ACT Government

Community and Stakeholder Engagement Report

Pathway to Electrification:
Regulation to prevent new fossil fuel gas network connections

June 2023

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Introduction

Between March and April 2023, the ACT Government undertook public consultation to inform a new regulation to prevent new fossil fuel gas network connections.

The new regulation is part of the Pathway to Electrification: a plan to electrify our city and achieve zero emissions from fossil fuel gas by 2045.

The purpose of the consultation was to:

- seek community feedback on the issues identified in the Issues Paper, and to hear about things that may not have been considered
- make sure the regulation considers the impacts of a change like this on all members of the ACT community
- support the development of an Integrated Energy Plan that reflects the views, concerns and interest of the ACT community and stakeholders.

The ACT Government is committed to legislating to key areas through the new regulation:

1. Prevent new gas connections in greenfield residential developments.
2. To advance all-electric infill developments, so there wouldn't be a need for new gas connections to future infill developments from 2023.

About the regulation

The Issues Paper proposes an initial regulation prohibiting all new fossil gas mains connections in residential and commercial areas across the Territory. This approach would allow new connections to continue to be made in industrial areas until a further regulation was made.

It's proposed that the new regulation would start in November 2023 (or as soon as practicable after then). The ACT Government is seeking community and stakeholder feedback on transition to a new regulation, how it is implemented and where exemptions might apply.

What is a fossil fuel gas connection?

The National Gas Law (NGL) governs access to fossil fuel gas pipeline services and elements of the broader natural gas market in Australia. 'Natural gas' is a defined legal term in the NGL. It is a fossil fuel, consisting predominately of methane and is non-renewable.

The ACT Government prefers the term 'fossil fuel gas' as it clearly identifies that we are discussing non-renewable gases. For the purposes of this consultation and this report, fossil

fuel gas has the same meaning as 'natural gas' in the NGL. The regulation consulted on relates only to new connections to the gas distribution pipeline network. It would not impact access to gas services where a gas service is already connected, unless that service became decommissioned.

The Pathway to Electrification

The ACT is preparing to electrify and transition away from the use of fossil fuel gas by 2045. This will allow Canberra homes, businesses, and transport to be powered in a **cleaner and cheaper way**.

Fossil fuel gas accounts for more than 20% of emissions in the ACT, making it the second largest source of emissions, after transport.

Residential customers (homes) account for 51% of the annual gas demand each year in the ACT and about 97% of all fossil fuel gas network connections in the Territory.

Each new home connection will generate approximately 1.3 tonnes of greenhouse gas emissions per annum.

Developing a regulation now to prevent new fossil fuel gas connections in the ACT will:

- help building users save on energy costs
- avoid potential health impacts from burning gas in homes
- reduce the Territory's greenhouse gas emissions
- help avoid new developments being locked into using gas in the future
- assist the electricity and gas network owners to plan and manage both networks in the most cost-effective way to meet the needs of Canberra
- help builders, developers, gas fitters, electricians, gas component suppliers, gas consumers and government plan for the ACT's electrification.

By regulating new gas connections now, electricity and gas network owners can plan and manage both networks in the most cost-effective way to meet the needs of Canberra now and in the future. A regulation will also give builders, developers, gas fitters, electricians, gas component suppliers, gas consumers and government certainty and help them plan for any impacts on their industries.

Engagement overview

The Social Deck was engaged by the ACT Government to plan, deliver, facilitate and report on the public consultation activities.

The ACT community contributed to the consultation through the following methods:

- Making a submission
- Completing a survey through the YourSay Conversations platform
- 1 x industry stakeholder webinar
- 1 x households webinar
- 1 x stakeholder workshop
- 1 x community workshop
- 1 x community councils workshop

All consultation activities were held online except for the community council's workshop which was held in-person.

Key issues

The Issues Paper and Summary Issues Paper were the primary consultation materials used through the consultation period.

The consultation activities were structured around 8 key issues:

1. Identifying land or premises that are subject to the regulation
2. Determining the types of land and premises to be included in initial regulation
3. Application of the regulation to greenfield and infill developments, including renovations and knock-down rebuilds
4. Exemptions to the regulation
5. Reporting
6. Commencement date
7. Transition period and considerations
8. Integrated Energy Plan

Participation in the consultations

Over 420 people, businesses and industry bodies participated in the consultation for no new gas network connections.

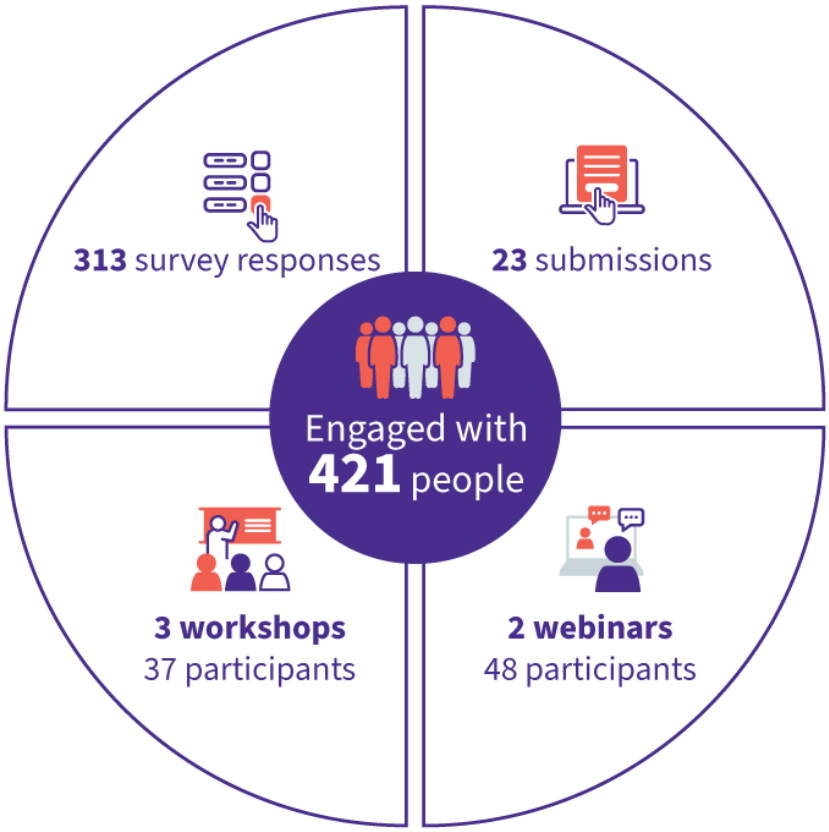
The consultations were open to anyone living in the ACT or with an interest in the new regulation. The priority was to hear from ACT households, including homeowners, renters and property investors, and those working in or representing the gas, plumbing and

electrical industries, small business owners, builders, developers, architects and community organisations.

We acknowledge and thank the following individuals who presented at the webinars:

- Michael Hopkins - CEO, Master Builders Association of the ACT (stakeholder webinar)
- Davina Rooney – CEO, Green Building Council of Australia (stakeholder webinar)
- Shannon Battisson - designer and architect, National President of the Australian Institute of Architects and sustainable home owner (households webinar)
- Dr Thomas Longden - Fellow at Crawford School of Public Policy, working on the ANU Energy Change Institute's Grand Challenge – Zero-Carbon Energy for the Asia-Pacific (households webinar)

Participation by audience group and activity




325
homeowner


26
renter


26
property investor


14
small business owner


41
work in or represent gas, plumbing or electrical industry


7
gas or electricity supplier


8
renewable gas industry


3
builder, developer or architect


22
community organisation


23
government or other

Awareness and sentiment about the regulation

Across engagement activities, awareness of the regulation was generally high.

87% of survey respondents had heard about the ACT Government's intention to develop a regulation to prevent new gas network connections for the ACT.

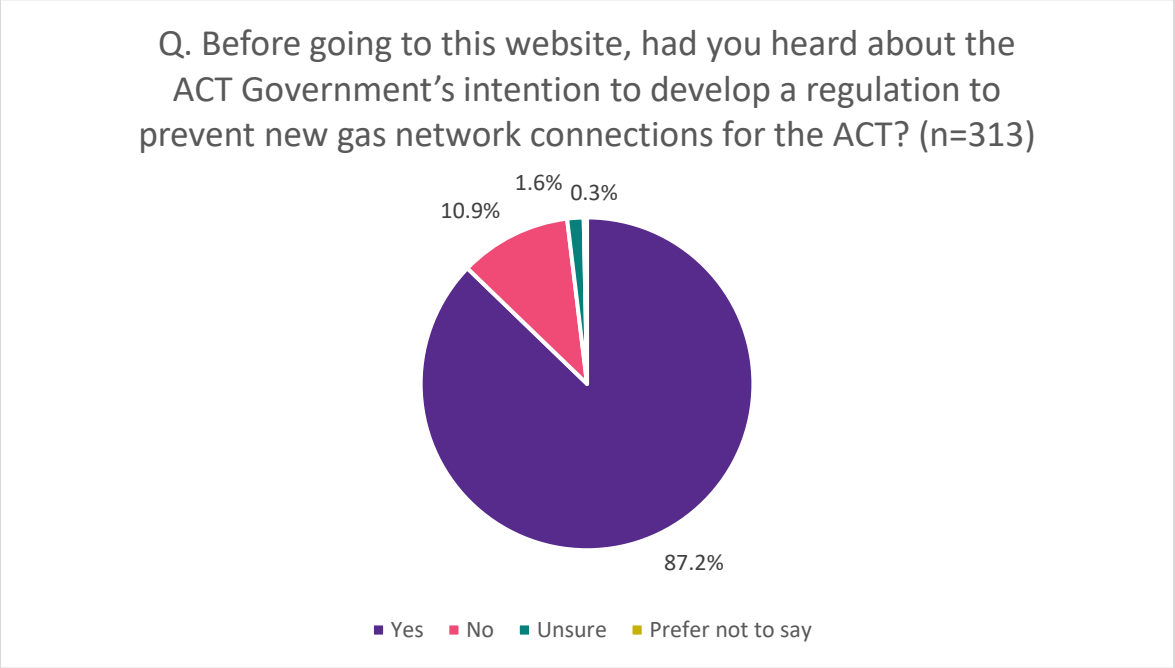


Figure 1: awareness of intention to develop a regulation to prevent new gas connections.

Across engagement activities, the majority of participants were generally supportive of and/or positive about the introduction of a regulation to prevent new fossil fuel gas connections.

Benefits

The intent of the regulation to contribute to achieving no fossil fuel gas emissions by 2045, and the environmental benefits of this, was most commonly cited as the reason for support.

Specifically, participants cited:

- reduced greenhouse gas emissions
- reduced reliance on fossil fuels
- acceleration towards renewable energy usage
- improved air quality
- aligns with global efforts to combat climate change.

'Preventing new gas connections provides certainty to owners and developers that it is intolerable that non-renewable sources of energy should be used when humanity is facing a climate change crisis.' – Survey respondent.

The regulation was also seen as a way to educate people about the benefit of moving away from fossil fuel gas and gas alternatives.

'There is an opportunity here to promote the alternatives to gas, cost comparisons of gas and electricity. This will be particularly important for supporting older residents. Need to reassure people that the alternatives are good. Make it easy for people to get off gas.' – Community councils workshop participant

Economic and social/political benefits were also recognized by many participants, with survey responses highlighting the following:

- reduced energy costs for households and businesses
- avoiding new gas infrastructure costs and locking households into higher energy costs from gas
- eliminating renovation costs to switch from gas to electricity in the future
- simplifying utility bills (one connection fee)
- increasing demand for electricians
- reducing influence of multinational gas companies on domestic politics
- encouraging innovation in energy-efficient appliances
- creating a sense of collective action towards addressing climate change with Canberra leading the national green conversation.

'It stops people making investments that will become stranded - less stuff that will only need to be taken out anyway, and less upkeep for the gas network until we can shut it off for good. It sends a clear signal to everyone about where we're headed so they can plan accordingly. There's an environmental benefit to reduced gas usage.' – Survey respondent

Some health benefits were also raised, including:

- improved health for residents, especially children, including reduced respiratory diseases and asthma
- safer homes and businesses due to reduced combustibility and toxicity of gas
- improved indoor air quality.

Concerns/challenges

Concerns about the regulation were raised both by participants who were otherwise supportive, and participants who were opposed to the regulation altogether.

Capacity and supply

A common concern among both stakeholders and community members was whether the current electricity network has the capacity to cope with the increased demand the regulation will create. The risk of reliance on a single source of energy was also raised by some, with concerns around the impact of overwhelming the grid and how network outages would be managed. It was suggested that back up energy sources should be secured in the event of an emergency or for during peak times.

> *'We are already having more and more blackouts. The electricity grids do not seem to be able to cope in absorbing solar energy on hot days.' – Survey respondent*

> *'We need to prioritise work to minimise and manage any potential supply interruptions within the renewable network as the ACT moves to 100% electrification. Planning for the transition must include provision for emergency supply for people with medical devices, existential heating and cooling needs and other issues requiring a reliable affordable supply of power and backups such as home batteries.' – Stakeholder workshop participant*

Impact on existing gas connections

The future of gas infrastructure was raised by several stakeholders and community members, both in terms of the cost of maintaining a diminishing network and the impact of decommissioning it on future advancements in green gas alternatives. Concerns included:

- Potential price increases for existing gas connections.
- Pressure from the gas industry to protect profits.
- Handling existing connections and appliance replacements fairly
- Increased costs for maintaining and upgrading existing gas systems.
- Potential negative effects on property values.
- Reducing energy options and potential lack of infrastructure for new alternatives e.g., renewable gas.

> *'There is recognition we will need gas during the transition to renewables. This decision will cut alternatives. I agree we need to reduce reliance on gas however there isn't enough risk assessment in case our renewable elect grid goes down or is overburdened by excess usage that it wasn't designed for. It all seems too soon to definitely cut it all off. Perhaps it can be built into buildings but developers and owned we get a financial incentive to not use it.' – Survey respondent*

Individual rights to choose

Some participants had concerns over the regulation impacting on the rights of individuals to choose their own power supply and forcing people to switch to electric appliances. Across

those who mentioned it, this was a concern both in relation to their expectation to have individual choice and as it relates to impacting consumer choice and reducing competition in the market. This issue was notable in survey responses, but was only mentioned sporadically or when prompted through the other engagement activities.

> *'That the ACT government is restricting my right to choice, to use whatever energy I wish.' – Survey participant*

Affordability and equity

The cost of switching from gas to electric for households was a concern that was raised across most engagement activities. Participants noted the cost of conversion, as well as increased appliance costs and potential increases in the cost of electricians. Additionally, rising gas prices and the burden of paying for a diminishing gas network were noted by many. These concerns are aligned with the broader policy to transition away from gas, rather than the proposed regulation, as transition activities will not be required for people who do not have access to obtaining a new gas network connection.

Matters of equity were also raised, with some participants highlighting the potential for the regulation to promote inequality between older and newer suburbs, and homeowners and renters.

There was also concern for some of the more vulnerable members of the community, including older people and people with disability.

> *'There are accessibility barriers associated with some newer electrical household products for older people and people with disabilities. For instance, programmable ovens or heaters with touchscreens and complicated interfaces which can't easily be managed by someone with a visual impairment or cognitive issues or are difficult for elderly people used to managing older devices.' – Stakeholder workshop participant.*

Other concerns raised included:

- the complexity of transitioning multi-unit dwellings
- impact on established cooking and heating practices in both households and business
- lack of competition leading to higher energy prices
- job losses and skills shortages
- business leaving the ACT
- environmental and health impacts (particularly in relation to wood fires)
- enforcement and regulation
- lack of community education and engagement.

'I prefer cooking on Gas. We cook Chinese food from a wok, very fast cooking requiring short bursts of high intensity heat that electricity cannot perform. It is quicker to cook.' – Survey respondent

'In Canberra's cold climate, natural gas is a very efficient way to heat a home. I have used both gas and electric heating and electric heaters cannot compare. If fact, in order to get the same heating, I have to have the electric heating on high.' – Survey respondent

'Massive loss of income in ACT, many gas fitters and plumbers will lose business and money.' – Survey respondent

Those who were in strong opposition to the regulation cited reasons such as:

- no perceived benefits, or belief that other factors contribute more to emissions
- concerns about the impacts on existing gas-dependent users and businesses
- perceived lack of consultation, research and appropriate modelling by the ACT Government
- perceived as a political move or catering to a 'false Climate Change Agenda'
- frustration with the ACT government's past promotion of gas connections
- concerns about potential increased emissions if electricity is generated from coal
- lack of consideration for future green gas alternatives to be used.

'No offence but the government provided me with incentives to move from wood fire to gas – what is preventing me – being trapped in ever-increasing costs of electricity and replacing products – again!' – Survey respondent

'This change is short sighted as it does not allow for bio-methane or gas blended with hydrogen.' – Survey respondent

Key Issues

Key issue 1: Identifying land or premises that are subject to the regulation

There are several ways the regulation could identify the types of land or premises it applies to, as well as possible exemptions. Land could be identified by:

- existing planning zones
- districts e.g. Belconnen, Gungahlin, Tuggeranong, Weston Creek
- suburbs
- specific property addresses
- parcels of land (also known as 'blocks').

The ACT Government's current preference is to use land planning zones as the primary source of identification. Planning zones identify the type of buildings or activities that can take place individual parcels of land. The population of the ACT is growing, and the Territory's building and infrastructure needs are changing. The advantage of using planning zones in the regulation is that the regulation will not need to be amended as land use changes and new suburbs emerge. This makes the regulation responsive and adaptable as the ACT changes and grows.

Across all other engagement activities, the majority of participants supported the use of planning zones to identify or categorise land or premises that are subject to the regulation. All written submissions that provided feedback on this issue supported the use of planning zones to identify or categorise land or premises that are subject to the regulation. Several stakeholders noted that the use of planning zones is commonplace in related activities and aligned with the ACT's current regulatory system. It was identified by many community members and stakeholders as the most logical option to allow for flexibility and responsiveness as the ACT and land use changes.

> *'The city is already split into planning, why waste time developing new zones just for this regulation, just use the zones already created.'- Community workshop participant*

It was also noted that the use of planning zones could be beneficial to any exemptions process (with the assumption that many/most exemptions would be requested in industrial areas).

Some participants suggested that while planning zones are the most logical way to identify land and premises, some flexibility or other markers should also be applied. For example, separating out medium and high-density housing, or looking at particular districts at a time.

> *'You've got whole suburbs that are a particular zone, and it may not be applicable to all of that zone. For example, somewhere in Belconnen with a commercial centre that would benefit from gas. But the area around is say medium density residential, that would not necessarily benefit from gas. So, I just think that big swaths of land use being given gas or not, I think is a bit blunt. I think you have to be a bit more strategic about it.'- Community workshop participant*

> *'Residential zones is quite a logical way of doing it, but I think we need to divide out the high density from the medium density and low density because the impacts and changes are going to be different across those different residential zones.' – Stakeholder workshop participant.*

Some stakeholders indicated that there should be alignment with how land use and premises is determined for this regulation and the existing planning review underway by the ACT Government.

> *'We are generally supportive of using planning zones, as long as these aren't likely to change dramatically with the planning review currently happening.' – Stakeholder workshop*

Survey respondents had mixed views about whether or not planning zones should be used to identify areas to be included in the regulation. 42% of respondents agreed that they should be used and 41% of respondents disagreed. 29% of respondents strongly disagreed whereas 17% of respondents strongly agreed. Businesses and industry representatives were slightly more likely to agree that planning zones should be used. Homeowners were more likely to strongly disagree.

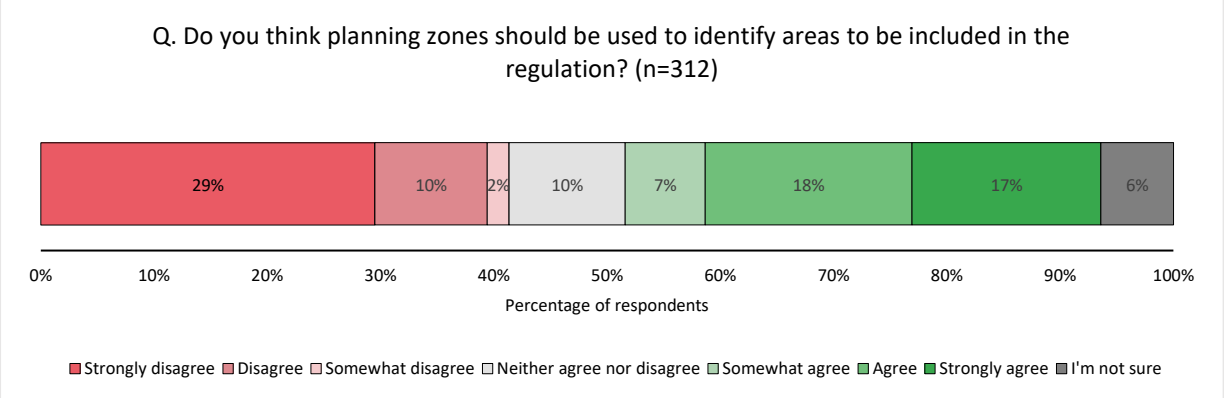


Figure 2 should planning zones be used to identify areas included in the regulation

Survey respondents who disagreed with the use of planning zones were asked why they shouldn't be used. The most common reasons provided are outlined below.

- **Perceived inequity:** Respondents expressed concern that using planning zones could lead to perceived inequity or discrimination, where some areas may be unfairly impacted compared to others.

  'It discriminates against Canberrans in some planning zones. Either all or nothing!' – Survey respondent

- **Simplicity and understandability:** Some respondents prefer approaches that are easier for people to understand, implying that using planning zones might complicate the regulation and make it harder for the public to grasp.

  'I prefer an option that is easier for people to understand, such as suburbs.' – Survey respondent

- **Planning fluidity:** A few respondents mentioned that planning zones are not fixed and can change over time, implying that using such zones for long-term regulations might not be practical or effective.

  'Planning zones in this city are always a moving target'– Survey respondent

- **Individual needs over general zones:** Some respondents suggested that individual needs and preferences should be prioritized over general zoning regulations. They feel that decisions should be made based on specific circumstances rather than broad planning zones.

  'How can you reconcile whole areas and the needs of particular individuals within them? Just like Soviet planners, the ACT bureaucrats are going overboard.' – Survey respondent

Other options

Survey respondents were asked for other options that should be used to identify different types of land and premises that should be subject to the regulation. The most common suggestions are outlined below.

- **Universal Application:** A large number of respondents suggested that the regulation should be applied universally, across all areas, without any zoning. They argue that

buildings can be all-electric now, and thus there's little reason not to apply the regulation universally.

> *'This should be a uniform regulation, so there is no need for zoning. Buildings can be all electric now, so there is little excuse.' – Survey respondent*

- **Suburb/District-based Approach:** Many respondents prefer a suburb or district-based approach rather than planning zones. They believe it's more practical and easier to understand for the public.

> *'Suburbs/districts should be used, as there's no point excluding some houses in a street if they are zoned differently, the infrastructure would still need to be there. Much better to not have to put it in in the first place.' – Survey respondent*

- **Consideration of Specific Business Types and Uses:** Some respondents highlighted the need to consider specific business types and uses that might depend on gas and have no cost-effective alternative.

> *'Type of business would be an important consideration. Some business types might depend on gas and have no cost-effective alternative.' – Survey respondent*

- **Pilot studies:** Some respondents suggested that pilot studies in selective areas could be performed ahead of more universal regulation to test the feasibility and potential impacts of the proposed regulation.

> *'After community consultation selective areas could be used for pilot study ahead of a more universal regulation.' – Survey respondent*

Key issue 2: Determining the types of land and premises to be included in the initial regulation

It is proposed that the initial regulation will not prohibit all new gas network connections in the Territory. This means that future regulations, or a staged approach covering additional land or areas, may be required. The ACT Government has a current preference to include all residential and commercial properties in the initial regulation.

Across engagement activities, there were mixed views about which land use zones should be included in the regulation. However, most participants indicated that residential and commercial zones should be included in the initial regulation, including many submissions from stakeholders, with a few suggesting that it apply to industrial areas in the near future (one stakeholder submission suggested a 5-year transition period).

The most commonly mentioned benefit of including residential land or premises in the regulation was preventing households from being locked into a diminishing gas network, avoiding rising costs and future requirements to convert to electricity.

The most commonly mentioned benefit of including commercial land or premises in the regulation was the fact that commercial gas users tend to have higher use, so preventing gas use in that context would provide a greater reduction in emissions. It was noted by several participants that the main challenge for commercial users would be the time and perceived complexity of moving a business to be all-electric.

> *'Time it takes to transition a business to a different energy source and whether there is an economically viable alternate energy source'- Webinar participant*

Some participants suggested the regulation should apply Territory-wide, particularly in the context of where the highest gas users (by volume) are situated.

> *The Issues Paper states that 'other land uses, such as industrial will be included in future regulations or a staged approach'. Why should this be the case when the Issues Paper also notes that 'most new businesses can meet their energy needs today with energy efficient electrical appliances' and that without regulation we could expect 'about 200 new small commercial customers, 14 new large commercial customers and 1 new industrial process customers per year' to connect to the network? – Stakeholder submission*

It was also suggested by a few stakeholders that the commercial sector, including business and the building industry, has had adequate time to prepare for a transition away from gas,

and that from an environmental and social perspective, it's inequitable to expect the community to continue to bear the increasing cost and impact of fossil fuel gas use.

Some participants indicated that it will be important to look at where the network connections are 'and be strategic about where the regulation applies. For example, some suburbs might be right near connections so they should go all electric, but it might not be practical for other areas.' There were also a few suggestions that the exemptions process may be a better option for dealing with exceptions, rather than excluding entire planning zones.

The idea of phasing was raised by some participants, for example, starting with new residential developments, then commercial and industrial units.

Key issue 3: Application of the regulation to greenfield and infill developments, including renovations and knock-down rebuilds

It is important that the regulation is clear and consistent in its application.

We consider that the best way to ensure that the regulation is equitable across the ACT is to prohibit new fossil fuel gas connections in both greenfield and infill developments, including knock-down rebuilds and renovations where the mains gas connection is removed.

If the regulation is not applied to new infill developments, a large number of consumers will move into these buildings into the future and will be locked into the gas network, with its higher costs and creating new emissions which are entirely avoidable.

However, we know there are also some impacts to businesses and industry that need to be considered. For example, preventing no new gas in both greenfield and infill developments will have an impact on the gas fitting industry in the ACT, and on gas reliant businesses. New businesses that rely on gas may need to establish in an area where a gas connection is already available, or to consider alternative energy sources, such as plumbed LPG.

All written submissions that provided feedback on this issue agreed that the regulation should apply to all greenfield and infill developments. This view was supported across other engagement activities. Many agreed that this approach is most aligned with the intent of the regulation and would help to prevent future inequalities in the community, support improved planning and provide clarity about the future Pathway to Electrification.

> *'Yes – because if gas is allowed, then you are locking in gas assets for another 20 years – which is not good. Plus you are locking in the building owner to have to retrofit at a later date'- Webinar participant*

> *'To give certainty to the market, achieve the aims of the policy, and ensure that it is a fair process, I think that it should be both.' – Stakeholder workshop participant*

Where survey respondents believed the regulation should apply differently to new and infill developments, the reasons most commonly cited were:

- that existing infrastructure should be utilised rather than left unused or decommissioned, which they perceive as a waste of resources
- concerns about that disconnecting existing customers would impose more costs on the remaining customers and potentially render the gas industry unviable, which could lead to increased costs for everyone connected to the network
- that homeowners should have the right to choose whether to use gas or electricity, and any regulation that restricts this choice is viewed negatively
- doubts about the capacity of the electricity grid to meet demand, especially during peak usage times.

There were several suggestions from stakeholders about the implementation of this aspect of the regulation, mostly to ensure it is applied consistently and, while leaving room for reasonable exemptions, provides a firm and clear advice about the requirements. This included:

- setting minimum energy efficiency standards for builders, encouraging the use of on-site renewable energy generation, and offering incentives for sustainable building practices
- updating zoning and land-use policies to encourage sustainable infill development and discourage urban sprawl
- ensuring clarity about the inclusions and exclusions to support planning and avoid confusion
- considering protections against retrospectivity for existing approvals and any identifiable exemptions, like commercial kitchens within greenfield mixed- use developments
- ensuring clear policy guidance and financial support for retrofitting
- limiting disparity between suburbs in the application of such a change, to avoid distorting the housing market.

Survey respondents were asked for their views on options for how the new regulation should be applied. Views were divided about each of the proposed ways it could be applied. However, the most strongly supported method (51% agree, 35% strongly) was that ‘no new gas connections should apply to both new developments and in-fill developments in the same way (including knock-down rebuilds or renovations where the gas connection is abolished).

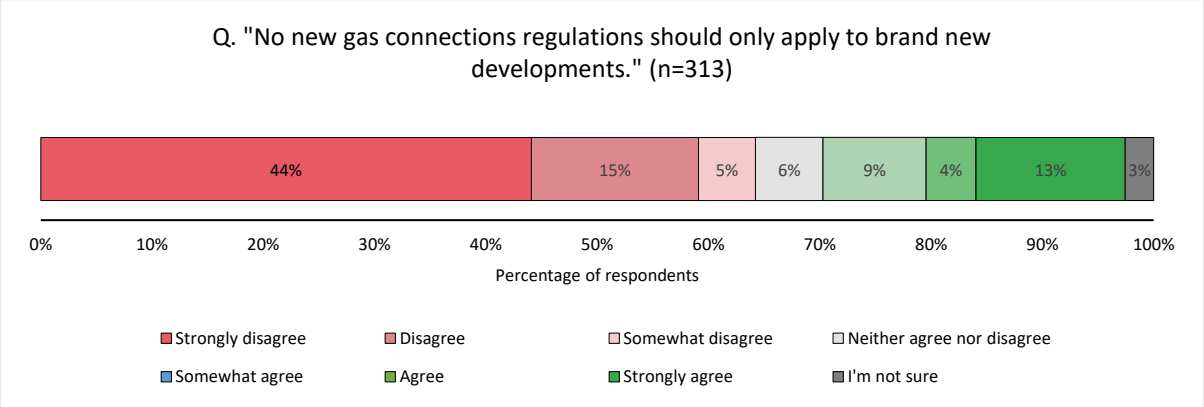


Figure 3 application to brand new developments

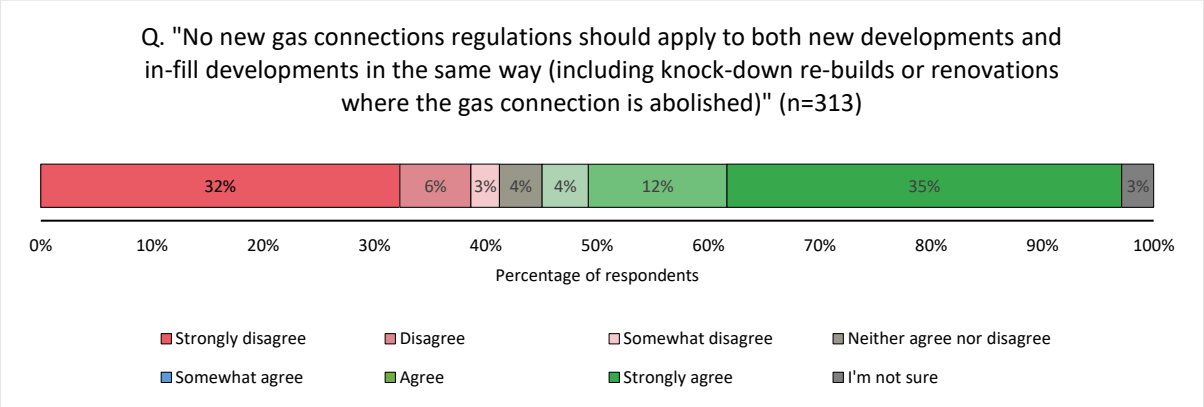


Figure 4 application to new and in-fill developments

Application of the regulation to knock-down rebuilds

In general, there was also strong support for the regulation applying to renovations and knock-down rebuilds. However, there was the suggestion by some stakeholders and community members that the proposed threshold for when the regulation applies to knock-down rebuilds (if the gas connection is abolished for safety reasons) is insufficient. Some indicated they would expect the knock down process to include compulsory removal of the gas connection, and that any renovation involving rooms or areas with gas appliances should require those appliances to be replaced with electric alternatives.

> *'Yes, as this is a key opportunity to make this transition when other significant changes are being made to the building fabric. This should also apply even if the gas connection is not abolished' – Webinar participant*

It was also noted by some stakeholders that other, related regulation is triggered in relation to major renovation works when 50% of the building being renovated, although it was acknowledged that this may not always be relevant with the new regulation i.e. it is possible

to renovate more than 50% of a building without the need to interact with any gas appliances.

In relation to renovations, the need to consider the impact for both single dwellings and multi-unit dwellings was also raised, in particular the challenges associated with electrifying existing apartment buildings.

A few stakeholders noted that the regulation should only apply to renovations and extensions where it does not cause delay or re-design on projects that have already commenced or been approved, and should not impose unreasonable cost. It also should not present a barrier to greater investment, renewal or development of new housing, (especially public, social and affordable housing) in the ACT.

Some community members' views were slightly more mixed in relation to whether the regulation should apply to knock-down rebuilds. In addition to the views expressed more broadly (and summarised above), other views included that:

- The regulation should apply to both, however noted that if it applies to knock-down rebuilds it might deter some people from renovating.

  'I agree that it should apply to both, however, this may possibly put some people off renovating their homes.' – Community workshop participant

  'They should be encouraged to not rebuild incorporating gas. If we are phasing it out, we shouldn't be dancing around it, even if the infrastructure is there.' – Community workshop participant

- *The regulation should apply to new developments, but not to infill, because the gas infrastructure is already there, and the work required to transition to electricity would be too significant.*

A small number of people disagreed that the regulation should apply to knock-down rebuilds, as it should be a matter of personal choice.

> *'I get what people are saying, but I do like choice. I wonder if we can achieve the desired impact through the new developments and other people taking their own initiative to stop using gas, while allowing those few that feel strongly about it to continue.' – Webinar participant*

Key issue 4: Exemptions to the regulation

There may be circumstances where an exemption from the regulation is needed. This could apply, for example, where electric alternatives are not available or feasible, or to a particular mapped area for a specific period of time.

Costs associated with new connections are likely to increase once a regulation is in place. This means that if an exemption were granted, the cost of the connection is likely to be higher once the exemption is lifted.

The ACT government's preference is that exemptions are limited to circumstances where alternatives are not feasible.

Most participants, including those who provided written submissions, agreed with the need for an exemptions process, and that broadly exemptions should be limited and only apply where there is not yet a viable, electric alternative. It was also considered important that exemptions do not allow any new gas connections where there isn't an existing network and that the regulation should not include blanket categories of exemptions or deferrals.

> *'Only businesses that can make the case that they absolutely can't run their operations using only electricity' – Webinar participant*

> *'Where a business can, it should (and will). But business, particularly small and medium businesses, need time to transition. So, an exemption in the first instance, for a specified time is sensible' – Webinar participant*

Some participants also suggested that some residential land could also be excluded, for example high-rise mixed use commercial and residential buildings – where a café in the building has a gas connection, the apartments could also be excluded from the regulation.

Some stakeholders were less supportive of a stringent exemptions process, suggesting a need to consider exemptions where discontinuing gas use would have an economic impact on a business or industry, or where application of the regulation would result in increased LPG use. In the context of commercial laundries, an increase in single-use products (where reusable alternatives cannot be effectively laundered) was also raised.

> *'A related outcome is that without gas, we face the perverse situation where single-use healthcare products replace the reusable garments and textiles that we currently hygienically clean. The burning or landfill disposal of such single-use healthcare products poses significant negative environmental outcomes. These are important considerations for this Pathway, that the electrification doesn't lead to more waste products.' – Stakeholder submission*

This issue of businesses moving to another location to avoid being subject to the regulation was raised by a few participants.

> *'Any manufacturing businesses. Or they will simply move to NSW' – Webinar participant*

A preference to concentrate exemptions to particular geographic areas was raised, to manage maintenance and other ongoing network costs.

It was suggested that usage-based exemptions should be assessed on a case-by-case basis and take into account the technological landscape, the economic feasibility of alternatives to gas, and the capacity of the electricity grid to support the activity.

The most common types of land or premises that survey respondents thought should be excluded from the regulation were existing homes (46%), industrial areas (44%) and small business premises (40%).

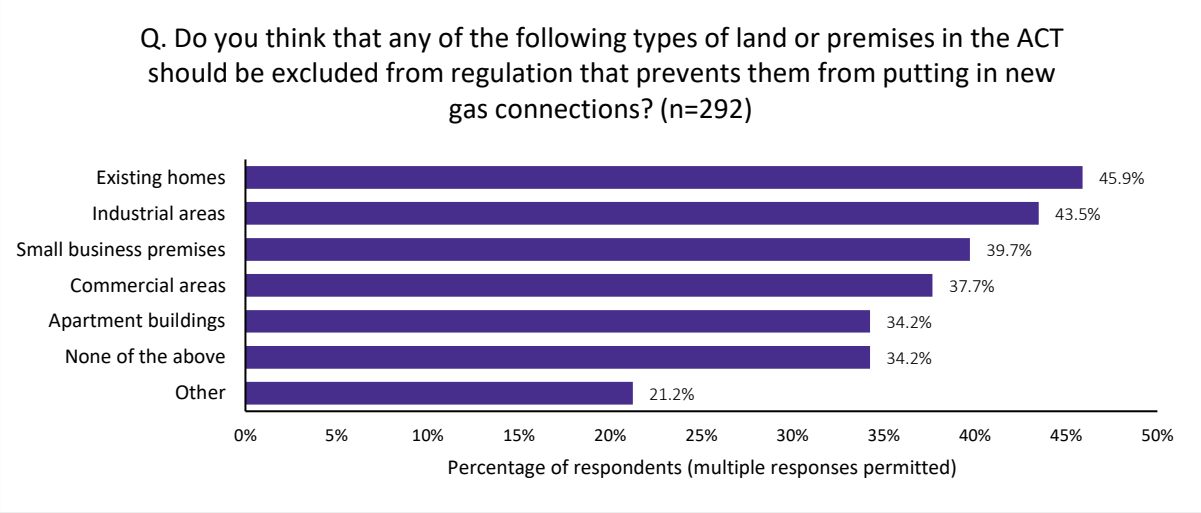


Figure 5 types of land or premises that should be excluded

More than half of respondents (53%) thought that there were activities that would need to use a new gas connection now or in the future.

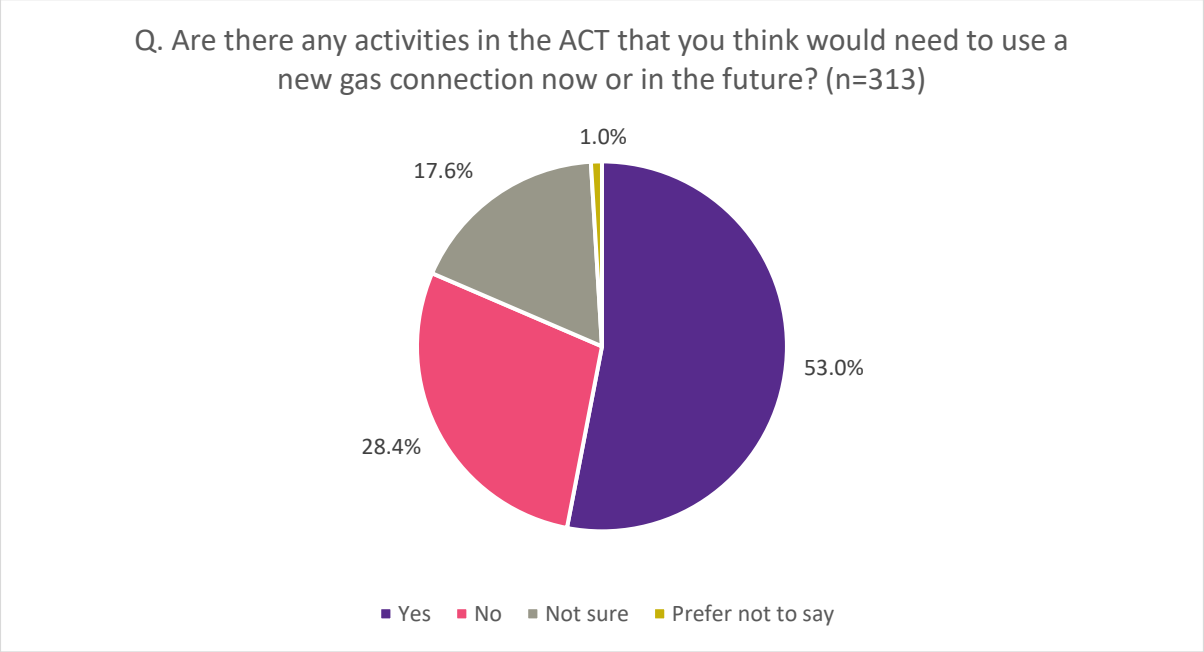


Figure 6 activities may need new gas connections in the future

The most common activities that respondents thought may need new gas connections are outlined below.

Cooking (Residential & Commercial): Many respondents identified cooking as a key use of gas, especially for households and commercial kitchens in restaurants and cafes.

Heating: Heating, both residential and commercial, was frequently mentioned as requiring gas, either for space heating or water heating.

Commercial & Industrial Processes: Some respondents highlighted specific industries or commercial processes that require gas due to their high-intensity heating needs or other process-specific requirements e.g., science labs, glass making, welding, metal working, chemical production.

Energy Supply and Backup: There were a few responses that suggested gas could be important for energy supply, especially as a backup when electricity is unreliable.

> *'Depending on the capacity of the grid and the availability of renewable power storage there may be a short fall in power so gas should be a backup for people' – Survey respondent*

Residential and Commercial Development: Some responses suggested that new residential and commercial properties may need gas connections for various uses.

Specific Businesses: Some specific business types, such as restaurants, breweries, and certain manufacturers were mentioned as needing gas for their operations.

'Breweries currently struggle with non-gas tech to boil water' – Survey respondent

Outdoor Activities: A few responses suggested that outdoor activities, like barbecues, could require gas connections.

Hospitality Industry: Some respondents emphasized the need for gas in the hospitality industry, such as in commercial kitchens and functions centre kitchens.

Exemptions for businesses or industries

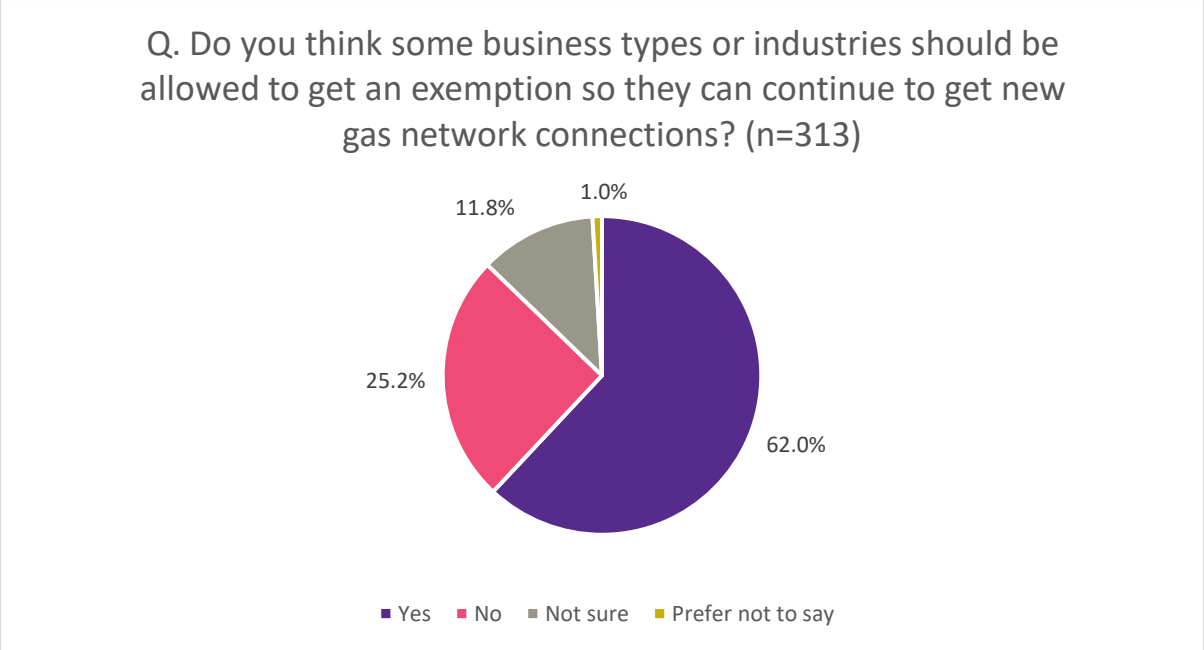


Figure 7 exemptions for some types of businesses or industries

62% of survey respondents agreed that some business types and industries should be exempt from the regulation. Most commonly, commercial and industrial land uses were referenced when discussing where exemptions might apply. Specific industries, sites and processes that were cited as potentially requiring an exemption included:

- Commercial laundries
- Biomedical waste incineration
- High heat manufacturing
- Emergency Services and the hospitals
- Where it's difficult to transition multi-unit dwellings
- Educational institutions, for example schools with science labs and CIT trade schools
- Glassworks
- The National Gallery, Library, Archives and Museum
- Emergency energy supply

How long should the exemption apply for?

Most survey respondents (45%) thought that if an exemption was granted, it should apply for more than 10 years. The second most common suggested length was 1 year.

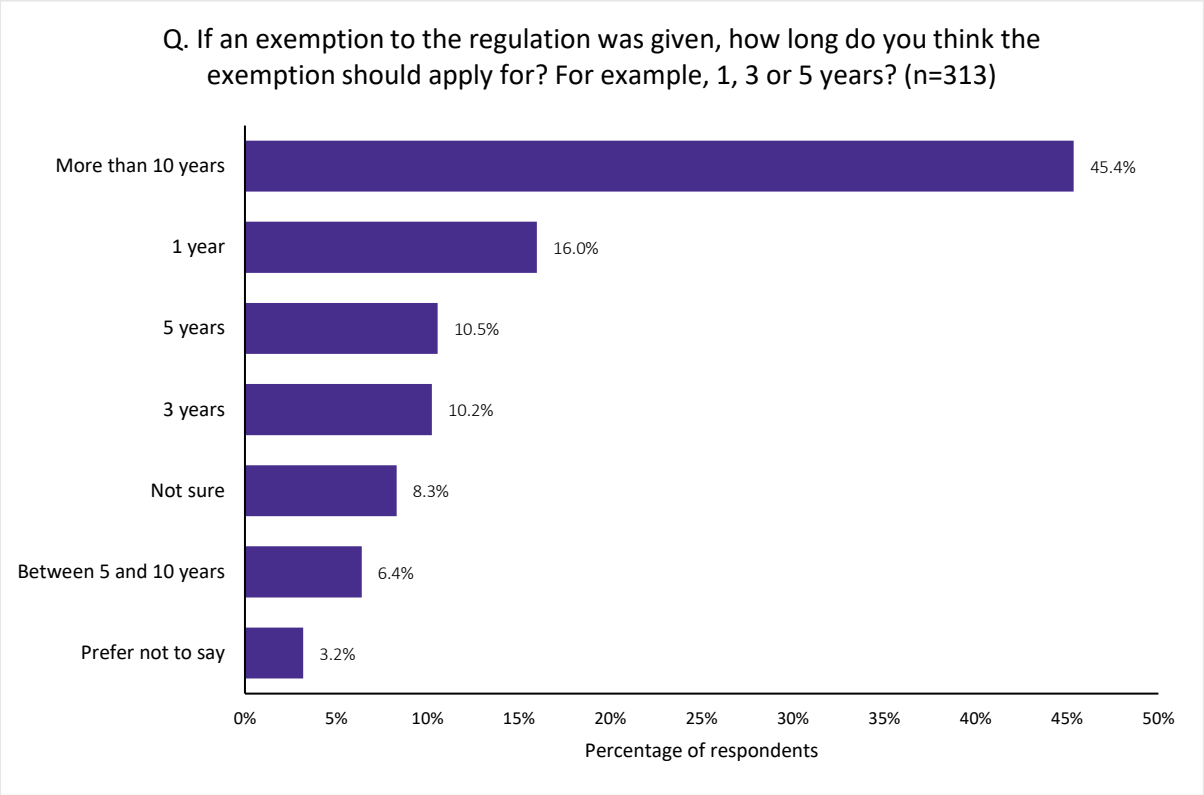


Figure 8 length of exemptions

Across other engagement activities, a few indicated that a 3-5 year time period would be reasonable when granting an exemption, while some other suggested 1-3 years. In both scenarios, it was noted that timeframes for likely technological advancements should also be factored in. Some community members and stakeholders suggested that the applicant should need to demonstrate a pathway away from gas, and exemptions should be aimed at commercial and industrial users who are seeking connection near the secondary high-pressure network and where other emission offsets could be specified.

> *'You should only get an exemption if there is no other genuine alternative to gas. With that being said, the exemption should be reviewed on a regular basis (every 2 years) and once a viable electrical alternative is available, the exemption should be revoked (after a transition period).' – Community workshop*

Payments for exemption assessments

Some participants indicated that the assessment process for exemptions should be funded and managed by the ACT Government, with any costs associated with delivering and maintaining a gas connection to be cost recoverable by the supplier. Others felt it should be

paid by the business (where relevant), in a similar process to applying for Development Approval.

> *'The applicant should bear the full cost of any exemption. There should be zero subsidy for attempts to avoid prohibition of gas use.' – Survey respondent*

> *'It depends on the type of exemption. If there is no genuine alternative, why should they (the business) have to pay. The application cost should be low but a charge for approval should depend on why they need it.' – Community workshop*

Some participants thought the cost should be shared between the government and the applicant. It was also raised that there should be a different application process for individuals and households, business and industry. In the case of exemptions for individuals, the ability of lower income households to over the cost of the application should be considered:

> *'There is probably some concern about adding a cost to a vulnerable resident who needs to apply for an exemption, again an equity issue.'- Stakeholder workshop participant*

Some stakeholders suggested that an application for an exemption should be made prior to receiving Development Approval (where relevant).

Key issue 5: Reporting

Making sure that the gas network operator gives relevant information to their customers could help people make decisions about the best energy choices for their homes or businesses. The types of information that could be provided to existing or potential customers might include:

- an information sheet about the future of the gas network in the ACT, and / or
- facts about fossil fuel gas emissions, consumption and connection figures.

This could be provided at the time of a connection request.

The gas provider could also be required to report to the ACT Government things like information about all new fossil fuel gas connections made including the location, type of building the connection was made to and, if the information is available, the purpose of the connection.

There was strong support from all stakeholders and community members for the proposed requirement for the gas distributor to both provide information to customers about the future of gas in the ACT and report new connection information to the ACT Government (including location, number and type of connection).

Most respondents were not concerned about gas providers being required to provide information about new gas connections to the ACT government.

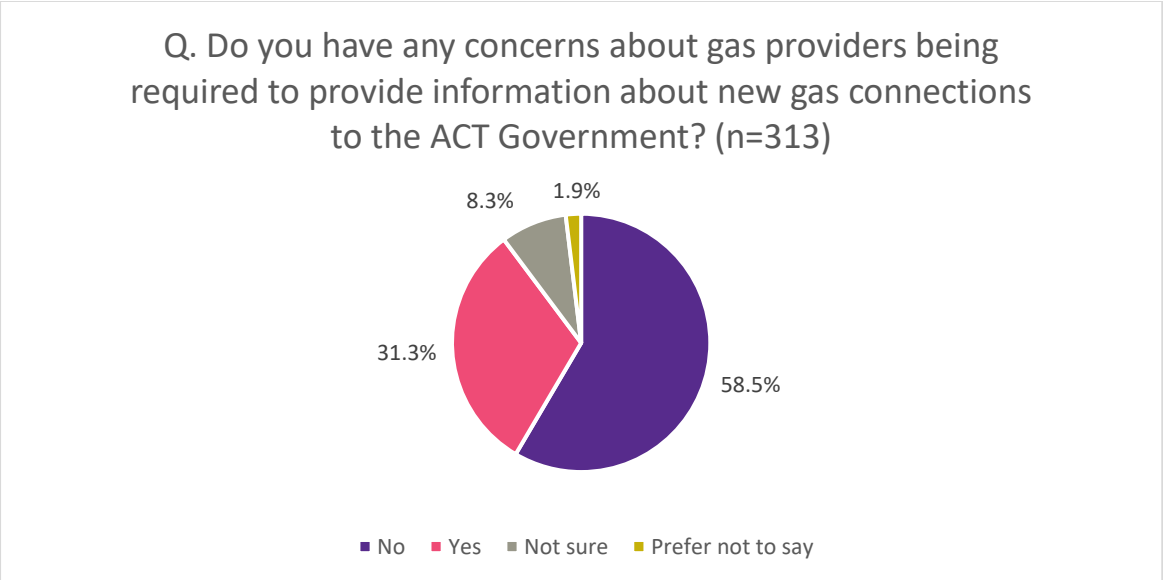


Figure 9 concerns about gas providers providing information about connections to the ACT government

This was supported across over engagement activities, with most participants agreeing that gas providers should required to provide information about new gas connections information to the ACT government for transparency.

'Knowing how much gas is being used in the area, or information on how it is changing in the area (becoming less as a used item), would be helpful, to make a planned future transition… as it would be an expense that I am not keen to experience.' – Webinar participant

Some stakeholder views noted that the cost of providing granular data to the government, including upgrades to software and data systems, should be recoverable from the ACT Government by the gas provider. There was a suggestion that reporting requirements should only apply where the benefits of providing the information outweigh the cost of doing so.

It was also noted that reporting about new gas connections, as well as information about the ACT's progress on the Pathway to Electrification, should be made public.

Most survey respondents (67%) thought that gas providers should provide information about the future of the gas network in the ACT as part of routine communication (e.g., with each bill).

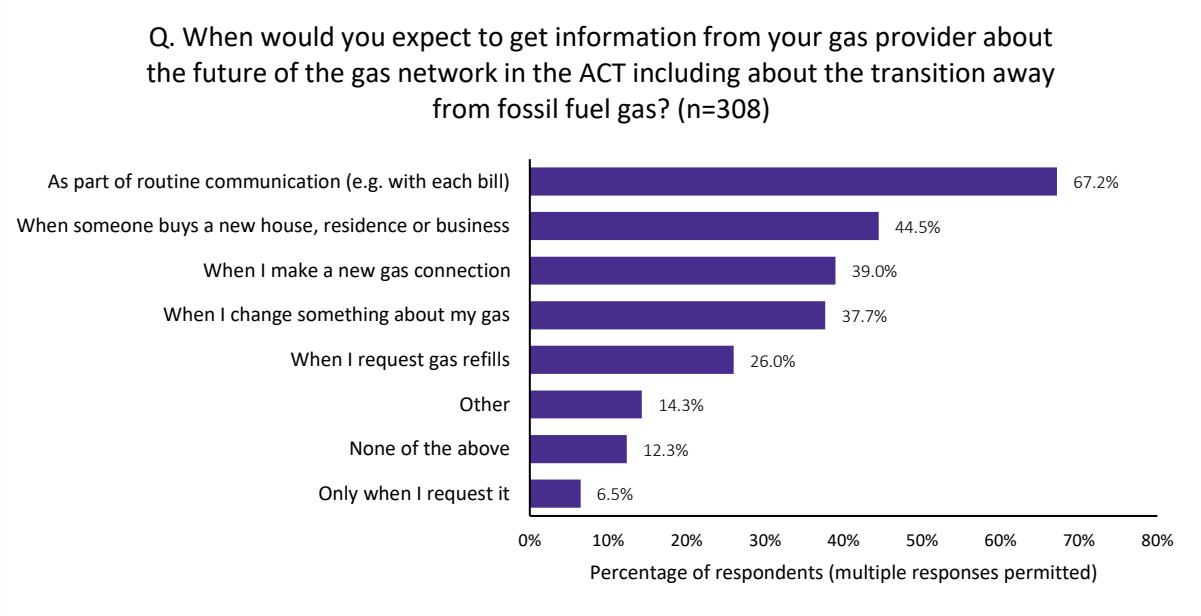


Figure 10 when gas providers should provide information about the future of the gas network

In relation to information to customers, suggestions included:

- clear information about the future of gas in the ACT, including timeframes
- gas and electricity price comparisons

- detail about gas use by area
- emissions information.

> *'My first thought on this is, the cost now and the expected costs year on year so I can make an informed decision as a prospective or existing customer.' – Stakeholder workshop participant.*

One stakeholder suggested it is the role of the ACT Government and energy retailers to provide this information. The role of real estate agents in providing this information was also raised by a few participants.

> *'(We) do not have a direct relationship with customers and do not have access to information that would support customers in making fully informed energy choices for their homes or business. This role is more aligned with the role of retailers and energy solution providers.' – Stakeholder submission (gas network provider)*

> *'Real estate agents provide advice to homeowners about preparing properties for sale/rent. This should include electrification to future-proof the property, then spruiking this in sales pitch' – Webinar participant*

Key issue 6: Commencement date

It is proposed that a regulation will commence by November 2023, or as close to this date as possible.

It is important for us to understand community views and impacts on whether the regulation implementation should be phased for different types of developments.

Across all engagement activities, there was strong support for a regulation commencement date of November 2023. This included among stakeholders who provided a written submission. Most commonly, participants noted the importance of the regulation commencing as soon as possible in order to achieve the policy outcomes.

> *'The proposed commencement should be adhered to as the sooner it starts the better it is for the policy objective.' – Stakeholder workshop participant*

Concerns about the regulation commencing in November 2023

Several stakeholders and community members across engagement activities suggested that the regulation should apply uniformly across all new developments at the same time to avoid confusion and to ensure fairness. However, others suggested a staggered approach, depending on the complexity of the building or development, with more complex projects like apartment buildings or commercial premises starting earlier.

Reasons for requiring a phased approach included:

- managing an increased stranded asset risk where reticulation has already been completed
- allowance for buildings where development approval has already been provided
- to allow for a progressive introduction based on the density of housing or the type of land use, starting from high to low density
- providing sufficient time for the workforce to adjust and re-skill
- impact of the regulation on the supply chain
- allowance of time to resolve the issue of retro-fitting multi-unit dwellings
- a flexible introduction, depending on various factors such as the preparedness of different sectors or the capacity of the power grid.

It was suggested by a few submissions that a reasonable transition time would be 1-2 years.

Survey respondents were asked the extent to which they were concerned about particular factors was introduced in November 2023. Respondents were divided about how concerned they were about higher development costs with 40% very concerned and 39% not concerned.

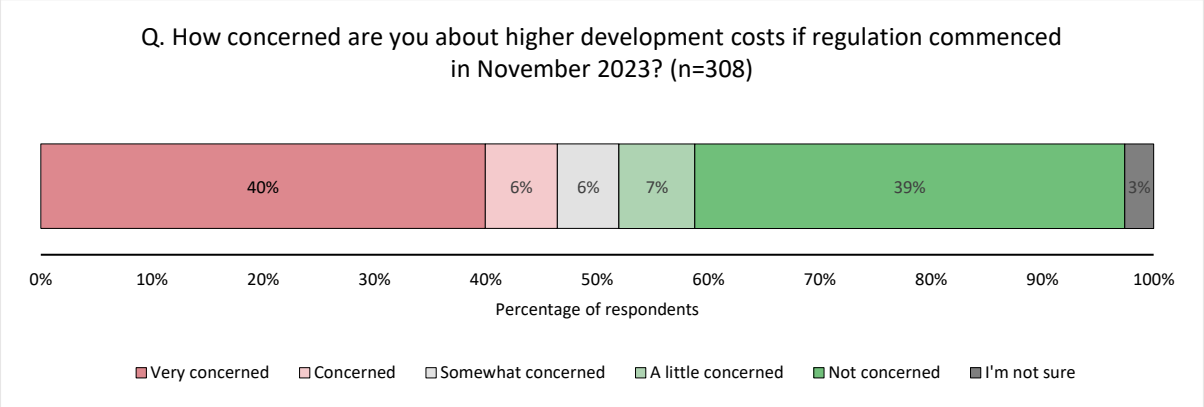


Figure 11 concern about higher development costs

42% of respondents were very concerned about the impacts of the regulation on jobs and workforce in the ACT if the regulation commenced in November 2023. 31% were not concerned.

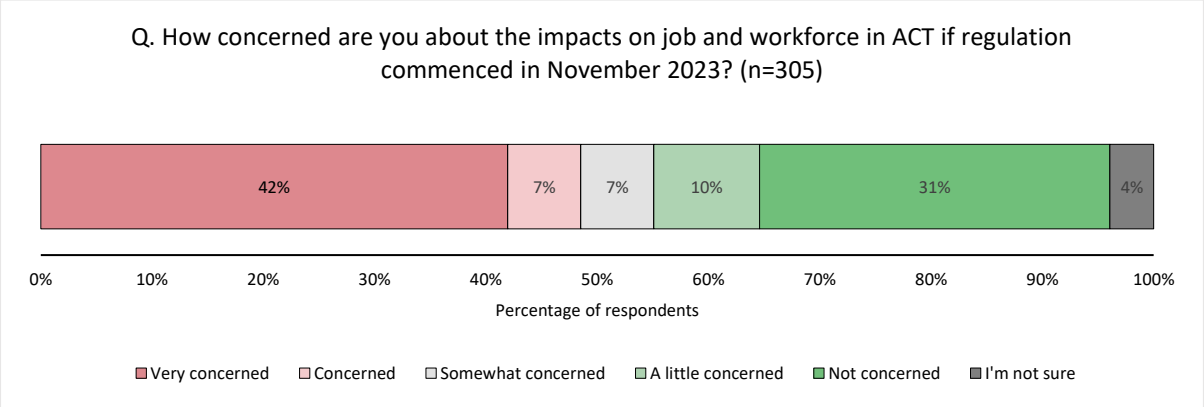


Figure 12 concerns about impacts on workforce in the ACT

43% of respondents were very concerned about the impacts of the regulation the ACT's economy. 38% were not concerned.

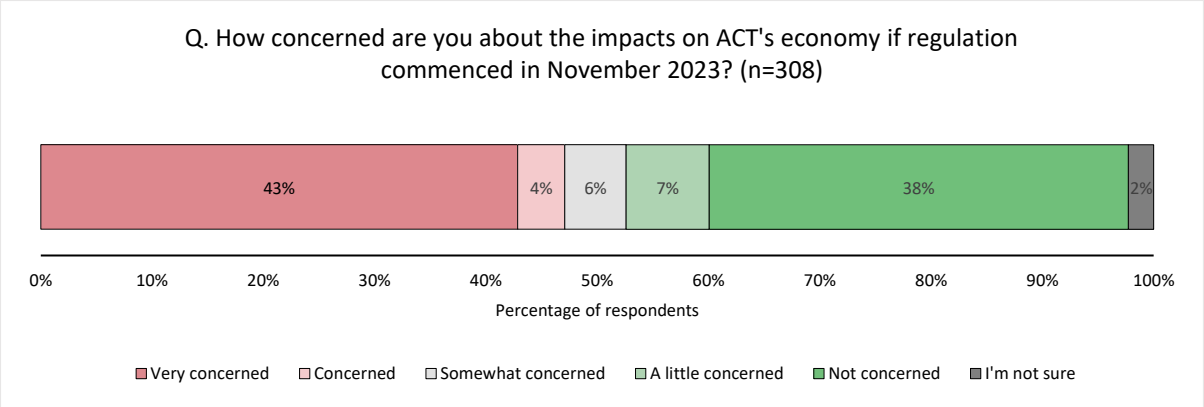


Figure 13 concerns about impacts on ACT's economy

Participants across engagement activities most commonly provided the following insights about what they think needs to be considered about when the regulation comes into place.

- **Timing and Notice:** Many respondents emphasized the need for sufficient notice before the regulation takes effect. This would give homeowners, builders, and businesses time to adapt to the changes and make informed decisions about their energy use and purchases.
- **Infrastructure and Availability of Alternatives:** Several respondents expressed concern about the readiness of alternative energy sources, particularly the reliability and capacity of the electric grid. They suggested that the regulation should only be introduced once these alternatives are reliably in place and can meet the demand.
- **Impact on Different Stakeholders:** Respondents suggested that the regulation's commencement should consider its impact on various stakeholders, including homeowners, landlords, renters, tradies, and energy providers. There was also a call for support mechanisms for those impacted, such as upskilling opportunities for gas workers and protections against arbitrary price hikes by energy companies.
- **Financial Implications:** A common consideration was the financial impact of the regulation, particularly on low-income households. Respondents suggested that the regulation should be implemented in a way that minimizes financial burden, possibly through phased implementation, financial assistance, or other supportive measures.
- **Workforce:** Respondents suggested that the introduction of the new regulation needs to be accompanied by comprehensive plans for workforce transition, particularly for those currently engaged in gas-related industries. Respondents emphasized that the regulation should only commence once these supports are in place, to prevent disruptive effects on the livelihoods of affected workers.
- **Impact on the ACT economy**. For example, businesses may choose to establish in nearby towns like Queanbeyan who won't be impacted by the new regulation.
- 'Because it will impact potentially on current contracts (reducing business income/profit) and future business growth' – Stakeholder workshop participant
- **New apartments** applying for Development Approval should be considered for inclusion in the regulation first, but only once a 'shut off' date is confirmed.

  'There should be a transition period for apartment style developments with a clear pathway for compliance.'- Stakeholder workshop participant

Key issue 7: Transitional matters and other considerations

This issue is about making sure the introduction and timing of the regulation considers the impacts on key groups and how these can be mitigated. These groups include building and construction, trades, and developments with existing approvals.

The most common issues raised across engagement activities about transitional matters and other considerations were the impact of the regulation on the workforce and supply chain, the handling of builds that already have development approval and the impact on individual rights.

Workforce and supply chain

Stakeholders suggested that significant investment is required in training and education to support capacity building within the gas-fitting industry, including support for people currently employed as gas-fitters to re-train as electricians or move to plumbing work.

> *'Because it could impact people's livelihoods. We need this to be a just transition. Might mean training for people to transition to new electrical work' – Webinar participant*

Most commonly, survey participants suggested the following skills and training would be needed to support a regulated environment where all new buildings will not have gas network connection:

- Electrician training
- Retraining of gas fitters
- Air conditioning and refrigeration skills
- Regulatory and licensing knowledge
- Energy efficiency knowledge
- Renewable energy systems skills
- Knowledge of electrical appliances and heating systems
- Apprenticeship programs.

The existing skilled labour shortage was raised, and it was highlighted that the transition away from gas will place additional demand on an already stretched workforce. It was also noted that a re-training process takes time – typically apprenticeships take 4 years – and that funding as well as incentives from the ACT Government for people work in Canberra would be needed to effectively support this.

Some participants indicated that the key skills and training needed to support the transition are subsidised electrical apprenticeships and trades, in particular the importance of supporting the gas fitting workforce to re-skill. To do this, participants suggested there needs to be government subsidised or free training available for gas fitters to re-skill in a new trade.

'The government should help those impacted through free training and upskilling for the current workforce.'- Community workshop participant

Other suggestions included:

- Provide more support for small businesses to take on junior apprentices will help to manage the risks and costs associated with people in the early years of a trade.
- Shorter apprenticeships, particularly for electricians, will help get people into the workforce faster.
- Incentivize mature age apprentices. One participant emphasised that 'they come across from another industry, and they are productive, but businesses can't afford to keep them on. Need subsidies to do this. Should be an avenue that's explored'.
- Amend rules around restricted licences so electricians can do things like changing gas heating to reverse cycle heating and cooling (which they can't currently do).
- Provide gas fitters with incentives to encourage them to stay in the industry until the transition is complete (or there will be a shortage of gas fitters and it will become a very expensive service).

Community members and stakeholders were also concerned about the impact on building and development costs, including supply chain issues. This includes financial, resource and time costs.

'We are concerned about higher development costs, making it more difficult for CHPs to provide housing, and similar for build to rent developments. We are also very aware of the need to balance this with potential transition costs in the future if gas is installed at the outset.' – Stakeholder workshop participant

'My new build is currently running 12 months behind because of skills shortage and supply chains. I am planning gas and house was designed for it.'- Webinar participant

Handling of existing Development Approvals

In general, across most engagement activities participants agrees that developments with existing approvals should be given a choice and encouraged to change their plans from gas to all-electric.

74% of survey respondents agreed with this.

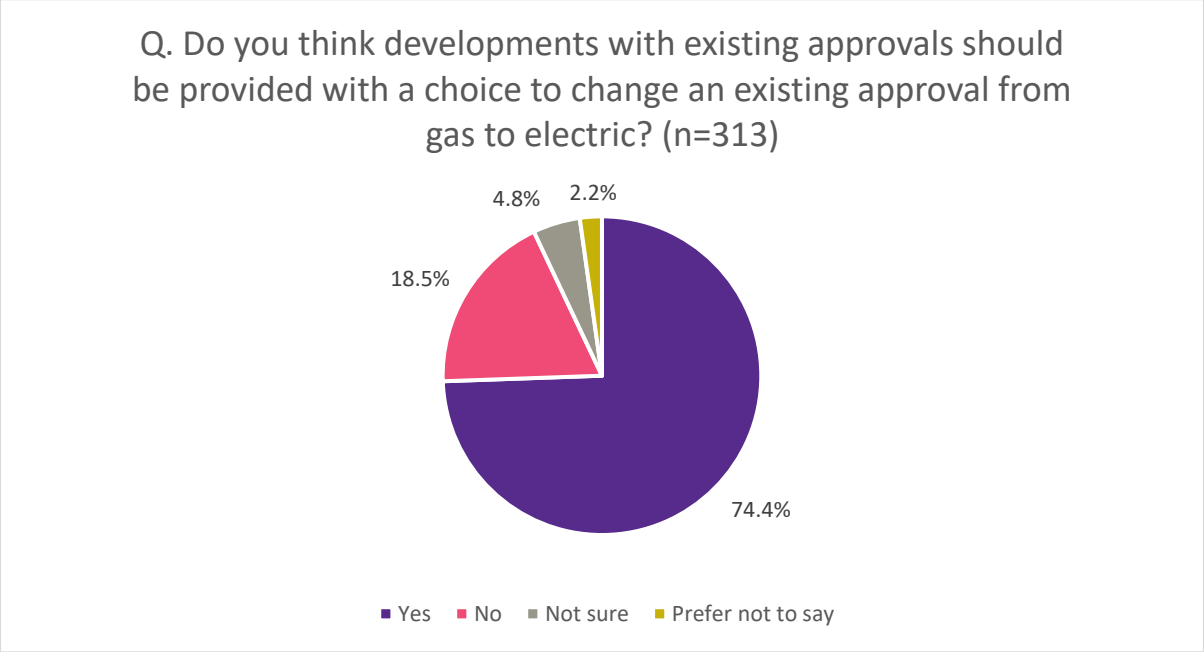


Figure 14 should existing approvals have a chance to change from gas to electric

Participants across engagement activities were asked if there were any impacts they would be concerned about if developers were encouraged to change approvals. The most common responses are outlined below.

- **Cost Implications:** Many respondents expressed concern about the potential increased costs, which they expect would be passed on to the property buyers or the public. This is a significant worry as it would add to the financial burden of buying a house, especially amidst rising interest rates and overall housing unaffordability.

  'I think they should be given the chance; however the costs should be waived, and maybe have some incentive like subsidies to make the switch more appealing.' – Community workshop participant

  'I agree that existing DA's should be given the opportunity to reconsider, however this may prove difficult for finance arrangements and pre-sales.'- Stakeholder workshop participant

- **Delays and Complexities in Development:** Respondents were worried about possible delays in construction and the complexities associated with changing from gas to electricity. This includes the time it would take to renegotiate contracts, resubmit development applications, and possibly rewire or retrofit buildings for electric appliances.

'Medium to high density developments will struggle with timings in some instances as changing to all electric could trigger a substation onsite or increasing the size of the proposed substation delaying construction significantly.'- Stakeholder workshop participant

- **Loss of Choice for Consumers:** Some respondents were concerned about the loss of choice for consumers, who might prefer gas for various reasons such as preferred methods of cooking where gas is considered better. Forced changes were seen as a restriction on the rights of people to choose their preferred energy source.
- **Government Intervention and Regulation:** Concerns were raised about the government's role in this change. Some respondents perceived the change as unnecessary government intervention that could cause cost overruns and delays. Some respondents felt that the government should bear the cost of the changes, or at least provide incentives or supports to encourage the transition.

Some participants suggested that changing existing approvals should only occur if building had not yet commenced.

'If they haven't started building yet, they should be encouraged to change.'- Local community councils workshop participant.

Conversely, there was also a view that it would be more aligned with the intent of the regulation to eliminate fossil fuel emissions to require all developments, including those already approved, to change to electrification. The risk of delay to construction and potential housing supply was seen as less than the risk of locking in any new construction to the gas network.

'Factors such as supply chains and workforce should be dealt with as separate issues and should not have bearing on the implementation of this regulation nor be used to justify phased start dates' – Stakeholder submission

Impact on individual rights

While not an issue that often arose organically across other engagement activities, some participants provided views on the impact of the regulation on the individual rights for people to choose how they power their homes and businesses. Of these, many participants strongly agreed that the benefits of introducing the regulation far outweigh the impacts on their individual rights. Participants also acknowledged that the regulation is needed to influence the transition required to make significant change.

'Our future outweighs our choice for gas and electricity. It is not a big infringement in the scheme of things.'- Community workshop participant

'I would rather take the personal hit - which is minimal for me anyway - and ensure a cleaner future for Canberra, than take issue with the regulation.' – Community workshop participant

Some participants indicated that while they understand the reasons for introducing the regulation, they would prefer some choice.

'I would prefer to have choice in the society that I live in' – Community workshop participant.

52% of survey respondents were concerned that the proposed regulation may impact their individual rights.

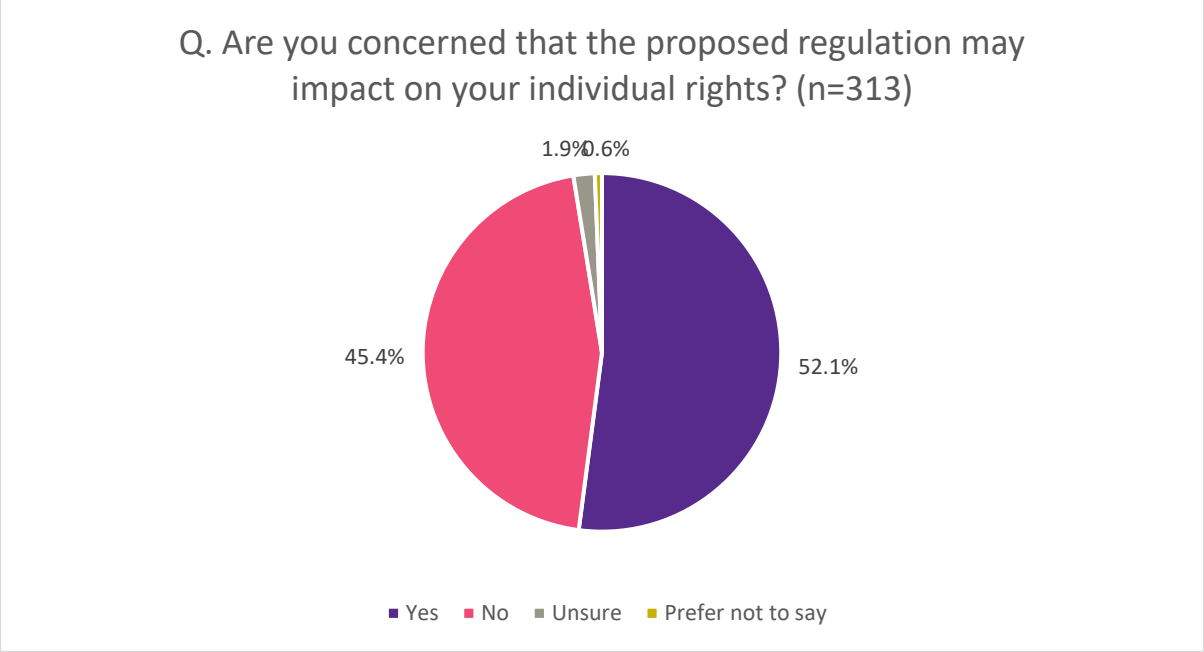


Figure 15 concern for impact on individual rights

Respondents were asked why they were concerned about the impact of the regulation on their individual rights. The most common responses are outlined below.

- **Loss of Freedom of Choice**: Many respondents feel that the proposed regulation is taking away their freedom of choice when it comes to energy consumption. They believe that they should have the right to choose what type of energy to use in their homes, including gas, and that the government is imposing its will by removing this option.

'It's my right to choose what energy I consume. We don't live in a communist country.'

- **Financial Burden**: The respondents are worried about the potential financial implications of the proposed regulation. They fear that the switch to electric energy might lead to increased costs for homeowners, especially those who are already struggling with the cost of living. Some also raised concerns about the potential impact (either increase or decrease) in property value due to the removal of gas connections.

  Impact on property prices - will it drive up the cost of homes in areas where gas is allowed? – Webinar participant

  'This will impact the price of gas over time and may impact selling on properties with existing gas connections.'- Community workshop participant

  One stakeholder emphasised that properties who remain on the gas network may de-value, and this should be taken into consideration and communicated to those property owners. The concern was extended to new all-electric builds de-valuing the older buildings in a particular area.

  'Every high rise in the (particular district) is gas powered. The new (all-electric) buildings will impact the old buildings…if all the new buildings have EV, the old buildings lose their value…so unless the old buildings have an ability to step up, the homes of all these people have just decreased (in value).'- Stakeholder workshop participant

- **Government Interference**: The respondents see the proposed regulation as an example of excessive government interference in their personal lives. They feel that the government is overstepping its bounds by dictating what energy sources they can use in their homes.
- **Loss of Reliable Energy Source**: Some respondents are concerned about losing access to a reliable and efficient energy source. They feel that gas is a reliable form of energy, and that the proposed regulation might leave them with less reliable or less efficient energy options.

  'You're clearly removing my right to a well heated home with instant and unlimited hot water and a very efficient way of cooking. It is a solution looking for a problem.' – Survey respondent

- **Ideological Disagreement**: Some respondents believe the proposed regulation is based on ideological beliefs rather than solid evidence. They see it as part of a larger push towards green energy and climate change initiatives that they may not necessarily agree with.

Other issues

Increase in LPG use

The unintended consequence of the regulation encouraging people to use LPG in homes and businesses was raised by several participants. The potential for higher emissions and health concerns were raised, in addition to market impact with bottled LPG potentially gaining a competitive advantage in the gas market.

> *'A perverse outcome would be for those customers to choose LPG (mostly propane), which has a higher emissions intensity than natural gas (mostly methane)…the natural gas network competes in the market with LPG cylinder distributers…the regulation may have a detrimental impact on competition and may therefore be at odds with national competition laws unless LPG distribution is also included in the ban on new connections.' Stakeholder submission*

> *'It is a major concern to potentially be forced to use LPG gas, as it is understood it is not as safe as the current use of the gas plumbed to households.' – Webinar participant*

Changes to processes

Some stakeholders provided suggestions for changes to or new processes to support the implementation of the regulation. One stakeholder suggested the creation of a fast-track assessments team to process development approval applications that are being modified to switch to all-electric.

The way the regulation interacts with other regulations and legislation should also be considered, for example the Planning Act, Building Act or National Construction Code. Some stakeholders felt that this should include prioritising approvals that would result in an all-electric outcome, even if this means other requirements are not met i.e. parking requirements.

> *Before drafting regulation, (we) recommend the ACT Government performs a deep dive into the potential interactions with other legislation, and identify any amendments required to support the implementation. Industry should be consulted on this to avoid any potential unintended consequences.' – Stakeholder submission*

Perceived environmental costs of electrification.

One submission suggested the ACT Government should consider approaches for managing the **waste aspect of gas appliances** being replaced, potentially before their end of life, and how to avoid them ending up in landfill (and having a perverse environmental impact). This concern extended to disposal of batteries, solar panels and wind turbines.

> *'… acknowledging the immense 2-fold environmental impact of lithium-ion battery production, and end-stage disposal. This is in addition to the enormous*

environmental impacts from the production and end-of-life disposal of solar panels and wind turbines. The UN defines e-waste as any discarded products with a battery or plug, and features toxic and hazardous substances such as mercury, that can pose severe risk to human and environmental health' – Stakeholder submission

The risk of electrification leading to increased emissions if there are delays or issues with investment in renewable electricity generation, transmission and storage, was also raised.

Information and guidance for households

The importance of clear information and guidance for households, business and industry about when and where the regulation applies, to bring the community along on the transition journey. This extends to information and education about the need for and benefits of switching to electricity.

'Despite the costs savings and health benefits, we are still getting push back from home owners wanting to install gas, mostly for HWS and cook tops. We have also conducted case studies on converting all gas homes to all electric, the results are astounding, yet when shown the costs savings they can't see past their mindset.' – Webinar participant

Early and sustained communication to those impacted in advance of, during and after the change coming into effect. – Webinar participant

One stakeholder raised the need for a residential apartment sector education program that promotes the benefits of electrification and engages owners, strata managers and building managers in pathways to converting existing buildings to all-electric.

ACT Government

Integrated Energy Plan

Integrated Energy Plan

Whilst the focus of the Issues Paper is to seek community feedback that will help shape a future regulation to prevent new fossil gas connections, we understand that the community is deeply interested in the broader energy transition, and the development of our 'Integrated Energy Plan'.

The Government will release a draft integrated energy plan in 2023, that will outline the governments proposed pathway to electrification. Community feedback will be sought on the draft plan.

The main themes arising across engagement activities in relation to the development of the broader Integration Energy Plan (IEP) were:

- Impact on households and vulnerable members of the community
- Management of infrastructure
- The need for ongoing community and stakeholder consultation
- Workforce and industry development
- Regulation and policy changes
- Timing of the IEP

Other issues of significance, although potentially out of scope for the IEP, were:

- Green gas/gas alternatives
- Health impacts

Impact on households and vulnerable members of the community

While in general there was strong support for the Pathway to Electrification among community members and advocates, it was noted by some that that the benefits of this need to be balanced with the costs to the community.

Cost to households was most commonly raised in relation to rising gas prices and appliance replacement costs. A few stakeholders suggested the need for a review of current financial incentives and subsidies, with one suggesting that ongoing assistance rather than a one-off payment could be required.

The cost for households to electrify their homes, and renters being locked into higher gas prices as they have no control over the energy source in their home, were raised as potential contributors to further inequities in the community.

'To get off gas now incurs a $900-$1200 fee. Less if the meter is left in place, but this is far from satisfactory. In a rental property the new tenant might reconnect even if electricity heating & hot water. The gas companies have made huge profits over many years. Shouldn't the retailers be obligated to fully remove the service at their cost to remove that cash barrier?'- Webinar participant

Many survey respondents also expressed the need for financial assistance to support the transition from gas to electric appliances, especially for low-income households and renters. Some suggested the need for increased financial incentives or subsidies, while others mentioned the need for government loans to support this transition. There was also a suggestion for the abolition of gas line costs.

A few participants suggested that these cost burdens support the case for a faster transition to an all-electric city.

'Note equity & vulnerability should be directly addressed by government. Surely right now removing barriers to those who can afford to move faster is the first step? - Webinar participant

Housing supply issues were also raised. Housing affordability or delays in construction may contribute further the housing crisis, and it was suggested that the ACT Government give consideration to preventing the creation of further barriers to housing on the Pathway to Electrification.

A few stakeholders highlighted the importance of understanding the impact of the regulation on low income and marginalised communities due to financial, cultural, information and language barriers.

'The vulnerable consumer will be most impacted. The financial impact of this must be considered' – Stakeholder workshop participant

Community members suggested that the things that would be most helpful to households that aren't able to switch to electric anytime soon are:

- extending the time they are able to remain on the gas network, and capping gas prices
- grants and partial or full subsidies to transition to the electricity grid
- interest free loans (in addition to those already available) and rebates to support purchasing electric appliances
- subsidised electricity
- higher feed in tariffs for solar.

'Are rebates or interest free loans being considered at all? That will be one of the first questions home owners will ask (as well as body corporates) as a number of home owners will need to upgrade their switch boards on top of replacing appliances. This will be a costly exercise.' – Stakeholder workshop participant

Management of infrastructure

Many respondents expressed concerns about the capacity of the existing electrical infrastructure to handle increased demand. They suggested the need for investments in renewable energy sources and infrastructure improvements to ensure a reliable and affordable energy supply. There were also suggestions for community batteries for solar storage and considering the supply of electricity for increasing demand.

A few stakeholders raised concerns about how relevant infrastructure would be managed over time. This included:

- reviewing the approach to allocating substations, both for the benefit of the community but also to plan ahead for growth and potentially reducing the need for exemptions
- sharing the cost of growth infrastructure across initial consumers and future consumers
- upgrading the electricity network to build resilience and reliability as more homes transition away from gas.

Some stakeholders raised concerns about handling of decommission the gas network and changes needed to the electricity network to support the transition to all-electric.

The costs associated with this were frequently referenced, with the suggestion that the cost burden would inevitably be passed to consumers and changes to network capacity would present a challenge for the gas industry to operate efficiently.

The capability of the existing electrical infrastructure was also raised, with one submission noting that the current transmission network is not yet ready to deliver what the ACT Government is asking of it.

'(The ACT Government should consider) the social, technical and economic challenge to effectively manage an orderly decommissioning of the gas network, including the synchronised build out of the electricity network, to ensure ACT consumers energy needs continue to be met.' – Stakeholder submission

One submission also raised the importance of having available energy alternatives and contingencies in case of emergency, natural disaster etc.

The need for ongoing community and stakeholder consultation

While this issue has been raised in the context of the regulation, it was also noted by several stakeholders and community members that the ACT Government should continue to work in partnership with the community and community sector about household impacts, and industry stakeholders about the detail of future initiatives.

> *'There needs to be greater awareness and engagement with the community regarding the system wide benefits of what it means to shift away from gas - the less obvious benefits and flow on effects' – Webinar participant*

Several survey respondents indicated the need for greater public education and communication regarding the benefits of renewable energy and the transition from gas to electricity. This includes educating households about the advantages of transitioning from gas to electric appliances and improving energy efficiency, as well as widespread communication about these changes.

Several participants suggested the most effective ways the ACT Government can continue engaging the community on the Pathway to Electrification is through:

- **Email Communication**: This is the most frequently suggested method. Respondents would like to receive regular email updates about the progress and developments of the ACT Pathway to Electrification project.
- **Surveys and Consultations**: Respondents showed a strong interest in participating in future surveys and consultations on this subject. They expressed a desire for their opinions to be heard in the decision-making process.
- **Public Channels and Government Communications**: Respondents suggested regular updates through various public channels such as government newsletters, the ACT Govt Newsletter, the 'Our Canberra' newsletter, and other news media (radio, newspaper).
- **Social Media and Online Platforms**: Many respondents suggested the use of social media and other online platforms (like the YourSay ACT platform) for updates and engagement. They also expressed interest in participating in public online discussions on this topic.
- **Community Involvement and Local Events**: Several respondents showed interest in being involved more directly, such as participating in local community consultations, focus groups, town halls, and stakeholder engagement meetings.

Stakeholders indicated that they would appreciate and expect to be involved in discussions and workshops around matters specific to their areas of interest.

> *'In the discussions, especially around the skills shortage and skills development space for the new and enhanced skills that will be required in this energy transition overall,*

also the OH&S implications for workers, for example we have been involved in your consultation around retro fitting insulation.' – Stakeholder workshop participant

'(We) will continue to be involved in conversations and consultations on the Integrated Energy Plan and to provide whatever input we can on supporting vulnerable and marginalised people through the transition.' – Stakeholder workshop participant

'These types of workshops are great to get a much better (and quicker) understanding of consultation papers. (We) are always keen to help out.' – Stakeholder workshop participant

'It would be good to be kept in the loop as much as possible to enable us to relay updates on the transition to local consultancy firms and contractors.' – Stakeholder workshop participant

Workforce and industry development

Some survey respondents highlighted the importance of a longer-term approach to developing a workforce capable of supporting the transition to electric systems, including training for green economy jobs like electricians and solar installers. There was also a call for a focus on the behaviour of gas suppliers and the need to incentivise and train more people in green economy jobs.

Regulation and policy changes

Several participants suggested that changes in regulations and policies should be prioritised. This includes implementing mandatory energy efficiency standards for rental properties, regulating new gas connections, more support for renewable technologies and adopting a phased approach to future regulatory measures. There was also a call for the government to stop the installation of gas in new suburbs and for incentives for building industry and other commercial enterprises to be offered incentives to transition away from gas.

Regulation for installing home insulation and regulating building codes to encourage more efficient home builds were also suggested.

Timing of the IEP

Some stakeholders disagreed with the sequencing of the regulation and the IEP, suggestion that the IEP should be completed before any regulations are made. It was suggested that further policy development is required, particularly in relation to decarbonisation and feasibility regarding gas supplies and networks.

'There is value in having the Integrated Energy Plan (IEP) developed prior to this regulation being finalised to ensure a considered approach which minimises constraints and the potential for unintended consequences.' – Stakeholder submission

Other issues

While not necessarily relevant to the regulation or the IEP at this point in time, there were two other issues of significance that were raised by participants.

Green gas and other gas alternatives

Green gas – specifically hydrogen and biomethane – was a common issue raised by stakeholders. A common concern was a view that existing infrastructure is capable of storing and delivering these alternatives, and decommissioning the gas network is premature given advancements in green gas technology.

The natural gas energy sector in the ACT is supported by $380m worth of infrastructure, which is 100% Biomethane and 95% Hydrogen ready. This currently provides storage to meet morning and evening peak heating demand. – Stakeholder submission

'Has any thought been given to the thought that the existing gas network could be used in the future with a cleaner gas such as hydrogen? Removing an embedded network then having to reproduce it later would be expensive.' – Stakeholder workshop participant

Several stakeholders indicated the view that there has not been sufficient/accurate modelling of the least-cost pathway to electrification, and that green gas is the obvious choice, as opposed to all-electric.

A few submissions request the ACT Government pause on any further regulatory work or pathway planning and conduct further research and modelling about the viability of green gas.

'(We) strongly recommend that the ACT Government pause its action against gas connections in order to consider the full potential of renewable gas uptake for gas use decarbonisation in the home through its proposed Integrated Energy Plan. – Stakeholder submission

Survey respondents were asked if there are any electric or zero emission alternatives to gas for activities that may require a gas connection to continue, now or being developed, and how their adoption could be supported. The most common suggested alternatives and ways that adoption could be supported are outlined below:

- **Hydrogen**: Was presented as a low or zero-emission alternative to gas, but respondents noted that it's currently expensive and has problems with storage and piping.
- **Solar Power**: Respondents suggested the use of solar panels for homes and buildings as well as solar-powered electric barbecues in parks.
- **Geothermal Heating**: Although only a few respondents mentioned this, it was suggested as a low-cost alternative to gas.
- **Nuclear Energy**: Some respondents suggested nuclear energy as an efficient and clean source of power, including small modular nuclear reactors and fusion nuclear.
- **Other Renewable Energy Sources**: This includes wind power and heat recovery from sewerage, though these were less frequently mentioned.
- The most common suggestions for how to support adoption of these alternatives were:
- **Financial Incentives**: This could include rebates, grants, and low or no-interest loans to help offset the higher upfront costs of switching to alternative energy sources.
- **Legislation and Regulation**: This could involve implementing building codes and standards that require the use of alternative energy sources in new construction and major renovations.
- **Education and Public Awareness Campaigns**: Respondents suggested educating consumers about the benefits of alternative energy sources and how to use and maintain these technologies.
- **Support for Research and Development**: This could involve funding for research into new technologies and solutions, such as better storage methods for hydrogen and improved efficiency for electric appliances.
- **Partnerships with Universities and Businesses**: Respondents suggested that the government could partner with universities and businesses that are working on renewable energy technologies and solutions.
- **Subsidising Infrastructure Upgrades**: This could involve covering or reducing the cost of disconnecting current gas connections and upgrading to electric alternatives.

Health issues

A few submissions referenced misinformation in relation to the health implications of using fossil fuel gas in the home. It was suggested that links to childhood asthma, in particular, have been rebutted by expert reviews. There was concern that the ACT Government ensure they rely on reputable and current evidence when referencing health concerns.

> *'(We are) acutely aware of misinformation being promulgated about natural gas, most recently the incorrect assertion in relation to negative impacts of gas use on health. This particular assertion has been thoroughly debunked, through independent, comprehensive, reputable research.' – Stakeholder submission*

Appendix 1

The following organisations made formal submissions:

ACT Council of Social Service (ACTCOSS)

ActewAGL

Australian Pipelines and Gas Association (APGA)

Australian Sustainable Built Environment Council (ASBEC)

Australian Pipeline Limited (APA)

Building Designers Association of Australia (BDAA)

Conservation Council

Energy Networks Australia (ENA)

Evoenergy

Green Building Council of Australia (GBCA)

Housing Industry Association (HIA)

Jemena

Laundry Association Australia (LAA)

Master Builders Association - ACT (MBA)

Master Plumbers Association - ACT (MPA)

Master Plumbers Association - ANZ (MPA ANZ)

Owners Corporation Network (OCA)

Property Council of Australia - ACT (PCA)

The Plumbing Industry Climate Action Centre (PICAC)