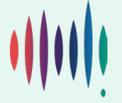


How households use gas and their attitudes towards electrification

Analysis of the December 2024 Consumer Energy
Report Card



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Summary

Nearly all major studies on the future of gas in Australia agree that residential gas consumption will significantly decline over the next 25 years if the country is to meet its emissions reduction targets. The primary driver of this decline is the anticipated electrification of existing gas appliances. However, the pace of this transition remains uncertain, as does the alignment of consumer preferences with these expectations.

This report uses our December 2024 Consumer Energy Report Card survey data to understand how Australian households are currently using gas, explore the extent to which households are considering electrification, and identify potential challenges to the transition to electric alternatives.

Over half of Australian households reported using mains gas, highlighting the substantial challenge of fully electrifying all households. We found that the electrification for each house will vary significantly depending on how households rely on gas. Specifically:

- Approximately one in four Australian households with mains gas said they relied on it for the three primary purposes (cooking, hot water, and heating) indicating that electrification could be particularly challenging and costly for these households.
- In contrast, a similar proportion of households said they use gas just for one purpose (either cooking, hot water, or heating), suggesting that electrification may be more straightforward and less expensive for them.

Our findings suggest that many households are aware of the potential need to switch away from gas in the future, with some already expecting to do so. Overall, 1 in 3 homeowner households using mains gas said they will probably cancel their gas supply within the next 10 years. Most notably, nearly 1 in 10 homeowner households with mains gas said they would probably cancel their gas supply in just the next two years. If this turns out to be true, there could be a large immediate shift towards electrification. Those most interested in making the switch tended to be higher income, environmentally conscious and engaged early technology adopters.

While a substantial proportion of households are highly engaged and interested in electrification, there is also a significant group that prefers gas appliances over electric alternatives. Therefore, education on the benefits of electrification will be crucial in shifting consumer preferences.

Many households will not be able to easily switch away from gas, even if they want to. For example, many will be renting and therefore will be reliant on their landlord (who might not be interested in electrification) to make changes to their property.

Given electrification has material upfront costs, income will clearly be a barrier to some households. We found that lower income homeowners were the least likely to say they intend to switch away from gas in the coming 10 years.

The Consumer Energy Report Card survey was conducted for Energy Consumers Australia by SEC Newgate. Information about sample size and demographic characteristics of the sample can be found in the Appendix. For further information about this report, please contact Ashley Bradshaw at ashley.bradshaw@energyconsumersaustralia.com.au.



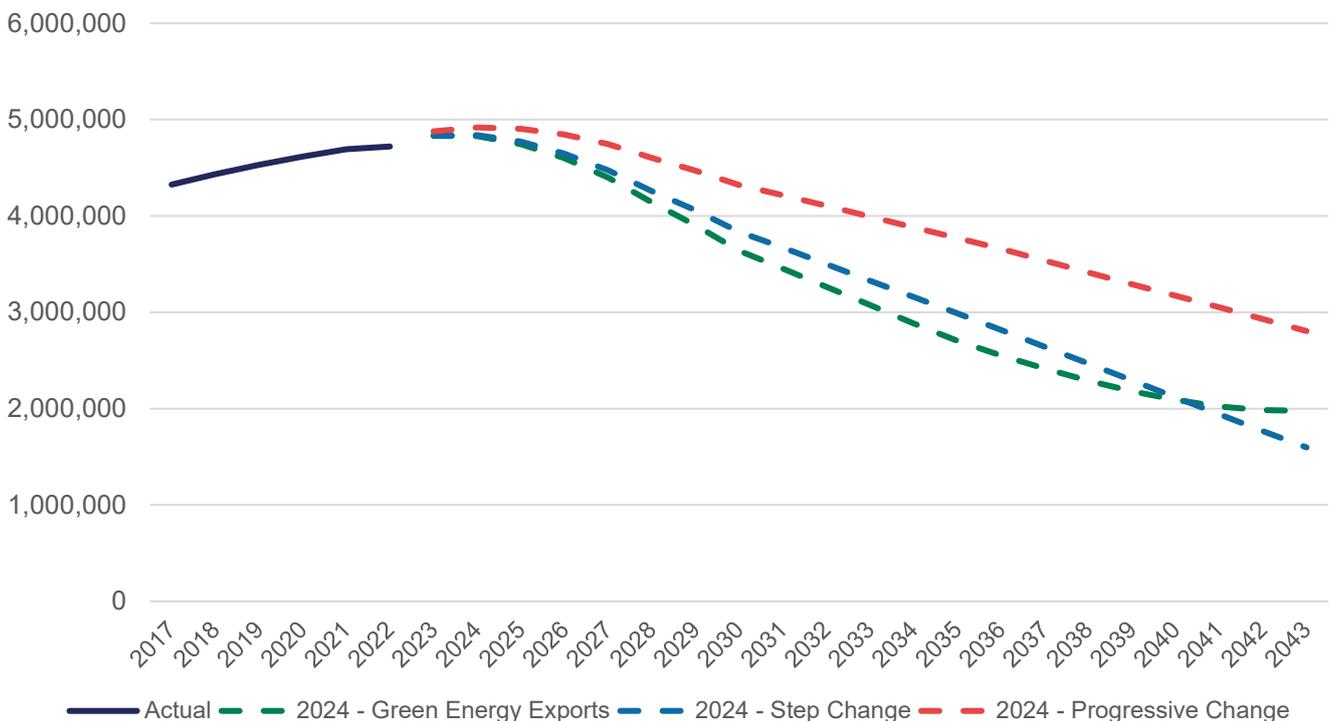
Residential gas use is forecasted to decline significantly

The Australian Energy Market Operator (AEMO) 2024 Gas Statement of Opportunities provides long-term forecasts of gas demand. AEMO state that “residential and small commercial consumption is forecast to slightly decline in the short term, with more significant fuel-switching to electricity in the medium to longer term as the economy transitions to meet net zero emissions goals.”¹

The national science agency, CSIRO, projects in its forecast for the Integrated System Plan (ISP) that “natural gas use in the residential and commercial sectors approaches zero by 2050”² across all modelled scenarios. The Climate Change Authority’s recent Sector Pathways review asserts that “the long-term complete electrification of buildings is the optimal decarbonisation approach, and governments should develop strategies to efficiently and equitably realise this.”³

By 2043, AEMO forecast annual residential and commercial gas consumption to fall between 47% and 65% under each scenario (relative to 2023 actual levels). AEMO forecast the number of ‘effective’ residential and commercial gas connections to show how gas demand is forecast to fall due to switching of gas appliances to electric ones AEMO note however that the pace of disconnections through electrification is highly uncertain.

Actual and AEMO forecast ‘effective’ residential and commercial gas connections





More than half of Australian households have mains gas, mostly for cooking and hot water

In National Electricity Market (NEM) states, over 4.3 million households have a retail gas account, and this number continues to grow.⁴ Therefore, electrifying every household in Australia will be a very considerable challenge.

Based on our survey findings, residential mains gas use is relatively common in all states and territories except Queensland, Tasmania, and the Northern Territory. While the proportion of households with gas in New South Wales was lower than some other states, it requires special attention due to its large population. New South Wales has the second-highest number of households with gas after Victoria, with approximately 2 million households connected to gas in Victoria compared to 1.5 million in New South Wales.⁵

Nearly all households with mains gas reported using it for cooking, with most also using it also for hot water. Almost half of households with mains gas in Victoria and the Australian Capital Territory used gas for space heating, whereas this share was significantly lower in other states.

Proportion of households with mains gas and gas appliances used

	Proportion with mains gas	Of the households with mains gas		
		Cooking*	Hot water	Space heating
National	54%	83%	74%	38%
VIC	84%	87%	75%	56%
WA	73%	90%	77%	24%
ACT	61%	71%	74%	49%
SA	61%	84%	76%	26%
NSW	48%	80%	71%	27%
QLD	18%	68%	69%	4%

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.

In addition to the use of mains gas, around 10% of all households surveyed said they used bottled gas (LPG). Households in jurisdictions with lower rates of mains gas use were generally more likely to say they used LPG. 22% of households in Queensland, 25% in the Northern Territory, 10% in Tasmania, and 9% in New South Wales reported using LPG.

For the remainder of this report, we focus exclusively on mains gas usage due to the small sample size of households using LPG. Although Tasmania and Northern Territory were included in the national sample, their analysis is not reported separately due to limited sample size for households with mains gas.



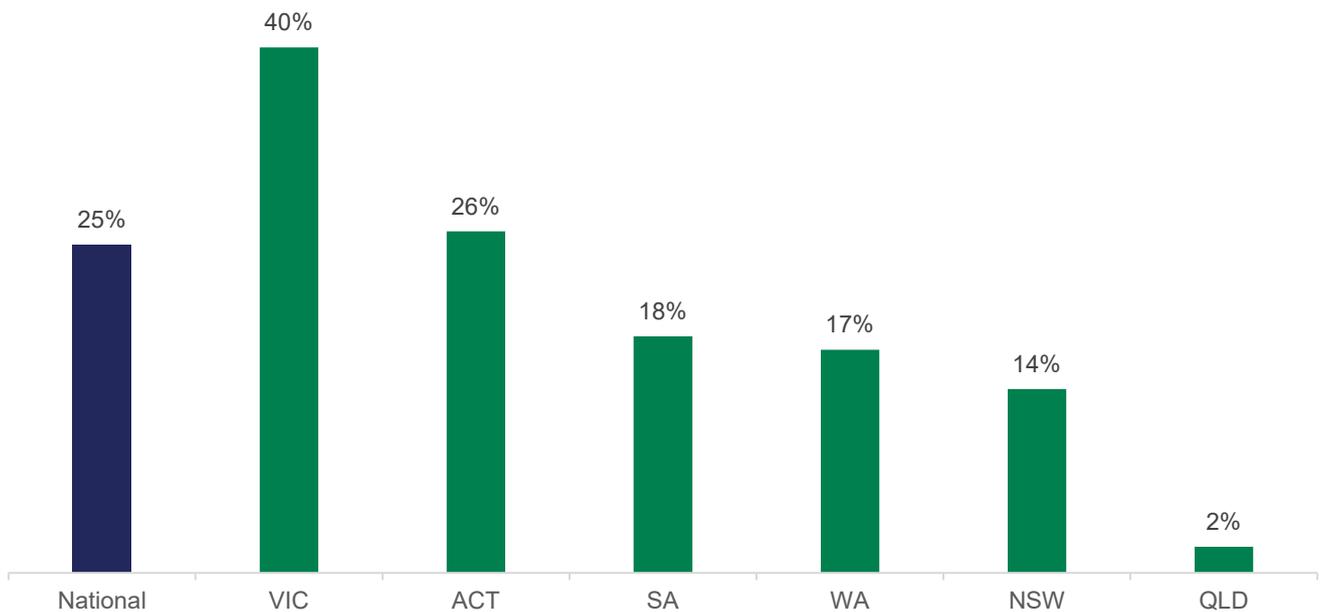
Nationally, 1 in 4 households with mains gas say they use gas to cook, to heat hot water and to heat their home

Mains gas is used in homes for three primary purposes: cooking, heating and hot water. Overall, around 25% of households with mains gas used gas for these three primary purposes. Given this high reliance on gas, it will be challenging – and costly – for these households to electrify.

Victoria had the highest proportion (40%) of households using all three primary gas appliances, far surpassing other states. In contrast, only small numbers of Queensland households said they used gas for all three primary purposes, which is unsurprisingly given Queensland’s climate and rare need for space heating.

Overall, the most likely combination of gas appliances used was cooking and hot water. Over 1 in 3 households who said they have mains gas said they used it for cooking, hot water, but not heating.

Proportion of households with mains gas that use it for all three primary purposes: cooking, hot water and space heating



Questions: *Is your home currently connected to gas? Do you currently use gas or electricity for the following things at your home?*



Many households with mains gas say they use gas for just one purpose

In contrast, 26% of households with mains gas said they used gas only for cooking, hot water, or space heating. This suggests that many households using gas may face relatively low barriers to full electrification.

In some states, a substantial number of households said they used gas just for one purpose. Queensland, which had a low share of mains gas use overall, had the highest proportion of single-appliance households (45%), followed by New South Wales (33%) and the Australian Capital Territory (31%). Victoria stood out as the exception with relatively few households saying they used gas for just one purpose.

Proportion of households with mains gas that say they use gas just for one purpose

Survey	Only one gas appliance	Only gas cooking	Only gas hot water	Only space heating
National	26%	15%	9%	2%
QLD	45%	21%	24%	0%
NSW	33%	19%	11%	3%
ACT	31%	11%	17%	3%
SA	26%	15%	10%	1%
WA	23%	15%	7%	1%
VIC	18%	13%	4%	2%

Questions: Is your home currently connected to gas? Do you currently use gas or electricity for the following things at your home?



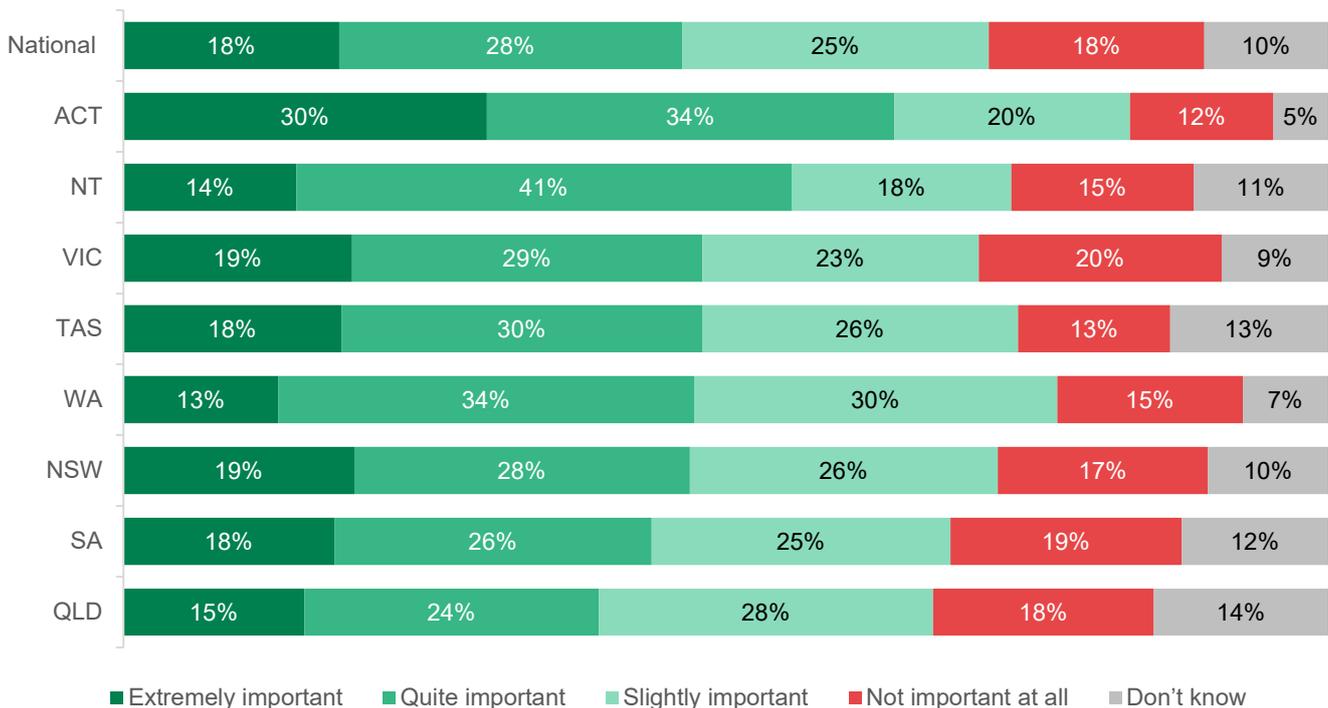
Many households think reducing household gas consumption is important for Australia to reduce emissions

Nearly half of Australian households (46%) thought that reducing household gas consumption was extremely or quite important to reduce emissions. Fewer than 1 in 5 households thought reducing household gas consumption was not important at all to reduce emissions.

We found no material difference in sentiment between households that said they did and did not use gas at the home. This shows that many households currently using gas do think it is important for residential gas use to decline in the future.

As shown below, households in the ACT were the most likely to think it was important for residential gas use to decline so that Australia could reduce emissions. In addition, we found that younger and higher income households were more likely to view reducing household gas consumption as important to help Australia lower emissions.

The extent to which Australian households think reducing gas consumption is important for reducing emissions



Question: How important is reducing the consumption of gas in households in reducing carbon emissions and helping Australia meet its emissions targets?



Nationally, 35% of homeowners with mains gas say they will probably cancel their gas supply in the next 10 years

The majority (around 66%) of Australian homes are owner-occupied, and most of these are standalone homes or townhouses.⁶ Since homeowners typically have greater control over decisions such as electrifying their homes, we asked them about their intentions to cancel their gas supply and transition their homes to run solely on electricity.

We have previously reported that homeowner sentiment towards the use of gas is changing, with a growing proportion of homeowners saying they are exploring electrification.⁷ As shown below, nearly 1 in 10 homeowner households with mains gas said they would probably cancel their gas supply in just the next two years. If this turns out to be true, it would be a large immediate shift towards electrification.

The ACT results are particularly noteworthy. Nearly 2 in 3 ACT homeowners said they probably will cancel their gas supply in the next 10 years.

The extent to which homeowners with mains gas are planning to cancel gas supply

Survey	Plan to cancel within next 10 years (total)	Plan to cancel within next 2 years	Plan to cancel within next 5 years	Plan to cancel within next 10 years	Don't have plan to cancel
National	35%	9%	13%	13%	65%
VIC	37%	8%	15%	14%	63%
WA	24%	6%	7%	11%	76%
ACT	65%	19%	20%	26%	35%
SA	28%	4%	10%	13%	72%
NSW	34%	10%	13%	11%	66%
QLD	30%	13%	5%	12%	70%

Question: Some Australian households have been cancelling their gas supply and converting their home to running on electricity only. Which of the following best describes you?

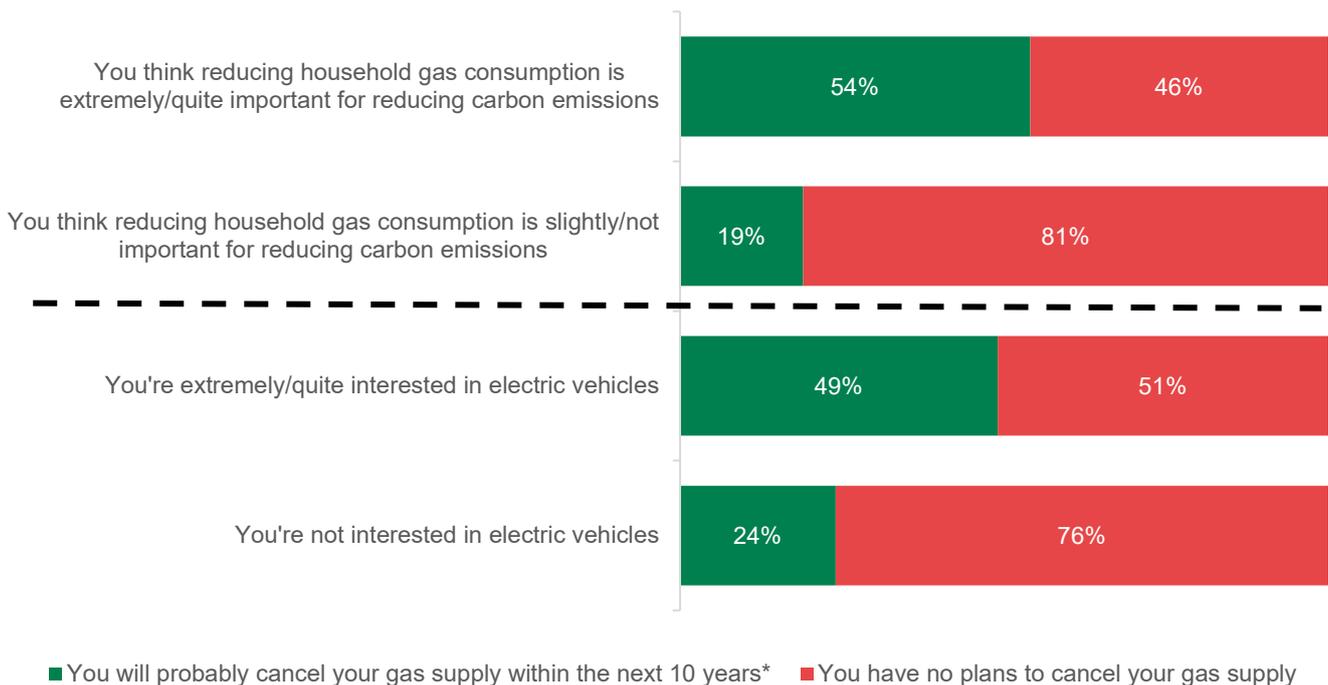


Households who said they probably will cancel their gas supply tend to be more environmentally conscious and early technology adopters

Homeowners who viewed reducing gas consumption as extremely or quite important for reducing carbon emissions and helping Australia meet its emissions targets were more likely to be thinking about cancelling their gas supply. Similarly, positive attitudes toward the energy transition were strongly linked to intentions to cancel one’s gas connection. Homeowners who believed they understood the rationale behind Australia’s energy transition and felt confident in the country’s clean energy transition plans were more likely to say they would probably cancel their gas supply.

Our findings also suggest that those who were thinking about electrification were more likely to be more engaged, early adopter households. We found that homeowners who were highly interested in electric vehicles or expressed interest in having an active role in managing their energy use (seeking greater choice, control, or flexibility) were more likely to say they would probably cancel their gas supply.

Intention of homeowners with mains gas to remove gas supply, by environmental and technological attitudes



Questions: Some Australian households have been cancelling their gas supply and converting their home to running on electricity only. Which of the following best describes you? How important is reducing the consumption of gas in households in reducing carbon emissions and helping Australia meet its emissions targets? How interested are you in electric vehicles?

Note: * This shows the proportion of respondents who selected that they thought they would probably cancel their gas supply within the next 2 years, the next 5 years, or the next 10 years.



Many households using gas appliances said they would prefer to stick with them, if given the choice

Nationally, around 2 in 3 homeowners with mains gas said they have no plans to cancel their gas supply. Additionally, many households express a preference for gas appliances over electric ones. As such, barring a large change in public perception, many households will not be eager to switch to electric appliances.

Overall, households tend to prefer to stick with what they currently use (whether they use electric or gas appliances). However, it was more likely for households using gas appliances to say they wanted to switch to electric alternatives, than it was for households using electric appliances to switch to gas appliances.

The one exception was cooktops, where many households clearly preferred to use gas. This preference was particularly pronounced for those living in regional areas.

For ovens, hot water systems, and space heating, a relatively higher proportion of households currently using gas appliances indicated a preference to switch to electric appliances compared to households using electric appliances wanting to switch to gas. For example, 42% of households using gas space heating said they would prefer to switch to electric space heating if given the choice, compared to only 14% of households using electric space heating expressing a desire to switch to gas.

Our findings also indicated that households expressing a preference for electric appliances were more likely to say they will probably cancel their gas supply in the future.

Preferred new appliance among current mains gas and electric users^a

Appliance	Current appliance	Prefer new gas appliance	Prefer new electric appliance
Cooktop	Gas	69%	30%
	Electric	26%	71%
Oven	Gas	58%	40%
	Electric	14%	83%
Hot water	Gas	59%	39%
	Electric	19%	78%
Space heating	Gas	57%	42%
	Electric	14%	83%

Question: If both options were available, and you needed to buy a new appliance, would you prefer to use electricity or gas for the following household purposes?

^a Note that the percentages do not add up to 100% as some respondents selected "Not relevant" or "Don't know" options.



Not all households can easily switch to electric appliances, even if they would prefer to

Nationally, around 31% of households live in rental properties⁸ and around 14% of households live in a unit or an apartment.⁸ Around half of these households said they have mains gas.

Rental households, and those living in apartments and units tended to be younger. Based on our survey results, younger households were relatively more likely to recognise the importance of reducing household gas consumption to reduce emissions. However, many of these households will face challenges in switching to electric alternatives.

Rental households depend on their landlord for property modifications and have limited control over decisions to switch to all-electric systems. More than half of property investors are over 50,⁹ and people over 50 are more likely to think reducing gas use is not important to reduce emissions.

In many multi-unit dwellings, some gas use is managed centrally by the body corporate, for example central hot water from a common large gas boiler. Upgrading shared energy services may be more complicated as it requires agreement from all owners and may involve higher upfront capital costs.¹⁰ Apartment and unit households are significantly more likely to be rental households, which means that many of these homes will need to navigate the challenges of both having a landlord and a body corporate to electrify all their energy use.

Mains gas supply and gas appliance usage by dwelling ownership and type

	Living situation (%)	Mains gas supply (%)	Of the households with a mains gas supply (%)		
			Gas cooking	Gas hot water	Space heating
Dwelling ownership	Rent	49%	83%	70%	29%
	Own	57%	83%	75%	41%
Dwelling type	Apartment/unit	53%	78%	67%	15%
	Standalone house	55%	83%	76%	45%

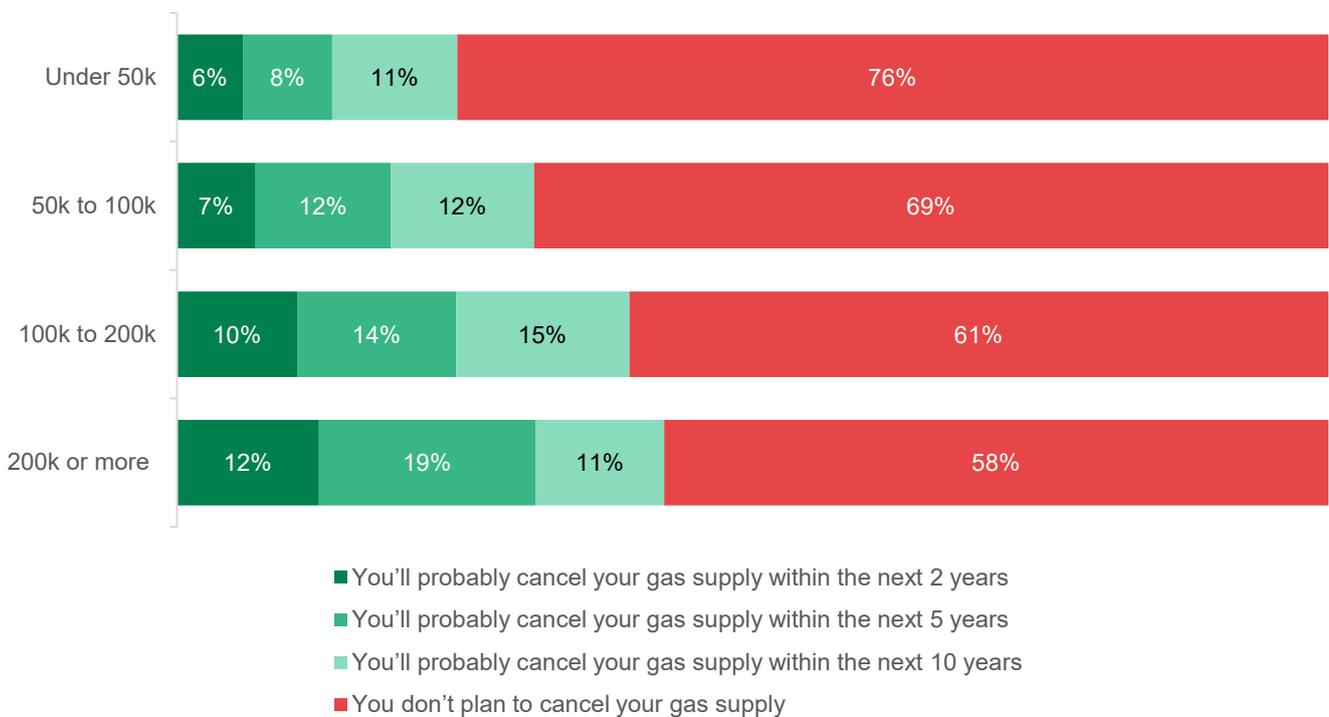
Questions: Is your home currently connected to gas? Do you currently use gas or electricity for the following things at your home? Do you own or rent the home you live in? Which of the following best describes the type of home where you currently live?



Lower income households are less likely to say they will probably cancel their gas supply in the coming years

Given the electrification process can come at a material upfront cost, income will likely be a barrier for many households. Indeed, our results demonstrated that lower income households were the least likely to say they are thinking about electrification.

Proportion of homeowners with mains gas with no intention to remove gas supply, by income level



Question: Some Australian households have been cancelling their gas supply and converting their home to running on electricity only. Which of the following best describes you? What is your household's overall annual income before tax or other deductions?



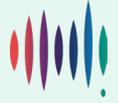
Appendix 1 – Overview of sample

This analysis is based on data from **Consumer Energy Report Card** December 2024 Survey. The Consumer Energy Report Card survey was conducted by SEC Newgate. The raw data, and information on the methodology can be found [here](#).

This analysis focuses on households with mains gas. The sample size for each state and territory is sufficient for analysis, except for NT and TAS, where the number of households with a gas connection is very small. While these states are included in the national analysis, specific analyses for NT and TAS are not reported

Overview of sample for December 2024 Consumer Energy Report Card

	Total	With mains gas	With LPG
Sample size (n)	4,152	2,214	427
Jurisdiction			
New South Wales	834	413	78
Australian Capital Territory	207	121	9
Victoria	824	681	28
Queensland	730	145	145
South Australia	620	389	51
Western Australia	625	441	73
Tasmania	207	13	18
Northern Territory	105	25	11
Age of respondent			
18-24	456		
25-34	854		
35-49	1,159		
50-64	957		
65+	726		
Homeownership status			
Own home / Mortgage	2,697		
Rent	1,388		
Other	67		



References

- ¹ AEMO, 2024 Gas Statement of Opportunities (2024)
- ² Reedman, et. al., Multi-sector energy modelling 2022: Methodology and results: Final report (2022), p. 59
- ³ Climate Change Authority, Sector Pathways Review – Built Environment (2024), p. 6
- ⁴ AER, Retail energy market performance update – Quarter 4 2023-24. Access [here](#). ESC, Victorian Energy Market Dashboard. Access [here](#).
- ⁵ Energy Networks Australia. (2021.). *Reliable and clean gas for Australian homes*. Access [here](#).
- ⁶ Australian Bureau of Statistics, 2021 Census. Access [here](#).
- ⁷ ECA. Homeowners are increasingly considering swapping gas appliances with electric ones (2024). Access [here](#).
- ⁸ Australian Bureau of Statistics, 2021 Census. Access [here](#).
- ⁹ Flaherty, A. (2023). *Australian landlords are now older than ever, and that spells bad news for renters*. Access [here](#).
- ¹⁰ Grattan Institute. (2023.). *Getting off gas: Why, how and who should pay?* Access [here](#).