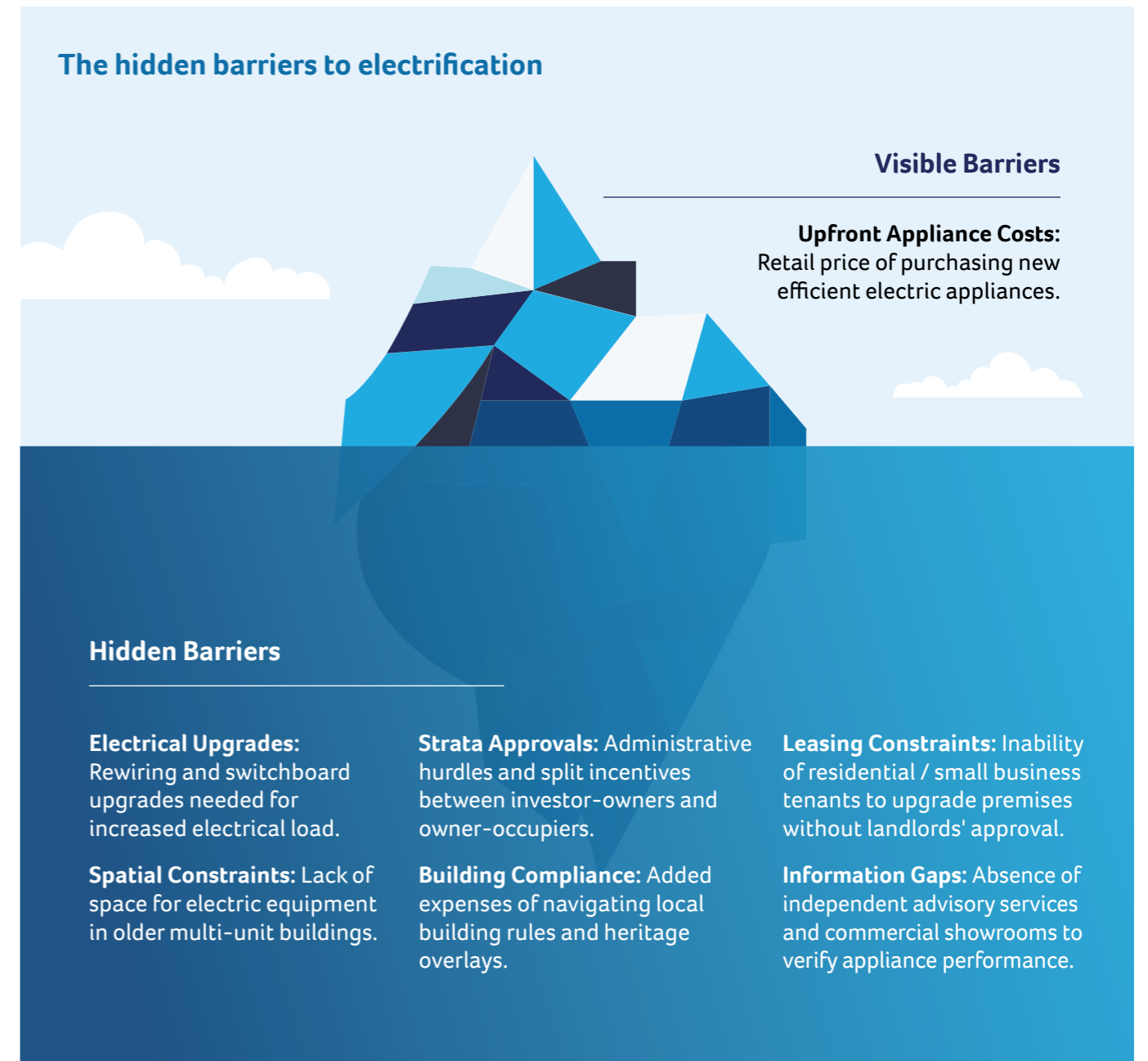
Consumers who face barriers to electrification are most at risk

Electrification is often described as a simple technical task: swap out a gas appliance, put in an electric one, and the job is done. But when we look at the practical realities for households and small businesses, the picture can be more complex.

Transitioning away from gas is not just a matter of having the right motivation. For too many people, it often involves navigating a web of structural, financial, and operational barriers.

Whether it is a tenant unable to upgrade a leased property, a business lacking the cash for new electrical equipment, or an owner struggling to find reliable technical guidance, these hurdles put those least able to transition at the greatest risk. The existence of these barriers underlines the urgent need for coordinated government action, as these challenges take time for households to navigate. A National Electrification Roadmap and supporting policies are needed to provide a clear signal to consumers and industry and ensure electrification is fair and affordable for all households and small businesses.

The hidden barriers to electrification



The structural barrier to electrification

The Australian Government’s Future Gas Strategy acknowledges an uneven playing field for many consumers:

“ The rising cost of remaining on the reticulated gas network can provide the economic incentive to transition for those able to control – and afford – the cost of switching. However, renters, those in community and social housing, and low-income households, have limited or no control over whether they electrify, even where they might want to transition. ”

Australian Government (2024)

As illustrated in **Figure 8**, around 40% of Australian households rent or live in multi-unit buildings. These households will face additional barriers to going all-electric.

For renters, the primary hurdle is that they rely on their landlord to invest in the necessary changes to enable electrification, but landlords have limited incentives to do so because the financial benefits of efficient electric appliances (lower energy bills) flows almost entirely to the tenant.

Those in multi-unit buildings face unique structural and administrative hurdles. Physically, older buildings often lack the required footprint to replace shared gas systems (like central hot water boilers) with electric alternatives.

Administratively, upgrading shared infrastructure is usually not a simple individual decision because the asset is collectively owned or affects common property. That means switching off a building’s gas supply, replacing central hot water or altering main services often needs a formal decision, in some states requiring a special resolution. This collective decision-making is frequently hampered by “well-known inertia and apathy.”⁴⁸ It is further complicated where investors are often “under incentivised to invest in sustainability upgrades” since there is no direct decrease in their own costs.⁴⁹

Even owners of detached owner-occupied houses can encounter barriers such as space limitations, switchboard and wiring upgrades, and heritage protections.⁵⁰ Barriers can also arise from people’s personal circumstances, such as where they live, infirmity or disability, income, literacy, English fluency and access to internet and digital tools. In addition, there are cultural and behavioural factors. Cooking, for example, is often strongly linked to cultural practices, with some households preferring gas for cuisines such as wok cooking.⁵¹ These preferences are not insurmountable, but they highlight the need for government programs that combine technical and financial support with clear information, training and consumer education.

Despite identifying the risks to consumers from declining gas use, neither the Future Gas Strategy nor any other Australian Government plan or policy offers a clear path to address them. While federal and state and territory governments are providing financial support to help some consumers electrify, these measures still leave remaining gas consumers at significant, and growing, risk.

The financial barrier to electrification

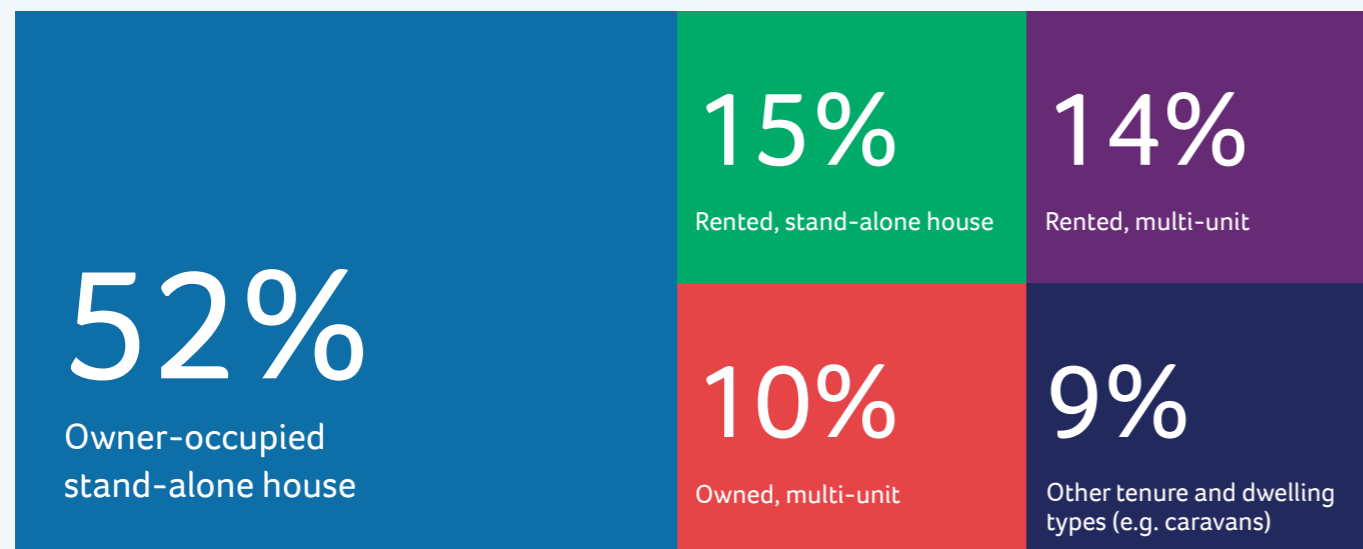
Electrification is in the long-term financial interest of consumers, delivering substantial ongoing bill savings. For most owner-occupier households, replacing a gas appliance with an electric alternative at the natural end of its life is a manageable investment that does not cost significantly more than a gas appliance. If capital is needed, access is generally available through standard financing or through low-interest options.

But often, the appliance isn’t the only expense. Households can face steep hidden costs, such as complex electrical rewiring, switchboard upgrades or the added expense of navigating building requirements and permits such as heritage overlays.

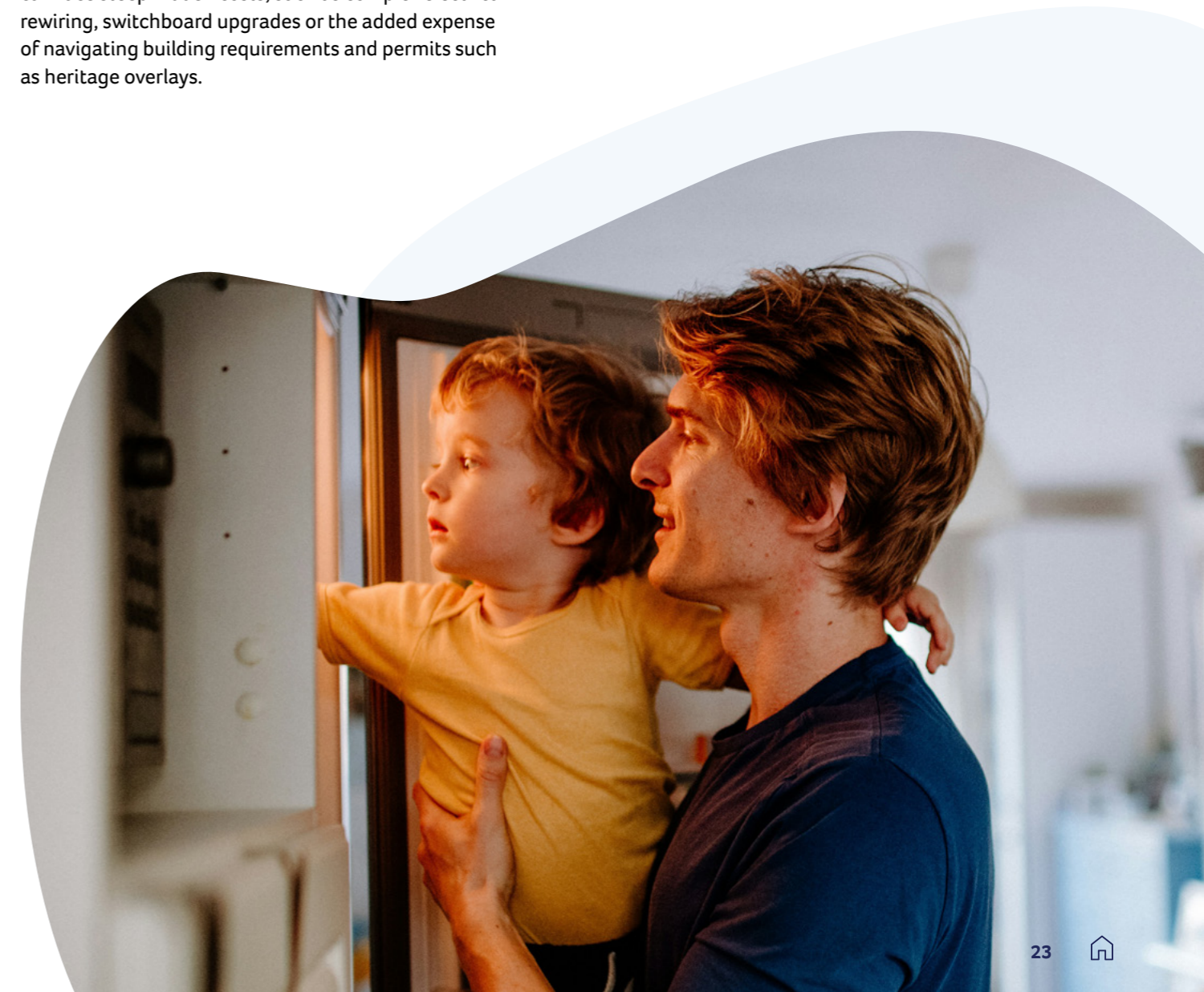
These costs and issues mean electrification is either inaccessible or too much of a hassle to many in Australia. A quarter of Australian households were unable to raise \$2,000 when needed in the 2023 Household, Income and Labour Dynamics in Australia (HILDA) survey, making the upfront cost of electrification difficult or out of reach entirely.⁵³ Data from our December 2024 Consumer Energy Report Card (CERC) underscores that the material upfront cost of electrification remains a primary barrier to investment, finding that lower-income homeowners are the demographic least likely to say they intend to switch away from gas over the next decade.⁵⁴

Crucially, the financial barrier becomes intractable when it intersects with structural constraints. Renters and apartment residents face the greatest difficulty accessing the financial benefits of electrification, yet current government supports, like appliance subsidies, tend to be most easily accessed by owner-occupiers.

Figure 8 - Dwelling structure by tenure and landlord type 2021



Source: ECA analysis of Census of Population and Housing: Housing data summary, 2021⁵²





The complex reality for small business

For Australia’s small businesses, these barriers extend even further into the complexities of supply chains, product quality, and daily operations. The Council of Small Business Organisations Australia (COSBOA) reports that almost half of small businesses (49%) have not yet taken any steps towards the energy transition, while nearly two-thirds (63%) say the cost of transition is difficult to manage.⁶¹

When we spoke directly with small businesses to understand their perspective on electrifying, consistent themes emerged (see case studies in Box 3). Treating electrification as a simple choice not only oversimplifies the process but fails to resonate with how business owners make operational decisions.⁶² Policy solutions to support small business electrification need to be informed by a clear understanding of these commercial realities.

Some of the key takeaways for policymakers highlighted by these case studies include:

- *De-risk the initial investment and align with natural business cycles.* Governments must provide targeted financial support (such as grants, zero-interest loans, or asset write-offs) that intersects with natural equipment replacement cycles. Electrification must be presented as a compelling, economically sound business case. This means demonstrating not just the emissions benefits, but the operational advantages (such as reduced maintenance and increased worker health and safety) of electrifying complex processes.
- *Address the commercial landlord-tenant divide.* The inability of small businesses to upgrade their energy systems is often tied to the physical constraints of leased premises, not just financial motivations. Tenants cannot force landlords to undertake major capital works to enable solar or electrification upgrades. Governments need to introduce targeted incentives or requirements for commercial landlords to upgrade building envelopes and unlock the capacity for tenants to fully electrify and generate their own energy.
- *Bridge the knowledge and skill gap.* Small businesses cannot be expected to navigate complex technical transitions in the dark. Government should support local demonstration sites, commercial showrooms, and independent advisory services, enabling business owners to see the technology in action, verify its performance, and make informed investments with confidence.
- *Adjust regulatory consumption thresholds.* Consumption thresholds determine whether a business is a ‘small consumer’ entitled to key consumer protections, tailored tariffs, and access to ombudsman dispute resolution. Electrification fundamentally alters energy usage profiles. Policymakers must proactively review and adjust these thresholds to ensure that businesses that electrify are not penalised by being tipped into the ‘large customer’ market without these protections.



Box 2: Overcoming financial barriers requires more than just rebates

Financial barriers can become insurmountable when households are forced into an unmanaged, rapid transition. Recent closures of gas infrastructure such as Esperance (WA),⁵⁵ Albany (WA)⁵⁶ and networks operated by Solstice Energy network across regional Victoria⁵⁷ highlight how the management of gas withdrawal influences the financial shock to consumers.

The closure of Solstice Energy’s gas network in 10 regional Victorian towns demonstrates this risk and the profound emotional and psychological toll this can have on a community.⁵⁸ Given as little as seven months to transition, some residents faced quotes of up to \$28,000 for whole-of-home electrification.⁵⁹ Some households were ineligible for state government rebates due to strict income thresholds or prior access, leaving vulnerable residents facing debt or thousands of dollars out of pocket.

The Esperance transition shows how targeted policy can help overcome these barriers.⁶⁰ When the private operator announced its exit, the Western Australian government intervened to secure a realistic 18-month transition window. Rather than relying on insufficient flat rebates, the program fully funded “like-for-like” energy-efficient replacements and absorbed reasonable installation costs.

Crucially, it bypassed the upfront cash-flow barrier entirely by paying approved tradespeople directly, ensuring low-income households were not forced to front thousands of dollars. Paired with dedicated case management, this structured approach achieved a 94% customer satisfaction rate.

These contrasting cases demonstrate that the barriers to electrification are deeply interconnected. Offering rebates alone is ineffective if households are still derailed by structural hurdles, strict timelines, or a lack of trusted guidance. To protect consumers and ensure an equitable transition, governments must move beyond simple rebates and provide holistic support that provides transparent planning, realistic timelines, and logical support.

However, it should be noted that these are examples of smaller transitions – supporting customers to move off the gas network at scale will require different decommissioning, planning and funding approaches, as discussed in section 5 of this report. Requiring large number of households to disconnect from the network with little time and at great cost is a suboptimal and avoidable outcome – if we begin to address this problem now.

Policy solutions to support small business electrification need to be informed by a clear understanding of these commercial realities.

Box 3: Case studies - small businesses face complex barriers to electrification



Champi Restaurant, a popular Southeast Asian venue in Canberra employing 10-15 staff, specialises in traditional wok-fired cooking. Operating at capacity, owners Aiden and Bianca decided to relocate to a new commercial development. However, before opening they learned the new premises would not have a gas connection, forcing a fundamental shift in their operations.

Without gas, they needed to adapt their cooking methods and the menu. Fortunately, the long lead time allowed them to come to terms with the required changes and adequately plan. The biggest challenge for Aiden and Bianca was replicating the “wok hei” flavour traditionally achieved through high-heat wok cooking. They plan to install a charcoal grill, returning to how food was originally cooked in Champi before gas woks became standard for speed. This transition requires considering charcoal storage, higher fuel costs, and the fact that charcoal grills cannot be turned off like gas or electric alternatives. Additionally, the food will taste different, so their customers will also need to adapt.

Researching this transition proved exceptionally difficult. Lacking local showrooms or examples of commercial all-electric kitchens in Canberra, they had to rely on video demonstrations and interstate builders. When quoting the new fit-out, they found the electric kitchen would cost approximately \$100,000 which was double the \$50,000 cost of a gas set up.

Their electricity use is expected to jump from roughly 35MWh to 90MWh, pushing them close to the 100MWh threshold that defines a small electricity customer in the ACT.

Given these steep compromises, the owners are strongly in favour of government support to help small businesses transition away from gas. This could include grants to offset upfront electrification costs or ongoing electricity bill subsidies. At the same time, they question the logic of requiring full electrification when they are shifting to a charcoal grill method that, while traditional, still creates greenhouse gas emissions.



Whipper Snapper is a Perth-based distillery established in 2014 by Alasdair and Jimmy. The business specialises in making corn whiskey and other spirits from a rented commercial premises. Their energy costs are evenly split, spending approximately \$11,300 for gas and \$11,000 for electricity.

Gas is used to generate steam to power distilling equipment such as the masher, the boiler, and the still, with all of Whipper Snapper’s products produced on-site.

Electricity is used to power the attached tasting room and coffee bar. Approximately 3 years ago, Whipper Snapper installed a 10kW solar system, which has reduced the power bill, particularly given the business does not operate at night.

In installing the solar panels, Jimmy noted that the space they operate out of has an asbestos roof. The roof developed a small leak just over three years ago, prompting the landlord to convert the relevant section of the roof to tin. Whipper Snapper then covered this section of roof with solar panels- however, noted that they would be unable to increase the number of solar panels on their roof without the rest of the roof being converted, as installers do not want to deal with asbestos.

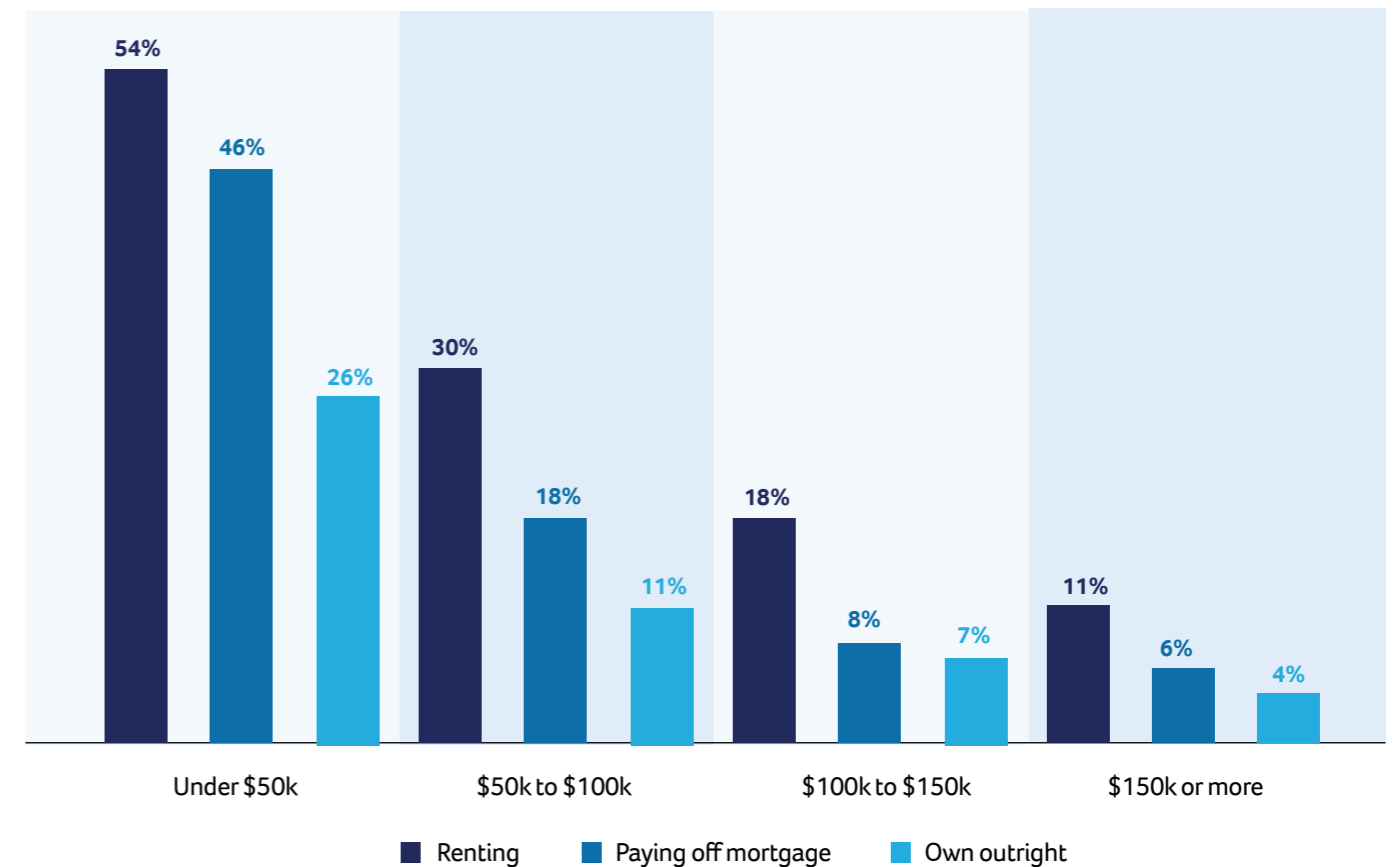
Jimmy stated that they had not considered electrification. While the business has considered and shifted to more sustainable practices in the back of house, changing power supply from gas has thus far not been a consideration. This was partially driven by the capital investment already made in the steam-powered appliances, and the relative safety of these appliances. Jimmy also noted that gas is cheaper. However, Jimmy noted that moving towards electric distilling equipment would likely have a benefit in reducing costs associated with maintenance.

Electrification can deliver significant long-term savings for households

As the cost of efficient electric appliances declines and the cost of gas increases, the economics increasingly favour electric appliances and all-electric buildings. This is true for new homes, existing households replacing appliances, and for many small businesses weighing up future energy costs. The economic case for electrification is further compounded for consumers that can access rooftop solar.

This is particularly important at a time when consumers are understandably concerned about energy affordability and cost of living. A third of Australian households find it difficult to pay their energy bills.⁶³ Renters – across all income groups – are more likely to face energy hardship than any other cohort (shown in Figure 9). Unaffordable energy bills are a social licence risk for the entire energy transition.

Figure 9 - Proportion of households vulnerable to, or experiencing, energy hardship (1+ indicators*) by household income and homeownership



Source: ECA, Understanding and measuring energy hardship in Australia, July 2025⁶⁴
 * '(1+ indicators)' refers to households that reported at least one hardship indicator, including spending more than 6% of income on energy bills, finding it very difficult to pay energy bills, experiencing financial stress and turning off heating and cooling to save money.

Appliance efficiency delivers more useful energy for every dollar

Modern electric appliances convert energy into useful heat and work far more efficiently than gas appliances. Heat pumps deliver three to four units of heat for every unit of electricity used and are up to five times more energy efficient than gas boilers.⁶⁵ A gas heater or hot water system, by contrast can never be more than 100 per cent efficient and in practice performs well below that once losses are taken into account.⁶⁶ The result is simple: households and businesses get more useful energy for every dollar spent when they electrify.

The difference shows up clearly in household bills. Our *Stepping Up* report also found that in 2030, an all-electric home saves more than \$2,000 compared to a fossil fuel home.⁶⁷ Various jurisdictions have echoed these findings in their own analyses. New South Wales released its Consumer Energy Strategy in September 2024. It finds:

“Households and small businesses that currently use gas for heating, hot water and cooking could be saving on average \$4,000 a year and 2,120 kilograms of greenhouse gas emissions if they switch to all-electric appliances and install solar and a battery in their house or building. Apartment residents can also access the benefits of electrification, saving on average \$2,400 and 820 kilograms of emissions a year.”⁶⁸

NSW Department of Climate Change (2024)

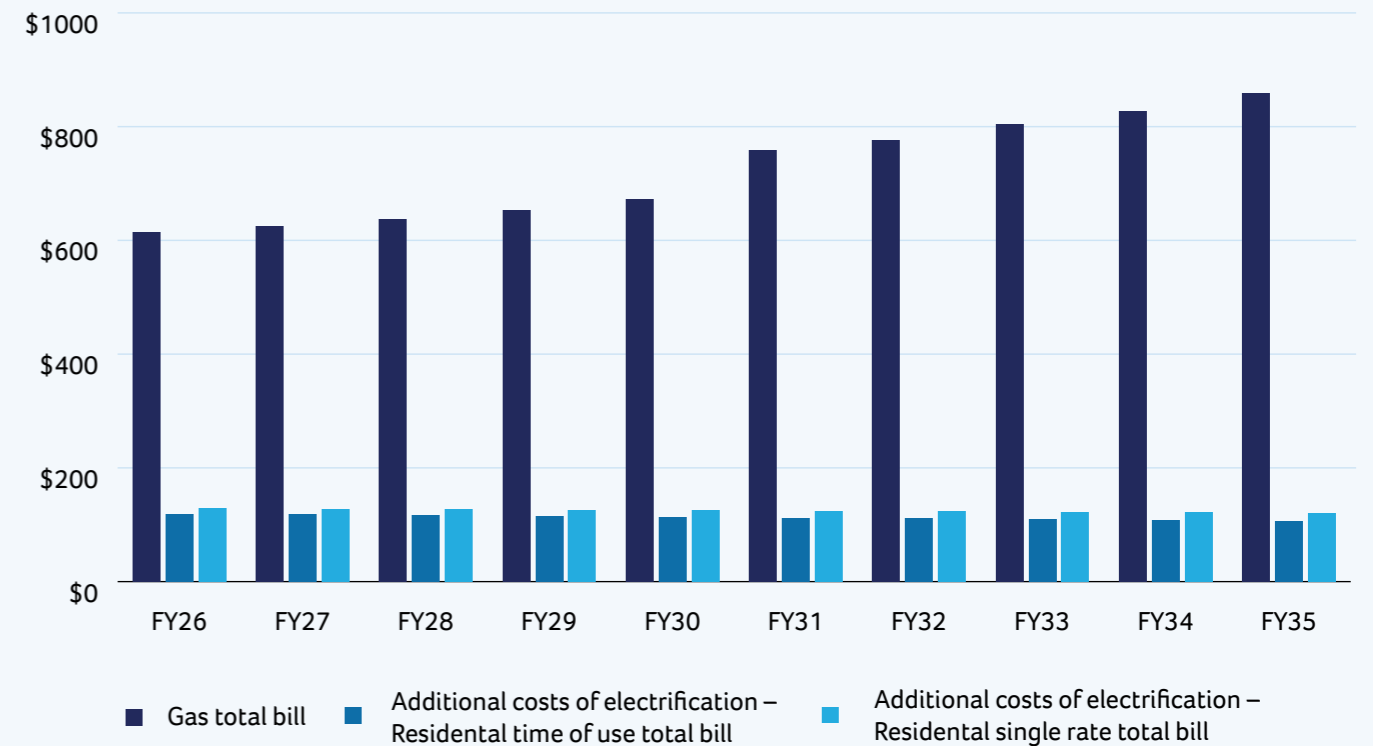
Multiple other reports identify similar savings from converting from gas to electric appliances, showing these savings are not just theoretical.⁶⁹ Evidence from more than 7,000 homes in the ACT showed that when households replaced gas heaters or hot water systems with efficient electric alternatives, overall household energy consumption fell.⁷⁰ Some households may use electric heating or cooling more once it becomes cheaper to run. Billing data from the ACT shows that these rebound effects did not outweigh efficiency gains. In any case, efficient electric appliances enable consumers to more easily keep their home at a healthy and comfortable temperature.

The benefits are especially clear for new homes. The Victorian Government outlined the total costs for running a new home on both gas and electricity compared to electricity only and found that the best decision is clearly to go all-electric.⁷¹ Their analysis showed that the upfront cost of efficient appliances for an all-electric home is comparable to the cost and installation of gas appliances in a new, dual fuel home. But an all-electric home (without rooftop solar) costs \$1,000 less annually to operate than a dual fuel home, and those savings increase to more than \$2,200 for an all-electric home with solar.⁷² Even research commissioned by the gas industry admits that “for new builds... it would be lower cost to electrify.”⁷³

Moreover, it is cheaper to build a an all-electric home from the start than to retrofit a dual-fuel home later,⁷⁴ making new buildings all-electric the most effective way to protect consumers from being locked into future costs. The financial case for building all-electric is strengthened by the recent AEMC rule change, proposed by ECA, requiring newly connecting gas consumers to pay the upfront costs of connecting to the gas network.⁷⁵

Many consumers are already responding to these signals. Our Consumer Energy Report Card shows that around one-third of homeowner households with a gas connection plan to cancel their gas supply within the next decade⁷⁶. For many households, these decisions are driven by everyday cost pressures and the search for lower running costs over time.

Figure 10 – Annual SA gas costs from electrification (\$, real 2026)



The benefits of electrification continue to increase over time

More efficient appliances are only part of the story. The underlying economics, both for individual households and the broader energy system, reinforce the case for electrification.

For everyday consumers, the financial logic will only become increasingly clear. As **Figure 10** illustrates (using the SA gas network as an example), the avoided gas costs (the savings from no longer paying a gas bill) are significantly greater than the additional electricity costs incurred after electrification. This comparison holds wholesale prices constant so that only the escalating gas network costs are factored in, meaning net saving will only grow for consumers as retail gas prices continue to rise.

These estimates do not include the upfront cost of purchasing new electric appliances. However, where gas appliances are replaced with efficient electric alternatives at the end of their useful life, the incremental capital cost is likely to be negligible. Consumers need to be made aware of these benefits and to receive help from schemes in cases where they face significant upgrade costs.

Beyond individual savings, electrification can deliver systemic network efficiencies to all electricity users. We found that if all residential gas customers were to electrify by 2035, South Australian electricity customers could save over \$150 million in the 10-year period. This is driven by improved electricity network utilisation where moving household energy demand entirely to the electricity grid spreads the fixed costs of maintaining the network across a much larger volume of consumed energy, thereby lowering the per-unit cost for everyone.

Realising these systemic savings depends on increasing electricity use without significantly increasing the cost of the network. Several recent analyses from CSIRO, the Institute for Energy Economics and Financial Analysis (IEEFA) and the Grattan Institute indicate this is achievable, particularly if we can unlock the potential of load shifting and demand response.⁷⁷

Much of the existing electricity network is underutilised, and so in many locations, there is plenty of scope for additional electricity use without triggering the need for upgrades. Determining where new demand peaks from electrification are sufficient to trigger an upgrade requires a granular, transparent understanding of activity on both gas and electricity networks. While annual planning reports and other initiatives have recently improved stakeholders' understanding of electricity network available capacity, we currently lack visibility on where and how big the new electric loads arising from customers leaving the gas network are. This is one reason ECA has sought to change the gas rules to require a regular, granular report on the state of the gas networks.

Despite these uncertainties, analysis from CSIRO and Dynamic Analysis, undertaken for ECA, utilises zone substation level data to estimate network investment requirements arising from electrification. They estimate that the savings for a typical residential customer of greater utilisation outweigh the costs of incremental capacity investment to the turn of \$90 per household in 2030, falling to \$20 in 2050 as greater electrification load requires greater investment.⁷⁸ Crucially, however, it is positive through to 2050, at which point the model assumes electrification is complete.

Efficient electrification has emissions, health and comfort benefits

All-electric, efficient homes and businesses are healthier, more resilient to extreme temperatures, and contribute to Australia's emissions reduction target.

The health risks of staying connected to gas are clear. Cooking with gas in the home has been linked to about 12.3% of the childhood asthma burden in Australia.⁷⁹ Doctors for the Environment and Asthma Australia note there are strong health arguments for not permitting indoor gas combustion, including a lack of education about the need for ventilation when a gas appliance is used.⁸⁰ The Climate Council has estimated Australia would save \$4 billion per annum in healthcare costs by combating gas-induced asthma.⁸¹

All-electric, efficient homes and businesses are healthier, more resilient to extreme temperatures, and contribute to Australia's emissions reduction target.

Electrification needs to be accompanied by continuing investment in energy efficiency upgrades as these reduce energy consumption and improve comfort and health outcomes. The overall energy performance of a building measures how well a building uses energy to heat or cool. Buildings with a high-quality thermal shell perform better. Insulation, draught proofing, windows and waterproofing prevent dampness and promote better temperature regulation. A high performing home also consumes less electricity, reducing pressure on the grid and bills.

Most of the homes Australians will live in in 2050 have already been built and Australia's housing stock does not perform well. Over 70% of Australian homes have an energy rating of three stars or lower.⁸² Renters (private and social – a third of Australian households), apartment-dwellers (14% of properties), and those on low-incomes typically live in the worst performing homes.

High performing homes protect consumers from heat-related illness and death. Heatwaves are the biggest cause of death from extreme-weather events⁸³ and are projected to significantly worsen in frequency, intensity and duration as climate change progresses.⁸⁴ Only 9% of people surveyed for the Heat in Homes Survey 2026 said their home is always or mostly comfortable.⁸⁵

Exposure to high temperatures in the home negatively impacts physical and mental health, as well as productivity.⁸⁶ Households without access to efficient electric appliances (such as air conditioners) and a high-quality building envelope (such as insulation) face heat related risk.⁸⁷ In winter, ongoing exposure to cold contributes to cardiovascular and respiratory issues.⁸⁸

An evaluation of the 2022 Victorian Healthy Homes program, which provided free energy efficiency upgrades to 1,000 low-income homes of people with a health or social care need, identified that for every \$1 in energy cost savings, more than \$10 is saved in healthcare costs.⁸⁹

Residential buildings are responsible for around a quarter of overall electricity use and more than 10% of total carbon emissions in Australia. More energy efficient homes use less energy and are therefore responsible for less emissions. The Victorian Energy Upgrades program has abated more than 90 million tonnes of greenhouse gas emissions, the equivalent of taking all the cars in Victoria off the road for five years.⁹⁰

Appliance labelling is needed to support consumer choice at point of sale

Despite these clear efficiency and operational benefits of electric appliances, consumers are often left without clear, comparable information when choosing appliances. While electric appliances are required to display energy efficiency labels that help households understand running costs under the Australia and New Zealand Equipment Energy Efficiency (E3) program, gas appliances are not covered by the scheme. Rather a separate, industry-led labelling scheme exists for gas appliances.⁹¹ This inhibits consumers from making direct comparisons between gas and electric appliances – presenting an information gap that may lock consumers into assets that are expensive to run over their lifetime. IEEFA found that 'the continued installation of gas and resistive electric appliances is locking Australian consumers into \$3.4 billion in unnecessary running costs each year.'⁹²

Consumer decisions at the point of sale are a key inflection point in the energy transition. For individual households, efficient electric appliances significantly reduce running costs, and electrification reduces their exposure to rising gas network charges as demand declines. While policy debates focus on the risk of stranded network assets, at an individual consumer level newly purchased gas appliances are also likely to become stranded assets for households as gas prices increase.

Box 4: Why hot water gas appliance star ratings can be misleading for consumers

Gas hot water systems are regulated under GEMS, including minimum energy performance standards. However, the regulations do not require water heaters to display an energy label. Instead, gas appliances show a voluntary industry-run star rating not regulated by government.

Gas appliance star ratings compare efficiencies amongst gas technologies, not whether gas is efficient or low-cost compared with electric alternatives. As a result, households and small businesses can be led to believe that a "high-star" gas appliance is a good long-term choice, even when it is likely to be more expensive to run than electric options over its lifetime.

Consumers need good information about the energy efficiency and financial risks associated with gas appliances. Appliance labelling can help bridge this information gap. ECA has called for labelling on all gas appliances to communicate the risk of the appliance becoming prohibitively expensive or stranded before the end of its economic life as the gas network winds down.⁹³ There is also an opportunity to modernise Greenhouse and Energy Minimum Standards (GEMS) to introduce labels that communicate emissions and bill information for all gas appliances and enables direct comparison to electric appliances.

Consumers need the tools to easily compare the long-term cost of choosing a gas appliance over an electric appliance. Governments should also consider whether gas appliance labelling should warn consumers of the risk that gas prices could increase due to projected reductions in gas demand.



This mismatch in labelling makes it difficult for consumers to understand long-term cost and emissions implications at the point of purchase, increasing the risk that households invest in appliances that become stranded or expensive well before the end of their technical life. Without clear, cross-fuel information, many consumers may default to another gas appliance.

Because appliance purchases are highly durable (for example, a gas ducted heater is sometimes expected to last around 20 years) that decision can lock households into two decades of higher running costs, which will accelerate as gas network charges and wholesale prices continue to rise.

Regulatory frameworks and policies need to keep up with the transition

Current regulatory frameworks are not effective at managing gas network decline

The gas transition is no longer hypothetical. Demand for residential and small-business gas is falling, yet networks continue to invest and recover costs as though growth will return. Without clear direction, the transition risks becoming disorderly and unfair, leaving households to absorb the cost of a system that is already shrinking.

As household and small business gas use falls, gas networks face a growing risk of asset stranding. This decline is also in line with government policies, such as the ACT's mandate to phase out gas by 2045.⁹⁴ Our analysis found there is a risk that the Jemena network (which serves nearly all gas consumers in NSW) alone may face \$2.1 billion in stranded assets in 2055.⁹⁵

Asset stranding can happen in two ways. Physical stranding happens when an asset is no longer used. Economic stranding happens earlier when the pipes are still there and working but there are not enough customers left to generate the revenue needed to affordably cover ongoing costs. For gas networks, whose costs are largely fixed, falling customer numbers increases asset stranding risks over time.

The regulatory framework, including the National Gas Rules, does not adequately deal with these risks. It was designed for a time when gas use was expected to be stable or growing. Long-lived infrastructure costs were spread across many customers over many decades, which was considered the most efficient way to deliver gas. The regulatory framework also incentivised networks to keep building new connections under the assumption that bringing in more customers would spread the costs wider and reduce per customer costs. Under this approach, regulated networks have been allowed to recover approved capital costs from consumers, insulating networks from revenue risk.

As electrification accelerates and gas demand declines, the regulatory framework has come under strain and exposes consumers to costs and risks. This is why we proposed four rule changes to the AEMC in 2025.

Our rule change proposals include:

- Requiring new customers to pay the upfront costs of connection to the gas network, instead of these costs being socialised among existing gas customers.
- Requiring gas networks to plan, and provide greater information on, the future of their networks.
- Making the use of accelerated depreciation contingent on broader consumer protections.
- Introducing new criteria to avoid unnecessary capital spending.

For gas networks, whose costs are largely fixed, falling customer numbers increases asset stranding risks over time.



04 Regulatory frameworks and policies



The first of these changes has already been approved by the AEMC and will avoid hundreds of millions being added to gas networks’ regulated asset bases and being recovered through existing gas consumers’ bills, as explained in **Box 5**.

The remaining three changes are being considered by the AEMC through its *Gas Networks in Transition* consultation.

Box 5: The impact of stopping the socialisation of gas connection costs

Historically, the cost of connecting new customers to the gas network has driven a substantial share of gas network capital expenditure (capex).⁹⁶ Across NSW, Victoria, the ACT, and SA, gas distribution networks have proposed or been approved to spend over \$1 billion on new gas connections in their most recent access arrangement proposals. New connections capex was proposed but later removed from the access arrangement proposals for AGN (SA) and Evoenergy due to ECA’s rule change proposal being approved before the access arrangement proposals were finalised.

Under previous rules, these investments were added to the regulated asset base (RAB), increasing the amount to be recovered from existing gas consumers even as average household gas use declines.

Recognising this risk, ECA proposed a rule change, which was approved by the AEMC in late 2025, to require gas connection costs to be paid upfront by the connecting customer. This reform avoids new connection costs being added to the RAB and being recovered through the bills of current gas consumers. This follows similar reforms introduced in early 2025 in Victoria (which has a different framework) by the Essential Services Commission.⁹⁷

While this reform stops the socialisation of costs, it does not prevent new connections from occurring, nor does it ensure consumers are informed about the long-term cost implications of connecting to gas. Policy direction from state and territory governments is therefore critical to closing this gap.

Network	Period	Gross connections capex
AGN (SA)	2026-31	\$155 million (Proposed before rule change)
Evoenergy (ACT)	2026-31	\$3 million (Proposed before rule change)
Jemena (NSW)	2025-30	\$330.9 million
AGN (VIC)	2023-28	\$166.1 million
Multinet Gas (VIC)	2023-28	\$93.7 million
AusNet (VIC)	2023-28	\$187 million
AGN (SA)	2021-26	\$114.5 million
Evoenergy (ACT)	2021-26	\$10.4 million
Total		\$1,060.6 million

Source: Access arrangements draft and final decisions, AER

Accelerated depreciation increases bills without reducing stranding risks

“...so long as demand continues to decline, no affordable amount of accelerated depreciation will achieve long-term price stability.”

*Australian Energy Regulator*⁹⁸

When network businesses face stranding risks, one of the few levers available to them under current frameworks is to seek to bring forward the recovery of past investments, reducing the losses they expect to face later. This is known as accelerated depreciation. This shortens the period over which network costs are recovered. Costs that would otherwise be spread over many decades are brought forward, increasing prices for today’s gas consumers.

The AER identified accelerated depreciation in its 2021 information paper, *Regulating gas pipelines under uncertainty*, as a tool capable of mitigating the risk of gas network assets becoming stranded as consumers leave the network.⁹⁹

The AER has framed accelerated depreciation as a shift of costs from consumers in the future to consumers today. Its 2021 paper notes that accelerated depreciation “can help maintain intergenerational equity by ensuring future customers are not subject to unreasonably high gas access prices if demand does fall substantially.”¹⁰⁰

Similarly, the AEMC has justified this mechanism by explicitly rejecting the view that accelerated depreciation transfers costs and risks to consumers, arguing that “absent any decline in demand, consumers would have paid the same capital costs in net present value terms; acceleration changes only the timing of the recovery, not the total.” The AEMC contends that because demand is falling, recovering capital earlier “ensures that capital cost recovery is better aligned with the expected use of the pipeline,” preventing a mismatch between who benefits from the asset and who is required to pay for it.¹⁰¹

But if residential and small business demand is in decline, the shift is not between generations of consumers. It is asking today’s consumers to reduce the losses that network investors face in the future. This is a future that investors could reasonably have been assumed to be aware of for the last decade or more, as the global imperative to decarbonise, the rise of high-efficiency electric appliances and the depletion of local gas reserves have long represented inherent commercial risks. While it is ultimately the regulator’s role to set returns commensurate with the commercial and regulatory risks of providing a service, completely insulating network investors from this long-standing structural reality places an undue burden on today’s households.



As shown in **Table 2**, in their most recent network revenue proposals (access arrangements) east coast gas networks have sought to bring forward a combined total of more than \$900 million in capital cost recovery from consumers, with \$448 million being approved by the AER and two decisions currently under consideration.

As part of our engagement in consultation on access arrangements, we commissioned Dynamic Analysis to assess accelerated depreciation proposals from Jemena Gas Networks (New South Wales) and AGN (South Australia) and their impact on consumers.

This analysis found that:

- for Jemena - accelerating depreciation will result in a typical NSW customer paying about \$130 more over the 2026-30 period, but this only leads to a 10% reduction in the RAB by 2055 from \$2.3 billion to \$2.1 billion
- for AGN – a typical South Australian household would pay around \$170 more over the next five years under AGN’s proposed approach, while the remaining network cost to be recovered would decrease by only about 2.8%.

The analysis also showed that by being more circumspect in their proposed expenditure instead of accelerating depreciation, Jemena could reduce their future regulatory asset base to \$1.8 billion – a larger reduction in risk than accelerated depreciation in a way that would actually reduce consumer bills today.

While accelerated depreciation was framed as a mechanism for households to buy “a form of insurance against adverse price outcomes” in the future,¹⁰² the evidence suggests it is an expensive and largely ineffective tool. To address this, ECA and the Justice and Equity Centre proposed rule changes to the AEMC to limit the use of accelerated depreciation.

This is demonstrated in **Figure 12**, which shows the increase in price for South Australian gas customers due to accelerated depreciation, and **Figure 13**, which shows accelerated depreciation only reduces the RAB by a small amount and doesn’t meaningfully reduce stranding risks.

Table 2 - Gas networks’ accelerated depreciation proposals (as of April 2026)

Network	Period	Proposed accelerated depreciation*	Approved accelerated depreciation
AGN (Vic)	2023-28	\$175 million	\$175 million
Multinet Gas (Vic)	2023-28	\$86 million	\$53 million
AusNet (Vic)	2023-28	\$200 million	\$105 million
Jemena (NSW)	2025-30	\$300 million	\$115 million
AGN (SA)	2026-31	\$70 million	TBC
Evoenergy (ACT)	2026-31	\$105 million	TBC
Total		\$936 million	\$448 million (two decisions pending)

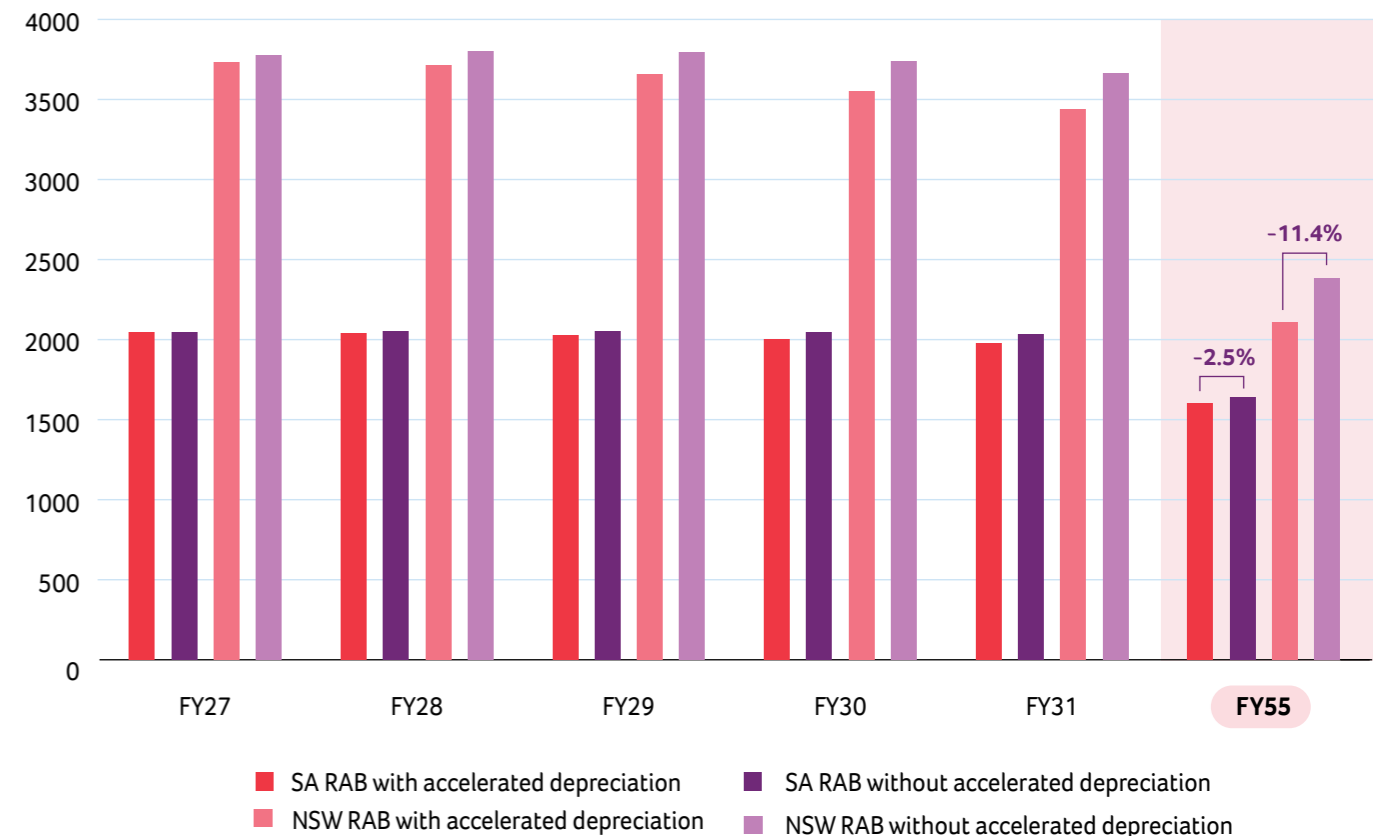
Source: AER, gas networks’ access arrangements¹⁰³

*This figure represents the highest amount proposed by the network at any stage of an access arrangement proposal.

Figure 12 - Price paid by a typical AGN (SA) customer with and without accelerated depreciation (\$, real 2026)



Figure 13 - Value of AGN (SA) and Jemena’s (NSW) RAB – with and without proposed accelerated depreciation (\$m)



Source: Dynamic Analysis modelling figures from AGN (SA) and Jemena (NSW) proposed access arrangements

These findings point to a deeper issue. The continued reliance on accelerated depreciation reflects the absence of an open, system-wide discussion about the future of gas distribution networks as household demand declines. Bringing forward cost recovery implicitly recognises that the economic life of the network may be shorter than the assumed regulatory asset lives. Yet it does so without providing a credible framework for how the contraction of the gas network should be managed in the interests of consumers.

There is an urgent need for state and territory governments to plan for the future of the gas network.

Many of the risks outlined in this report are already well understood by energy market bodies. Regulators see the same trends in declining gas use, rising network costs and growing uncertainty about the future of gas networks. However, these market bodies are increasingly highlighting the limits of what they can address within their roles.

Economic regulation is designed to assess whether individual proposals are efficient and consistent with the rules in place at the time. It is not designed to decide broader policy questions about the long-term role of gas, the pace of decline or how the cost of transition should be shared between consumers, network businesses and governments. As gas use falls, these questions become more prominent and more consequential for consumers.

The AER has been explicit about these limits. In its recent draft decision on the Evoenergy gas access arrangement, the AER noted:

“ We continue to encourage an open discussion between consumers, network businesses and governments regarding who should pay for the costs of stranded assets associated with past and future capital investments, and when and how these costs are shared. ”

AER, *Evoenergy access arrangement (2026)*¹⁰⁴

Clare Savage, Chair of the AER, has noted that government needs “to set clear policy direction on the future use of gas in order to facilitate a safe, reliable and affordable transition.”¹⁰⁵ The AEMC has stated recently that government must support, “gas consumers and service providers through the energy transition, including through clearer jurisdictional policy signals, addressing service obligations, supporting consumers and planning for potential network decommissioning.”¹⁰⁶

The AEMC has also recently highlighted the role for government to support consumers through the energy transition, saying:

“ ...the NGR economic regulatory framework cannot fully resolve the impacts to gas consumers and service providers... There will therefore be a role for governments in helping to support an orderly transition. This could, for example, include governments providing more clarity around the future of gas and gas distribution networks in their respective jurisdictions. ”

AEMC, *Gas Networks in Transition, Directions paper (2026)*¹⁰⁷

Some industry groups have also argued that decisions that will impact the value of gas networks should not be made by the AEMC itself through the National Gas Rules – though making rules is the AEMC’s fundamental role – but instead these decisions should be left to government.¹⁰⁸

At present, the future of the gas network is being shaped indirectly through regulatory processes that were never designed to manage structural decline. Access arrangements, depreciation schedules and pricing decisions are being made in isolation, one regulatory period at a time, without a clear end-state in mind. This leaves regulators in the difficult position of managing short-term risk while the underlying problem remains unresolved.

Regulators are in a difficult position, as they must navigate the future of the gas network in the absence of a broader policy response to the challenge of declining gas network use. Accelerated depreciation is, at best, an incomplete regulatory response to the challenge. When applied without broader reforms to ease the transition to electrification, it becomes flawed and unfair.

Existing regulatory frameworks – which provide networks a “reasonable opportunity” to recover costs from consumers – may lead some to incorrectly assume that consumers are the only entity who should pay for the fixed and future costs of gas networks. But this should not be the case – as the gas network declines the costs need to be shared fairly between consumers, network investors, and taxpayers. Decisions about cost sharing and the ‘endgame’ of household gas networks are broader policy questions for government, not matters that should be limited by the constraints of existing regulatory frameworks that were not developed to manage a declining network.

As gas use continues to fall, the current approach increases the likelihood of sharp price increases, uneven outcomes, and a disorderly exit of the gas network for remaining consumers. Managing that risk requires more than regulatory adjustments. It requires governments to step in, set direction, and decide how the costs of transition should be shared in the long-term interest of consumers.



Clear jurisdictional gas policies are needed to provide clarity and confidence for consumers

While some jurisdictions have led the way in planning for the future of gas for households and small businesses, others have yet to articulate a clear direction. This leaves consumers without clear information to make long-term decisions about their energy needs. Even where the overall policy direction is clear, there are gaps in what this means for how consumers will be supported to make the transition and how the costs of the gas network will be managed. In the absence of clear direction, consumers will remain the default funders of the energy transition.

Inconsistent jurisdictional policies highlight a growing gap between governments’ long-term climate commitments and the practical decisions facing households and small businesses today. While most jurisdictions signal an eventual move away from fossil gas, few have articulated how consumers are expected to transition, when that transition will occur, or how the costs of doing so will be shared.

Inconsistent jurisdictional policies highlight a growing gap between governments’ long-term climate commitments and the practical decisions facing households and small businesses today.

Some jurisdictions have begun to close this gap.

For instance, in August 2022 the ACT committed to phasing out fossil gas by 2045,¹⁰⁹ and has begun planning for the decommissioning of its gas network.¹¹⁰ In 2023, the ACT was the first Australian jurisdiction to stop most new buildings from connecting to the gas network and has outlined a clear plan to decarbonise the territory through electrification, and in June 2024, the ACT also released its Integrated Energy Plan. The Plan sets out how the territory will electrify, including through upgrading social and community housing and support for households who face barriers.¹¹¹ While there are some exceptions for commercial areas, this ban applies to all residential buildings.

In July 2022, the Victorian Government released its Gas Substitution Roadmap and became the first jurisdiction to set out a plan to move away from fossil gas. Over subsequent years, Victoria has updated the Roadmap (in 2023, 2024 and 2025). The revisions consistently signalled that electrification is the long-term pathway for households.¹¹² From January 2024, all new homes requiring a planning permit must be all-electric, effectively

preventing new residential connections to the gas network in most circumstances. Building on from a 2024 Regulatory Impact Statement that demonstrated the significant net benefits of transitioning existing buildings, the Victorian Government introduced further developments. Taking effect from January 2027, new residential homes and most new commercial buildings cannot be connected to the gas network, and from March 2027, installation of new gas water heaters will be prohibited in most homes, and new gas space heaters will be banned in most rental properties.¹¹³

Elsewhere, progress has been slower.

In New South Wales, policy direction has been limited, but the NSW Government has more recently committed to setting a 2035 electrification target and a Decarbonisation Roadmap in 2026.¹¹⁴ The NSW Government does not have a policy on requiring new builds to be all-electric, but as of January 2026, nine NSW councils have implemented some form of restriction on gas in new buildings. This council-led approach reflects community-level concern about costs and health impacts but also highlights the tension between different levels of government in the absence of a clearer state-wide policy direction.

The NSW Government has described local government restrictions on new gas connections as an “overstep” framing the issue as one of choice rather than long-term consumer risk.¹¹⁵

While South Australia has been a leading jurisdiction in the transition to renewable energy, South Australian government policy does not discourage gas connection for households or small businesses.¹¹⁶ While there is policy support for electrification and low emissions fuels and appliances in new and existing buildings, there is no requirement for new builds to be all-electric and no plans to phase out residential and small business use of the gas network. The South Australian gas network operator has shifted its position to emphasise “considerable uncertainty” regarding its future role.¹¹⁷

The result is a growing gap between governments’ long-term climate commitments and the day-to-day decisions facing households and small businesses.



The result is a growing gap between governments’ long-term climate commitments and the day-to-day decisions facing households and small businesses. Consumers continue to connect to gas networks or buy new gas appliances without clear information about how long those networks are expected to operate or how future costs will be shared. Meanwhile, the financial risks associated with declining gas use are being managed through regulatory mechanisms, such as accelerated depreciation and higher network charges, rather than through coordinated policy frameworks.

From a consumer perspective, however, leaving the transition unmanaged does not preserve choice. It narrows it. Furthermore, for many households, including renters, using gas appliances was never a choice in the first place. When governments avoid setting clear direction, households continue to make long-term decisions, such as replacing gas appliances or connecting to gas networks, without understanding the long-term cost

implications or even the likelihood of their gas network being decommissioned. As more consumers who can afford to electrify do so, fixed network costs are spread across a shrinking customer base. Prices rise, making gas increasingly unaffordable for those who remain.

Without clearer direction from governments, the transition away from household gas risks becoming fragmented, inequitable, and more expensive than necessary. Planning for the future of the gas network is not just a technical or regulatory issue. It is a policy choice about how costs are allocated, how consumers are protected, and how the transition is managed in a way that is orderly and fair.

Without clearer direction from governments, the transition away from household gas risks becoming fragmented, inequitable, and more expensive than necessary.

Consumers need support disconnecting from the gas network

When a household or business leaves the gas network, the gas connection can either be safely abolished – this includes removing the meter, cutting and capping the service line, and ensuring the dedicated pipeline poses no safety risk – or disconnected, which is the closing of a connection at a premise (often by capping at the meter).¹¹⁸

Table 3 shows that simple disconnection is relatively cheap and can be done for low to no cost if consumers only cancel their gas retail contract, while abolishment costs are higher.

To stop high costs acting as a barrier, regulators like the AER have tried socialising the costs of abolishment.

In Victoria for example, the existing consumer pays no more than \$220, and the remaining is recovered through the network tariffs pay by all other gas customers.¹¹⁹ While this removes the barrier for the consumer that is electrifying, it creates a structural inequity where the consumer who cannot afford to leave the network are actively subsidising the abolishment costs of those who have the capital to electrify. Rule changes proposed by the AEMC in response to a rule change request from the Justice and Equity Centre would require consumers to pay a cost reflective abolishment charge.¹²⁰

Table 3 - Overview of disconnection and abolishment charges and costs

Service fee	Evoenergy (ACT)	Multinet (VIC)	AGN (VIC)	Ausnet (VIC)	Jemena (NSW)	AGN (SA)	ATCO (WA)
Applicable regulatory period	Proposed 2026-31	2023-28	2023-28	2023-28	2025-30	Proposed 2026-31	2025-2029
Disconnection (temporary disconnection)	\$170 – \$270	\$58	\$81	\$65	\$145	\$85	\$73-\$78
Abolishment (permanent disconnection)	\$747- \$1,139		\$220 - \$251		\$1,100- \$1,500**	\$1,250	\$1,029- \$1,108

Sources: Multiple AER decisions on gas network access arrangements and ERA decision on ATCO¹²¹

Government support through direct subsidies for abolishment costs will be needed to ensure this upfront cost does not act as a barrier to household and small business electrification. The permanent and safe removal of gas assets is a system-level transition challenge, not an individual consumer responsibility, and state governments have a key role in providing this support. Funding this process directly would also provide state governments with a strong economic motivation to move away from ad-hoc individual abolishment, and instead better plan when and how consumers disconnect from parts of the gas network through more cost-effective, strategic decommissioning.

Strategic decommissioning can deliver savings and better outcomes

To meet legislated net zero targets, strategic decommissioning will eventually be necessary across the entire system, regardless of whether specific network segments remain safe or economic to operate. Without a coordinated approach to safely retiring these assets, governments risk being left with a highly inefficient and expensive, patchwork gas network by 2050.

Forthcoming research by the Brotherhood of St. Laurence, funded by an ECA grant, demonstrates that strategic decommissioning (also known as ‘pruning’) can be highly cost-effective and that avoiding business-as-usual (BAU) pipeline replacements and electrifying whole precincts can deliver millions of dollars in net economic benefits.¹²² Modelling for the report examined a hypothetical pruning of an area in Melbourne slated for gas upgrades in the next few years, and found the pruning scenario delivers \$2.48 to \$3.37 million (up to \$4,200 per household) compared to two modelled BAU scenarios.

Crucially, BSL’s social research highlights that pruning must be treated as an equity measure, not just a technical one. To ensure a fair transition, the capital saved from avoided gas infrastructure spending should be redirected to fully fund the electrification of low-income and renting households in the targeted areas, overcoming the upfront capital barriers that currently stall the transition.

Australia can also look to international examples to operationalise this concept. For instance, Dr Glen Currie’s research through ECA’s Gill Owen Scholarship shows how Australia can learn from recent legislation supporting California’s energy transition.¹²³

- Non-Pipeline Alternatives (NPAs): Californian legislation explicitly enables utilities to shut down aging pipelines and replace them with electrified systems if doing so is cheaper than replacing the gas

pipe, effectively creating a prudency test that protects ratepayers from funding stranded assets.

- The Mapping Mandate: The legislation requires utilities to submit detailed annual maps showing where gas infrastructure is planned for replacement, overlaying this with census data to identify prime opportunities for electrification.
- Addressing the “Holdout” Problem: A single household holding could force millions of dollars of gas spending to go ahead. California is piloting a lowered threshold, allowing targeted electrification to proceed with 66% community agreement rather than requiring unanimous 100% opt-in.

The risks of unplanned withdrawal of gas supply are increasing, highlighting the need for clear decommissioning plans. In Western Australia, the gas network in Esperance has already been withdrawn,¹²⁴ and in Albany the distributor has announced plans to decommission the network after determining it is no longer economically viable.¹²⁵ More recently in Victoria, Solstice Energy is closing its compressed gas network in 10 regional towns.¹²⁶ In each case, the trigger for action was not a government-led transition plan, but a commercial decision by the distributor. When this happens without advance public planning, consumers are left facing uncertainty about timelines, costs, and their options for replacement energy services.

Governments and regulators must shift from passive network management to actively working with gas networks to identify opportunities for strategic decommissioning. Government and networks could identify areas slated for replacement investment and instead consider those funds to electrify the homes in that precinct, allowing that branch of the gas network to be safely retired.

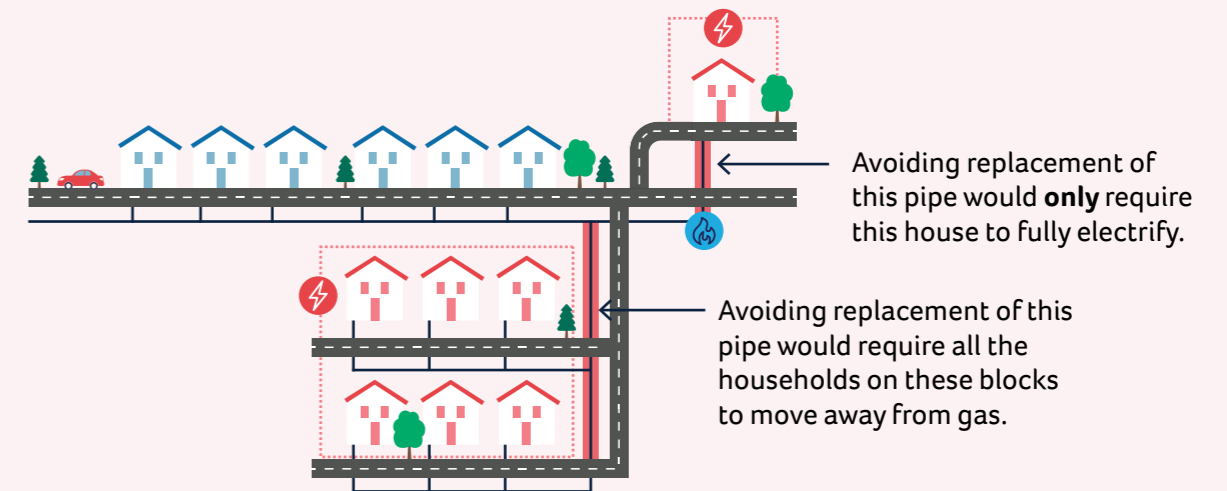
The AEMC has highlighted the clear role for government, noting:

“...decommissioning a gas network is a multi-faceted project with several distinct phases and a range of inter-related activities that need to be supported by national and jurisdictional action.”

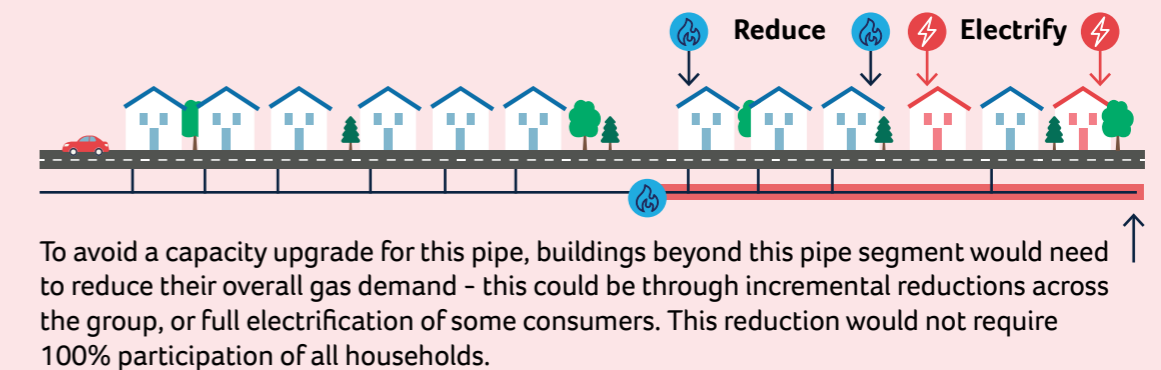
AEMC, *Gas Networks in Transition, Directions paper (2026)*¹²⁷

Examples of Non-Pipeline Alternative Projects (NPAs)

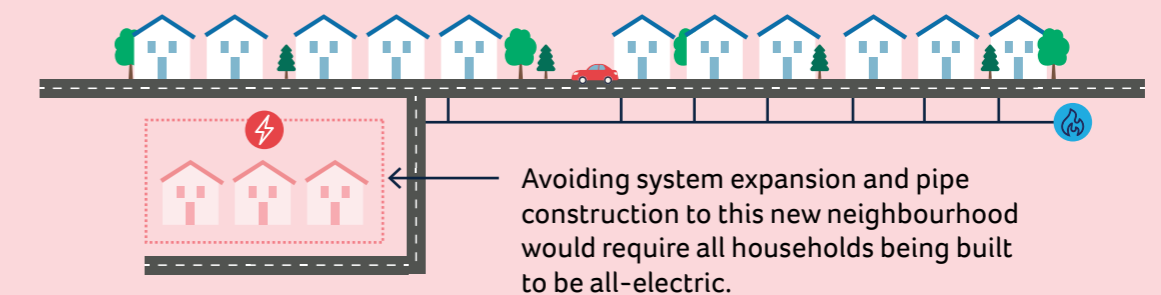
Avoided replacement



Avoided capacity expansion



Avoided system extension



Source: Brotherhood of St Laurence (2026)

Gas networks and regulators have also commented that jurisdictional governments should be responsible for determining if and when decommissioning is required.¹²⁸

The AEMC has also said that clear regulatory guidance on decommissioning would support an orderly transition and that there is currently a gap in the regulatory framework.¹²⁹ For instance, the current NGL currently restricts service providers to recovering costs only for services provided by “means of a pipeline”.¹³⁰ This prevents networks from funding and offering non-pipeline alternatives, such as electrification, even when it is the true lowest-cost option for consumers.

Jurisdictional gas connection and ‘obligation to supply’ arrangements would also need to be considered. As gas use declines, there may be circumstances where continuing to serve one or two remaining customers is no longer efficient or fair to others. This raises the question of whether, and under what conditions, the obligation to supply gas should be varied or removed. Any change to that obligation must be made within a clear framework that ensures affected consumers have access to safe, affordable alternatives and are adequately supported through the transition.

Despite this, few jurisdictions are publicly planning for decommissioning parts of the gas network. The ACT Government has provided perhaps the clearest signal, stating in its Integrated Energy Plan that by 2030–2035 a pathway for decommissioning the gas network will become clear and by 2035–2040 sections of the gas network will be safely decommissioned. The Plan includes an action to ‘Develop policy and regulatory frameworks to support safe, efficient and equitable decommissioning of the gas network’.¹³¹ The challenge of developing and implementing these frameworks, however, highlights the complications of gas networks that operate across state and territory lines, such as Evoenergy. A network’s overall decommissioning strategy can be affected by differing technical and safety standards on either side of the border. Furthermore, without a unified approach, the availability of government support to help consumers move off gas risks becoming dependent on which side of the border the customer lives on, rather than the timeline of the network closure.

Some other jurisdictions hint at decommissioning without setting out a timeline. In Victoria, the Gas Substitution Roadmap states that reforms to require gas distribution businesses to publish detailed, local consumption data, “will improve our understanding of how fossil gas consumption is evolving and support evidence-based decisions about the future of gas networks”.¹³²

Electrification policies and targets are needed to send a clear signal about what the transition means for households.

Consumers need a clear signal about the future of their household energy use. Electrification is one of the most tangible examples of how the transition will impact, and benefit, consumers. However, ECA’s Consumer Energy Report Card data shows that only 21% of households understand what the transition will mean for them.¹³³

It is better for this signal to come sooner rather than later to give consumers time to plan for upgrades and replace appliances at point of failure. Without this signal, consumers may buy gas appliances today that will cost them dearly or be forced to replace before the end of their economic life. Importantly, the need for electrification should be clearly understood by tradespeople, strata committees and property managers, as they are often engaging with decisions about appliances at point of failure.

Australia has an opportunity to be world-leading in its approach to electrification. So far, few governments overseas are setting clear timelines for electrification. The Netherlands has committed to disconnecting all households from the gas network by 2050. Australia’s role as President of Negotiations in COP31 provides an opportunity to show international leadership on electrification and send a clear signal to the market and consumers about what the transition means for households.

Governments across Australia have raised their level of ambition on electrification in recent years. The Australian Government’s Electricity and Energy Sector Plan sets out the economy-wide plan to reduce emissions. It notes the benefits and high-level barriers for households of electrification. The Trajectory for Low Energy Buildings, agreed by federal, state and territory governments, sets out a coordinated work program to improve the efficiency of our housing stock. The policies and measures proposed in the trajectory are examples of what is needed to support electrification.

However, these policy documents do not detail a clear plan for how and when households will electrify, make policy or funding commitments, or set targets or dates to achieve them.

The ACT is the only jurisdiction in Australia to have committed to all-electric homes and businesses. The ACT plans to phase out fossil gas by 2045. Victoria’s Gas Substitution Roadmap bans gas connection for new builds from 2027 but does not set a target or end date for gas use in the home. NSW has committed to setting 2035 and 2050 electrification and energy performance targets in its Consumer Energy Strategy.

The financial support available to electrify varies depending on where you live. Nationally, consumers can access subsidies for solar, batteries, solar water heaters, and heat pump water heaters through the Small-Scale Renewable Energy Scheme (SRES) and low-interest loans supported by the Household Energy Upgrades Fund (HEUF). Several jurisdictions, such as the ACT, Victoria and NSW, have multiple grant and low or no-interest loan schemes to support consumers to electrify. Grant schemes for apartments and renters tend to focus only on solar and batteries, rather than comprehensive support for all the energy upgrades required to electrify.

NSW, Victoria, South Australia and the ACT have ‘white certificate schemes’, market-based instruments that incentivise investment in energy efficiency and lower the upfront costs of efficient electric appliances.

The South Australian white certificate scheme – Retailer Energy Productivity Scheme (REPS) – provides subsidies to install gas appliances.¹³⁴ NSW no longer provides subsidies of gas hot water or space heating from July 2026.¹³⁵ Subsidising gas appliances is counterproductive to Australia’s emissions commitments and exposes consumers to the ongoing risk of increased gas prices as demand declines.

Financial support and subsidies are fragmented and difficult to navigate. Consumers may not know they are eligible for financial support or low-interest loans through the HEUF. Consumers need to navigate multiple federal, state and council subsidies at their point of purchase. Electrification funding, such as through SRES, was designed to be managed by industry and passed on to consumers. This underscores the importance of equipping industry with the knowledge to be champions of electrification.





Recommendation 1

Establish national targets and a clear direction on household and small business electrification

The Australian Government should:

- Set ambitious electrification targets that aim to ensure electrification of all new households and small commercial buildings by 2028, all existing social and community housing by 2035, all rental homes by 2040 and all homes by 2050, if not sooner.
- Develop a National Electrification Roadmap that sets out a plan for achieving targets collaboratively across all jurisdictions.

State and territory governments should:

- Develop or align jurisdiction-based targets and plans to ensure they are at least as ambitious as those set out in the National Electrification Roadmap.

The Australian Government and state and territory governments should regularly report against the targets and plan publicly. The Energy and Climate Change Ministerial Council should coordinate nation-wide action to meet these targets.

Australia needs a coordinated, staged plan for electrification. This will provide household and small business consumers with clarity and confidence to electrify. Consumers are more likely to act when they understand where the system is heading and what the transition means for them.

Australia must send an unambiguous message that transitioning off gas to efficient electric appliances in homes is essential. Clear policies and roadmaps give consumers and industry the certainty they need to plan. At present, signals are mixed. While around half of households believe reducing gas use is quite or extremely important to meeting emissions targets, one in five believe it is not important at all.¹³⁶ Only a third of homeowner households plan on cancelling their gas supply in the next ten years¹³⁷ and we continue to see the number of customers connected to gas networks grow in all jurisdictions except the ACT and Queensland.¹³⁸

Box 6: Canberrans feel more confident about Australia's energy transition

Consumers are more likely to feel positive about the transition, and understand their role in it, when they feel there is a plan for it. Analysis of our Consumer Energy Report Card finds that consumers who feel confident that Australia has a well-planned approach to manage the transition to clean energy are more likely to be considering disconnecting their gas supply.

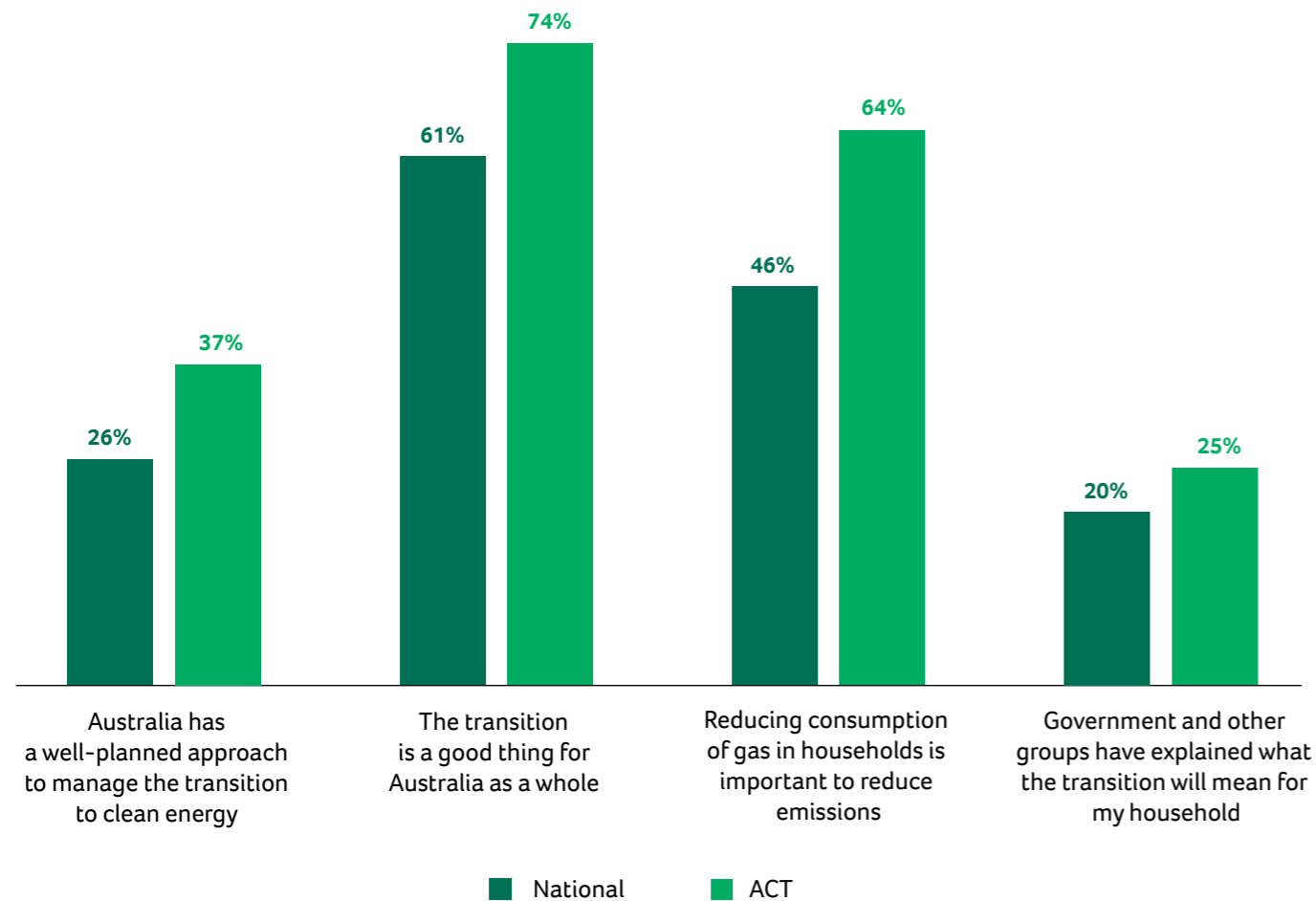
We are seeing this play out in the ACT where the ACT Government has clearly communicated their plan for ending residential gas use. Two thirds of ACT homeowners with gas are planning on disconnecting their gas supply in the next ten years, almost twice as high as the national average.

Furthermore, ACT households are significantly more likely to prefer electric appliances over a gas alternative. **Figure 14** also shows the ACT is the jurisdiction most likely to say they feel confident Australia has a well-planned approach to manage the transition and recognise the need to reduce gas to reduce emissions.

05 Recommendations



Figure 14 – Percent of households who agree with the below statements



Source: ECA, Consumer Energy Report Card Data, December 2024.

The Australian Government plays a critical role in setting a coherent national narrative and ensuring jurisdictions are aligned on the direction of travel. The Australian Government should develop and publish a clear household and small business electrification roadmap that defines electrification as the least-cost pathway for consumers, while reserving renewable gases for industrial uses where alternatives are limited.

An interjurisdictional partnership is required between federal, state and territory governments to coordinate the action required between different levels of government and policy portfolios.

The partnership builds on the National Retrofit Partnership proposed by the Energy Efficiency Council to plan, promote and support nationwide residential retrofitting of Australian homes.¹³⁹

To achieve an energy transition that benefits the entire community, Australia should set ambitious electrification targets ahead of COP31 for all households. Targets should be at least as ambitious as the ISP, linked to emissions reduction milestones and staged to show progress from now to 2050. To determine the targets, the Australian Government should choose dates that are ambitious yet achievable, rather than taking specific modelling from the ISP. This could look like electrification of all new builds by 2028, all existing social and community housing by 2035, all rental homes by 2040 and all homes by 2050.

Recommendation 2

Support consumer decision making on electrification

The Australian Government and state and territory governments should take action to signal electrification to consumers at key decision points:

- Mandate that landlords install efficient electric appliances when a gas appliance fails in rentals.
- Introduce clear labelling of the bill and emissions impacts of gas appliances at point of sale.
- Remove or prohibit rebates, incentives or subsidies to purchase new gas appliances where they are eligible under state-based schemes or offered by gas networks.
- Mandate disclosure of energy performance ratings of properties at point of lease and sale.
- Reform strata legislation to support electrification in multi-unit dwellings.
- Support tradespeople (electricians, plumbers) and strata and property managers to be champions of electrification.

There is no ‘silver bullet’ for electrification: it will require a comprehensive set of policies and making it unequivocally clear to consumers that the future is all-electric. These nudges can together help consumers understand how the transition will unfold in practice. These signals matter most at key decision points for households and small businesses, such as appliance replacement, renovations, new builds and lease changes. Other policies are about reducing existing friction and making it easier for consumers to choose electrification.

Renters remain heavily exposed due to limited control over their premise. Small businesses face similar challenges, particularly where premises are leased, capital is constrained, or sector-specific advice is lacking.¹⁴⁰ The structural nature of this issue means subsidies and information for landlords alone are not likely to drive electrification for rental properties. It is essential that as gas appliances come to the end of their lives in rental units, landlords replace them with efficient electric alternatives. Otherwise, renters will be stuck using expensive gas that they did not choose, and landlords themselves might be required to replace gas appliances before they naturally

reach end of life. The other key decision-maker for a rental is the property manager. Minimum standards to require upgrades should be combined with training for property managers to understand and plan for electrification decisions. There is an opportunity for property managers to be champions of electrification for in Australia’s investment properties.

State and territory governments should amend strata legislation to support electrification decision-making in multi-unit dwellings. Strata governance models, including by-laws, voting thresholds, annual meetings and special resolutions, create inertia and perceived and actual barriers to electrification. Reforms include lowering voting thresholds and banning special resolution fees for energy upgrades; and requiring owners’ committees to consider energy upgrades at regular intervals. To support this, strata managers need training and resources to support electrification.

Mandatory disclosure of energy performance ratings of properties at point of lease and sale provides consumers with transparency about the performance of, and drives improvements to, housing stock. Disclosure of home energy ratings also helps investors understand the effort required to retrofit a property to meet minimum standards.

To support decision-making around gas appliances, governments should introduce mandatory, standardised appliance labelling that allow the consumer to make a direct comparison between choosing an electric or a gas appliance. Appliance labelling should communicate emissions impact and lifetime energy costs the lifetime of the gas appliance. This reform should be considered in first instance through the modernisation of GEMS.

Governments should also consider introducing a warning on gas appliances that consumers are purchasing an appliance that is likely to become stranded as gas networks decline.

Simultaneously, governments should remove any incentives for gas appliances to avoid sending conflicting signals to consumers. Governments should ensure that energy upgrade schemes do not continue to subsidise gas appliances. All jurisdictions should consider a ban similar to that introduced in Victoria which prevents gas networks from providing rebates or incentives to purchase new gas appliances.¹⁴¹



Recommendation 3

Lower the cost of electrification



The Australian Government and state and territory governments should implement policies and review existing programs to ensure all Australians are supported with the upfront costs of electrification and energy efficiency upgrades, including to:

- Provide grants and direct finance options for low-income households or illiquid homeowners.
- Expand the Social Housing Energy Performance Initiative (SHEPI) to retrofit all social and community housing to be fully electric and high performing.
- Provide rebates on efficient, electric appliances.
- Provide targeted support for small business electrification.

Electrification is the least-cost pathway for most households and small businesses over time, but not everyone is equally able to act on that option.

Without targeted support, consumers with the least agency risk paying the most to remain connected to a shrinking gas network.¹⁴²

Governments have begun to address parts of this challenge. Programs such as the national Social Housing Energy Performance Initiative,¹⁴³ the Household Energy Upgrade Fund,¹⁴⁴ Cheaper Home Batteries Program¹⁴⁵ and small business grants and loans are helping to reduce upfront costs for some consumers. However, coverage is uneven.

Through direct finance and incentives, the Australian Government can ensure all Australians are supported to overcome the upfront cost barriers to electrification. Specifically, the Government should support:

- An expansion of SHEPI to retrofit all social and community housing to be fully electric and high performing.
- Rebates on efficient, electric appliances to reduce the upfront cost and help consumers choose the best appliances for themselves and the broader community.
- Direct finance for low-income or illiquid homeowners, such as through an expansion of the Household Energy Upgrades Fund (HEUF) to provide government-backed loans.
- Incentives to support landlords to electrify and improve the energy efficiency of their properties, such as tying negative gearing or capital gains tax discounts to all-electric properties with a high energy performance rating.
- Targeted, sector-specific support for small businesses facing high transition costs, such as instant asset write offs for electric equipment and low-interest loans.

Governments should focus support where barriers are highest and risks are greatest. More general programs, such as energy efficiency loans or rebates, often rely on consumers having sufficient capital, credit, or decision-making power, which limits their effectiveness for renters, apartment-dwellers and small businesses. Coordinated, place-based approaches can also reduce costs and disruption by upgrading multiple premises together rather than relying on individual action.

State, territory and local Government electrification programs should continue or expand to complement any national initiatives. Further work should be done to explore an expansion of the SRES to more electrification technologies beyond just heat pump hot water systems, and an extension beyond 2030, after assessing the impact of bill or budget funding on different cohorts of consumers.

Recommendation 4



Plan for an orderly and fair transition off the gas network

State and territory governments must actively plan for the transition by:

- Ensuring all new household and small commercial buildings are all-electric.
- Signalling a clear end date for gas for households and small businesses.
- Providing support to reduce the cost consumers face when disconnecting from the gas network.

The Australian Government should work with state and territory governments to develop plans for the future of gas and align them with net zero targets and a National Electrification Roadmap.

The absence of clear direction on the future role of gas for households and small businesses, compared with industrial users, is creating uncertainty that affects every part of the energy system.

Most jurisdictions have not set out whether residential and small-business gas use should continue or phase down, leaving regulators, networks and consumers without a shared basis for planning.

Consumers also need a clear signal about the future of their household energy use. It is better for this signal to come sooner rather than later to give consumers time to plan for upgrades and replace appliances at point of failure. Aligned with a National Electrification Roadmap, state and territory governments should clearly signal an end date for household and small business gas use and actively support consumers through this transition.

Clear jurisdictional policy is critical to give consumers confidence and to enable coordinated decisions by governments, regulators and industry. When jurisdictions provide a clear policy framework, it also sends a signal to the Australian Government about where national action is needed. With greater clarity, governments can target support where it is most needed, gas networks and regulators can plan more effectively, and consumers can make informed decisions about their future energy use.

The most effective way to protect households and small businesses from an expensive and inequitable energy transition is to prevent them from being locked into the gas network in the first place. Decisions made at the point of construction or appliance replacement can shape energy costs for decades. Once a building is connected to gas, or a gas appliance is installed, consumers face ongoing fixed charges, exposure to rising network costs, and the eventual cost of electrifying later under pressure. Other jurisdictions should therefore follow the lead of the ACT and Victoria (and some NSW Councils) and ensure new homes are all-electric.

Governments should also provide direct subsidies to support consumers to disconnect from the gas network, particularly if cost reflective abolishment charges become a barrier to consumers making the transition.

While many of the policy levers for this recommendation sit with state and territory governments, there is an important role for the Australian Government in leading a nationally consistent approach consistent with federal net zero targets and the National Electrification Partnership and Roadmap we have proposed. A nationally consistent approach to transition away from fossil fuel gas and provide households and small businesses with reassurance and a clear direction.

Recommendation 5



Plan for how the costs of the transition from gas will be funded

State and territory governments must actively plan for how gas network costs will be shared fairly between consumers, networks and their investors, and taxpayers through the transition. The current approach assumes consumers will continue to fully fund the costs and risks of the transition off gas by default.

The Australian Government should engage with state and territory governments to plan for these costs and consider initiating an independent inquiry (for example by the Productivity Commission or another appropriate body) to ensure these issues can be considered holistically at a national level.

Australia's gas distribution networks are valued at \$11.8 billion.¹⁴⁶ As gas demand declines, that value will not be recovered in full through future use. The key question that impacts consumers is no longer whether gas assets will become stranded, but who pays the costs of managing their decline safely and fairly.

Some of the regulatory foundations for this transition are now being considered by the AEMC, including through its Gas Networks in Transition review and the framework for retail customer-initiated gas abolishment. These reforms focus on economic regulation and cost recovery and are necessary to improve efficiency and transparency.

Increasingly it is clear that market bodies cannot resolve these questions alone: governments have a clear role.

The AER says it, “continue[s] to encourage an open discussion between consumers, network businesses and governments regarding who should pay for the costs of stranded assets”.¹⁴⁷ Similarly, the AEMC has been explicit that there are limits to what can be achieved through the national energy framework alone.¹⁴⁸ The AEMC's remit does not extend to broader policy, funding or safety decisions, which sit with jurisdictional governments and safety regulators.¹⁴⁹ As a result, even well-designed rule changes cannot resolve the distributional impacts of gas network decline. Without government intervention, fixed network costs are increasingly borne by a shrinking group of remaining consumers, raising equity and sustainability concerns.

We agree with the Grattan Institute that, “[t]he answer is probably some sort of grand bargain where the costs of the transition are shared among consumers, businesses, and taxpayers. But that won't emerge organically or by muddling through.”¹⁵⁰ Governments must play a role in brokering a fair settlement that balances consumer protection, investor responsibility, and system safety.

Governments should therefore establish a clear funding approach for gas network decline, including the end-of-life costs that will arise as networks contract and are retired. This should cover both customer-facing exit costs, such as abolishment and disconnection works needed to make a property safe, and system costs, such as making redundant infrastructure safe and managing decommissioning over time. These costs are unavoidable. What is still avoidable is leaving them to be dealt with late, inconsistently, and in ways that concentrate costs on the consumers least able to adapt.

While state and territory governments hold primary responsibility for the gas networks within their jurisdictions, the Australian Government should also play a key role by setting out a nationally consistent approach to addressing these issues. For example, the Productivity Commission or another suitable body could be tasked with initiating an independent inquiry to review the most effective and fair way for these costs to be shared.

Recommendation 6



Explore strategic decommissioning of the gas network

State and territory governments should begin actively exploring and taking a lead role with networks in planning strategic decommissioning of sections of the gas network. This approach can reduce costs and risks for consumers and network investors alike.

State and territory governments and ECOM should also lead legislative amendments to remove existing barriers to strategic decommissioning.

The Australian Government should work with state and territory governments to explore options for decommissioning and align decommissioning plans with net zero targets and a National Electrification Roadmap.

As gas demand declines, there will be locations where it is no longer safe or economically viable to maintain the gas network.

These are not decisions that individual households or small businesses are well placed to manage on their own. They involve system-level questions about safety, cost, and timing, and require coordination across distributors, safety regulators, electricity networks and governments.

Without clear government involvement and planning, there is a risk that the costs and disruption associated with network withdrawal fall disproportionately on households and small businesses, particularly those with limited capacity to electrify quickly. This includes questions about who pays for abolishment, how safety risks from dormant infrastructure are managed, and whether consumers are given enough notice and support to transition in an orderly way. It is an expensive and unwieldy way to manage a transition that everyone sees coming.

Governments should therefore work proactively with gas distributors and safety regulators to identify where parts of the network are ageing, under-utilised, or becoming uneconomic, and plan for staged, area-based decommissioning where appropriate. This includes setting expectations for early engagement with affected communities, coordinating electrification support, and clarifying funding arrangements so consumers are not left carrying the costs of decisions made too late.

Done well, proactive and strategic decommissioning planning can reduce long-term costs, improve consumer outcomes, and avoid the need for rushed or fragmented withdrawals. Most importantly, it ensures that responsibility for managing the decline of the gas network sits with those can best manage it: governments and energy system planners.



References

- 1 AEMO, Gas Statement of Opportunities (GSOO), 2026. Step Change Scenario accessed via gas forecasting data portal.
- 2 Australian Government Department of Industry, Science and Resources, Future Gas Strategy, 2024, 38.
- 3 ECA, Stepping Up: A smoother pathway to decarbonising homes, 2023, 15.
- 4 ECA, Gas distribution network rule changes: what you need to know, 2025.
- 5 AEMO, Gas Statement of Opportunities (GSOO), 2026. Step Change Scenario for Residential and Commercial customers accessed via gas forecasting data portal.
- 6 AER, Gas Network Performance Report, 2022, 107, Figure 7-9.
- 7 Dynamic Analysis, SA residential Gas Customers Long-term Analysis, 2026.
- 8 Ibid.
- 9 Renew, Limiting energy bills by getting off gas: All-electric homes after the 2022 energy crisis, December 2022, 15.
- 10 DEECA VIC, Save with an all-electric home: Everything you need to know about moving away from fossil gas in your home, 2025.
- 11 Renew, Limiting energy bills by getting off gas: All-electric homes after the 2022 energy crisis, December 2022, 19-21.
- 12 AEMC, GRC0082, Gas Networks in Transition, Directions paper, 2026, iv.
- 13 ECA, Consumer Energy Report Card Data, August 2025. 21% of consumers agree or strongly agree that government or other groups have clearly explained how the transition will affect their households.
- 14 Premier of Victoria, New Victorian Homes To Go All Electric From 2024, July 2023.
- 15 ECA, Gas distribution network rule changes: what you need to know, 2025.
- 16 ECA, Managing the transition from gas for South Australians - new modelling, 2026; ECA, Turning down the gas: Reducing consumer risk, 2024.
- 17 ECA, Consumer Energy Report Card: How households use gas and their attitudes towards electrification, 2025.
- 18 ECA, What small businesses are telling us about electrification – and what needs to change, 2026.
- 19 BSL, The Balancing Act; Dr Glen Currie, Gill Owen Scholarship 2025: Comparing the Californian energy transition with Australia, 2025.
- 20 Justice and Equity Centre, Roadmap for efficient and electric homes: Making all Australian homes healthy and affordable, 2023, JEC-Roadmap-for-Efficient-and-Electric-Homes.pdf
- 21 Energy Efficiency Council, The EEC's Plan for Accelerating Growth in the Market for Efficient, Electric Homes, 2025, MAP backing document - v3
- 22 ECA, Consumer Energy Report Card: How households use gas and their attitudes towards electrification, January 2025.
- 23 ECA, Consumer Energy Report Card: How households use gas and their attitudes towards electrification, January 2025.
- 24 ECA, Consumer Energy Report Card Data, February 2025. Questions: Is your home currently connected to gas? Do you currently use gas or electricity for the following things at your home? Note: Tasmania and Northern Territory are excluded due to small sample size. A household is considered to use gas for cooking if either the cooktop, the oven, or both are powered by gas.
- 25 AEMC, The energy revolution in our homes | AEMC, 2025.
- 26 Energy Networks Australia, The role of Australia's gas distribution networks, 2024, 2.
- 27 See e.g. access arrangements for Jemena (NSW), AGN (SA), Evoenergy, available at: Access arrangements | Australian Energy Regulator (AER).
- 28 AEMC, Gas Networks in Transition Directions Paper, 128; Australian Energy Regulator, Final Decision – Jemena Gas Networks (NSW) access arrangement 2025 to 2030, Attachment 10 – Reference tariff variation mechanism, May 2025.
- 29 Reedman, et. al., Multi-sector energy modelling 2022: Methodology and results: Final report, CSIRO Report No. EP2022-5553, Australia, 59.
- 30 Ibid.
- 31 Australian Government Department of Industry, Science and Resources, Future Gas Strategy, 2024, 38.
- 32 Analysis of Essential Services Commission, Energy Market Dashboard and Australian Energy Regulator, Retail Energy Performance Updates.
- 33 AusNet, Gas Access Arrangement Review 2024-28 Variation Proposal, September 2024, 8.
- 34 Victorian Government, Victoria Gas Substitution Roadmap.
- 35 Jemena, 2025 Draft Plan, 2025–30 Access arrangement.
- 36 AER, Retail energy market performance update for Quarter 1, 2025–26, December 2025.
- 37 AEMO, Gas Statement of Opportunities (GSOO), 2025, 5.
- 38 AEMO, Gas Statement of Opportunities (GSOO), 2026. Step Change Scenario for Residential and Commercial customers accessed via gas forecasting data portal.
- 39 ECA, Managing the transition from gas for South Australians - new modelling, 2026; Turning down the gas: Reducing consumer risk, 2024; AER Annual Information Responses from AGN VIC, AusNet, Multinet from FY23-24 and FY24-25.
- 40 Bond, K.B., Butler-Sloss, S., Peaking: A Brief History of Select Energy Transitions, 2022.
- 41 AER, Gas Network Performance Report, 2022, 107, Figure 7-9.
- 42 Australian Government Department of Industry, Science and Resources, Future Gas Strategy, 2024.
- 43 Graham, P., et. al., Consumer impacts of the energy transition: modelling report, CSIRO, Newcastle, 2023.
- 44 Grattan Institute, Getting off gas: why, how, and who should pay?, June 2023, p.43.
- 45 Rosenow, J. A meta-review of 54 studies on hydrogen heating. Cell Reports Sustainability, 2024; Rosenow, J., Is heating homes with hydrogen all but a pipe dream? An evidence review, 2022; Sara Baldwin, et. al, Assessing The Viability Of Hydrogen Proposals: Considerations For State Utility Regulators And Policymakers, Energy Innovation, 2022; IEEFA, Household Hydrogen: Hype clouds the economic reality, June 2024; Occupational Health and Safety Administration, Hydrogen Fuel Cells: Fire and Explosion, date unknown; Australian Government Department of Industry, Science and Resources, Future Gas Strategy, 2024. 31; ARENA, Australia's Bioenergy Roadmap, 2021; ARENA, Australia's Bioenergy Roadmap Appendix – Resource Availability, November 2021, 2; Deloitte, Decarbonising Australia's gas distribution networks, December 2017, 79.
- 46 Victorian Government Department of Energy, Environment and Climate Action, Victorian Industrial Renewable Gas Guarantee Directions Paper, December 2024, 3.
- 47 ACT Government, The Integrated Energy Plan 2024-2030, June 2024, 3.
- 48 Rewiring Australia, Submission to the Victorian Parliamentary Inquiry into renewable and affordable energy for Apartments, 2026, 3.
- 49 Ibid.
- 50 Parliament of Australia, Residential Electrification: Chapter 3 – Consumer barriers and supports, 2025.
- 51 ENA, Natural Gas: Voice of the Customer, 2022.
- 52 Australian Government Department of Industry, Science and Resources, Future Gas Strategy, 2024, 42.
- 53 Australian Bureau of Statistics, Making ends meet, 2025.
- 54 ECA, Consumer Energy Report Card: How households use gas and their attitudes towards electrification, January 2025.
- 55 Government of Western Australia, Department of Mines, Industry Regulation and Safety, Esperance natural gas network disconnection 2024.
- 56 Western Australia Government, Changes to the Albany Gas Distribution System, 2026.
- 57 Victorian Government, Supporting Solstice Energy customers, 2026.
- 58 Life Course Centre, Customer Impacts of the Withdrawal of the Gas Service in Gippsland, 2025.
- 59 Life Course Centre, Customer Impacts of the Withdrawal of the Gas Service in Gippsland, 2025; ABC, Solstice Energy to cut gas supply to 10 regional Victorian towns, 2025.
- 60 Horizon Power, Esperance Energy Transition Project: Knowledge Sharing Report, November 2023.
- 61 COSBOA, Small business is facing energy hardship and is at the frontline of the energy transition. It needs support, 2024.
- 62 ECA, What small businesses are telling us about electrification – and what needs to change, 2026.
- 63 ECA, Consumer Energy Report Card data, 2025.
- 64 ECA, Consumer Energy Report Card: Understanding and measuring energy hardship in Australia, July 2025.
- 65 International Energy Agency, The Future of Heat Pumps, 2022, 11. ACT Government, Hot water heat pumps – Climate Choices.
- 66 Grattan Institute, Getting Off Gas: Why, how and who should pay?, June 2023, 9.
- 67 ECA, Stepping Up: A smoother pathway to decarbonising homes, 2023.
- 68 NSW Department of Climate Change, Energy, the Environment and Water, NSW Consumer Energy Strategy, September 2024, 42.
- 69 Paul Graham, et. Al, "Consumer impacts of the energy transition: modelling report," CSIRO, June 2023, 27; Climateworks Centre, Climate-ready homes: Building the case for a renovation wave in Australia, December 2023; Climate Council, Switch and save: how gas is costing households, October 2022; Rewiring Australia, Household Electrification: Savings in the Suburbs, October 2021; Clean Energy Council, Powering Homes, Empowering People: A National Consumer Energy Resources Roadmap, June 2024; Institute for Energy Economics and Financial Analysis, A focus on homes, not power plants, could halve energy bills, July 2025.
- 70 Hammerle, M & Burke, P., From natural gas to electric appliances: Energy use and emissions implications in Australian homes, Energy Economics, 2022.
- 71 Victorian Government, Victoria Gas Substitution Roadmap.
- 72 Victorian Government Department of Energy, Environment and Climate Action, Save with an all-electric home.
- 73 BCG, The role of gas infrastructure in Australia's energy transition, June 2023, 7. Commissioned by APA Group, Australian Gas Infrastructure Group, and Jemena.
- 74 Green Global Connected prepared for City of Sydney, Appendix 2: Electrification discussion paper – Engagement report, 2024, 10.
- 75 AEMC, Updating the regulatory framework for gas connections | AEMC.
- 76 ECA, Consumer Energy Report Card: How households use gas and their attitudes towards electrification, January 2025.
- 77 IEEFA, Energy Security Safeguard policy reform submission, 2026; ECA, Stepping Up: A smoother pathway to decarbonising homes, 2023; Grattan Institute, Getting off gas: why, how, and who should pay?, 2023, 45-46.
- 78 CSIRO and Dynamic Analysis, Consumer impacts of the energy transition: modelling report, 2023.
- 79 Knibbs, L, Woldeyohannes, S, Marks, G and Cowie C, Damp housing, gas stoves and the burden of childhood asthma in Australia, 2018.
- 80 Asthma Australia, Inquiry into Residential Electrification, 2023, Doctors for the Environment Australia, Submission to the Inquiry on Home Electrification, Senate Economics Reference Committee, 2023.
- 81 Climate Council, Tents to Castles: Building Energy Efficient, Cost-Saving Aussie Homes, 2022, 9.
- 82 AHURi, A national roadmap for improving the building quality of Australian housing stock, 2024.
- 83 Australian Institute of Health and Welfare, Let's talk about the weather: injuries related to extreme weather, 2023.
- 84 Australian Climate Service, Future Climate, 2026.
- 85 ACCOSS, Heat in Homes Survey 2026.
- 86 Ibid.
- 87 Ibid.
- 88 Forcey at al., 'Cold and lonely': emergency presentations of patients with hypothermia to a large Australian health network, 2022.
- 89 Sustainability Victoria, The Victorian Healthy Homes Program Research findings, 2022.
- 90 Victorian Government, Summary report: Assessment of the Victorian Energy Upgrades program 2021 – 2024, October 2025.
- 91 Sustainability Victoria, Energy Rating Labels, 2022.
- 92 IEEFA, Appliance standards are key to driving the transition to efficient electric homes, 2024.
- 93 ECA, 3 Year Plan, 2025.

References *continued*

- 94 ACT Government, Preventing new gas network connections.
- 95 Dynamic Analysis, Turning down the gas – Minimising consumer risk, 2024.
- 96 AEMC, AEMC proposes changes to gas connection charges to support transition to net zero, 2025.
- 97 Essential Services Commission (VIC), Gas Distribution System Code of Practice review: Final decision, 2024.
- 98 AER, Draft decision – Evoenergy access arrangement 2026-2031, 2025, 10.
- 99 AER, Regulating gas pipelines under uncertainty, 2021.
- 100 Ibid., 31.
- 101 AEMC, Gas Networks in Transition Directions Paper, 23.
- 102 AGN SA, AGN SA 2026-2031 Final Plan, available at Proposal | Australian Energy Regulator (AER).
- 103 AER, Access arrangements.
- 104 AER, Draft decision – Evoenergy access arrangement 2026-2031, 10.
- 105 AER, AER decision supports Victorian gas consumers in energy transition, 2023.
- 106 AEMC, Directors paper: National Gas Amendment (Gas Networks in Transition) Rule, 2026.
- 107 AEMC, Gas Networks in Transition, Directions paper, 2026.
- 108 APA Group, Re: Gas Networks in transition Rule change package GRC0082, 2025; Charis Palmer, Who will carry the can for stranded gas, 2026.
- 109 ACT Government, Powering Canberra. Our Pathway To Electrification. ACT Government Position Paper. August, 2022.
- 110 ACT Government, Integrated Energy Plan 2024-2030, 2024.
- 111 Ibid.
- 112 Victorian Government Department of Energy, Environment and Climate Action, Gas Substitution Roadmap, 2022.
- 113 Victorian Government Department of Transport and Planning, Building Electrification Regulatory Impact Statement, December 2024; Victorian Government, New electrification and efficiency standards and regulations for Victorian buildings.
- 114 NSW Government, Delivering a Gas Decarbonisation Roadmap | NSW Climate and Energy Action, 2025.
- 115 Fitsimmons, C., City of Sydney council's gas ban an 'overstep', says Chris Minns - but developers love it, 2025.
- 116 Office of the Technical Regulator, Submission to AEMC on Gas Connections and abolishment/permanent disconnections rule change, 2025, 3.
- 117 AGN SA, 2026-2031 Revised Final Plan, 2025, 4.
- 118 ENA, Abandonment of domestic and small commercial gas services and associated metering installation – Guideline, 2025.
- 119 AER, Final Decision – AusNet2023-28, 7.
- 120 AEMC, Updating the regulatory framework for gas connections, 2025.
- 121 AER, Final decisions on various access arrangements: AusNet, MGN, AGN (VIC), Evoenergy.
- 122 BSL, The Balancing Act, 2026.
- 123 Currie, G., Comparing the Californian energy transition with Australia. 2025.
- 124 Western Australian Government Department of Mines, Industry Regulation and Safety, Esperance natural gas network disconnection, 2023.
- 125 Western Australia Government, Changes to the Albany Gas Distribution System, 2026.
- 126 Victorian Government Department of Energy, Environment and Climate Action, Supporting Solstice Energy customers, 2026.
- 127 AEMC, Gas Networks in Transition, Directions paper, 2026, 19.
- 128 Ibid., 19.
- 129 Ibid., 19.
- 130 Ibid., 21.
- 131 ACT Government, Integrated Energy Plan 2024-2030, 2024, 18-19, 55.
- 132 Victorian DEECA, Gas Substitution Roadmap, 2022.
- 133 ECA, Consumer Energy Report Card Data, August 2025.
- 134 Government of South Australia, Replace or Upgrade Water Heaters.
- 135 IPART, Energy Savings Scheme excluded activities.
- 136 ECA, Consumer Energy Report Card: How households use gas and their attitudes towards electrification, 8.
- 137 Ibid., 3.
- 138 AER, Retail energy market performance update for Quarter 1, 2025–26, 2026; ESC, Energy market dashboard.
- 139 Energy Efficiency Council, Time to supercharge efficient electrification to protect against global shocks, March 2026.
- 140 ECA, What small businesses are telling us about electrification – and what needs to change, 2026.
- 141 Victorian Government Gazette, Gas Industry Act 2001, April 2024, GG2024S184.pdf
- 142 ECA, Stepping Up: A smoother pathway to decarbonising homes, 2023, 9.
- 143 DCCEEW, Social housing energy performance – DCCEEW, 2026.
- 144 Clean Energy Finance Corporation, Household Energy Upgrades Fund - Clean Energy Finance Corporation
- 145 DCCEEW, Cheaper Home Batteries Program – DCCEEW, 2026.
- 146 AER, State of the Energy Market report, 2025, 187.
- 147 AEMC, Gas Network in Transition: Directions paper, 2026, 19.
- 148 Ibid., 20-21.
- 149 Ibid., 52-53.
- 150 Grattan Institute, Getting off gas: why, how, and who should pay, June 2023, 51.





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