



**ACT**  
Government

Powering Canberra

# Our Pathway to Electrification

## Forum Snapshot Report

November 2022



## Introduction

In August 2022, the ACT Government announced their intent to transition away from the use of fossil fuel gas by 2045 and electrify our city's transport systems by supporting the rapid uptake of zero emissions vehicles (ZEVs). These policies seek to support the ACT's efforts to become a net zero emissions city by 2045 and target the Territory's two largest sources of greenhouse gas emissions – transport (65%) and gas (20%).

The Pathway to Electrification Industry Forum held on 10 November 2022 was the first around transitioning away from gas in a series of regular forums designed for stakeholders to share feedback on the Territory's transition along the pathway. Bringing together key stakeholders from impacted industries and the community sector provided the opportunity to establish a unified, baseline level of understanding around the strategy and its underpinning justification, such as economic modelling, market factors and global lessons learned.

### Purpose of this document

**The purpose of this document is to capture the key findings, themes, questions and outcomes from the forum. This document highlights the stages of the forum and provides a synthesised view of findings from the various sessions below:**

- > opening address from Andrew Barr (MLA), Chief Minister and Minister for Climate Action
- > key transition challenges from Shane Rattenbury (MLA), Minister for Water, Energy and Emissions Reduction
- > ACT Government policy overview from Fiona Wright, Executive Group Manager, Environment, Planning and Sustainable Development Directorate
- > academic presentation from Professor Frank Jotzo, Head of Energy at the ANU Institute for Climate, Energy and Disaster Solutions
- > panel session and Q&A
- > economic Modelling Presentation from Cath Collins, Director Gas Transition Regulatory Policy
- > breakout sessions

## Ministerial remarks

### Andrew Barr (MLA), Chief Minister and Minister for Climate Action

Chief Minister Andrew Barr (MLA) commenced the forum by outlining the basis for the electrification strategy.

#### Key notes:

- > Over 60% of emissions in the Territory comes from transport and 20% comes from gas usage.
- > The transition must be done at a pace that is manageable for the Territory; this is a long-term transition.
- > A measured and planned transition will ensure community and industry have certainty throughout the process.
- > Despite significant financial and geopolitical pressures facing the electricity market, the ACT is well positioned to manage these with agility and adaptability.
- > There are significant benefits that will arise from this transition including long-term growth, job creation and research and development gains.



### Shane Rattenbury (MLA), Minister for Water, Energy and Emissions Reduction

Minister Shane Rattenbury (MLA) outlined the five key themes of the gas transition strategy.

#### Key notes:

- > This is a long-term strategy that will have challenges along the way.
- > Challenges will be mitigated by having a clear end-point for the transition. The 2045 target provides certainty and a clear signal to industry and the community on what the ACT's future energy system will look like.
- > Government plays an important role in this transition by supporting the removal of barriers for industry and community.

## ACT Government overview

Fiona Wright, Executive Group Manager, Environment, Planning and Sustainable Development Directorate

Fiona Wright, Executive Group Manager, Environment, Planning and Sustainable Development Directorate, outlined the market factors at play in the electrification decision.

Key notes:

- > The electrification transition must be managed in a manner that is respectful to Indigenous peoples and promotes long-term sustainability.
- > There is significant financial and economic modelling that underpins the strategic pathway.
- > The transition will not just support the ACT's climate change commitments. Customers are already transitioning away from gas and prices are anticipated to rise in the coming years.
- > The ACT is committed to reducing emissions and supporting a reliable, efficient and affordable energy system for Canberrans.
- > The transition must be managed in an orderly, sustainable manner to promote long-term success.



## Academic overview



Professor Frank Jotzo, Head of Energy at the ANU Institute for Climate, Energy and Disaster Solutions

Professor Frank Jotzo spoke to the key macro trends in the global electrification field.

Key notes:

- > There will be continued niche uses of gas, but research, development and investment play an important role in the transition to electricity.
- > Technology replacements will be crucial for sectors such as hospitality and industrial.
- > Early adoption across industry and the workforce is a critical factor to success.
- > There are global lessons learned that should drive the ACT's pathway.



## Panel session: key takeaways

### Shane Rattenbury (MLA), Minister for Energy, Water and Emissions Reduction

Minister Rattenbury outlined the macro factors at play in the current energy market and how the ACT is relatively buffered from this, due to sound energy policy developed in the previous decade to support the ACT's current 100% renewable electricity supply.

### Peter Billing, General Manager, Evoenergy

Peter spoke of the continual need to maintain the safety and reliability of the gas networks, despite the inevitable wind down over the coming years. He touched on the investment in the network that would be required to sustain this transition.

### Dr Emma Campbell, CEO, ACTCOSS

Emma highlighted the lack of consideration for low-income and vulnerable peoples, and the need for affordability and accessibility measures to be built into the transition. She noted that education should more broadly engage decision-makers around how low-income households should be left better off by the transition, not worse off as is the current trajectory. She also touched on the importance of prioritising people at every stage of the transition, not just targeting those in the short term who have capacity to purchase zero-emission vehicles and solar panels.

### Jason Tait, Managing Director, Master Plumbers Association

Jason outlined the financial benefit the plumbing and gas-fitting industry provides, including bringing in over \$1 billion in revenue for the ACT and enabling skills development across the workforce. He highlighted the lack of transition plan for the workforce, and the important role that workforce modelling plays in the transition. Jason touched on the assumptions of the modelling, including the lack of forecasting of recent population increases and new dwelling developments in the Territory, specifically apartments and townhouses.

### Dr Adele Lausberg, National Policy Manager, Property Council

Adele touched on the advantage of listening to and adopting global lessons learned and the encouragement this should provide for the transition journey. She also outlined the important enabling role that regulation and policy plays from an early stage of the transition to avoid a sustained 'uphill battle', particularly around new and future developments.

# Panel Session: Q&A

The panel session Q&A provided the opportunity for attendees to ask the panel members a series of questions. Two questions were asked from participants on the floor:

Will there be a review of policy for low-income households so that their lived experience is better understood?

**Minister Shane Rattenbury** responded that policies, grants and programs are not a one-size-fits-all approach, so there is importance in having options at the varying levels and stages.

**Dr Emma Campbell** noted that the prioritisation of current policies, grants and programs are not right and skew towards high income earners.

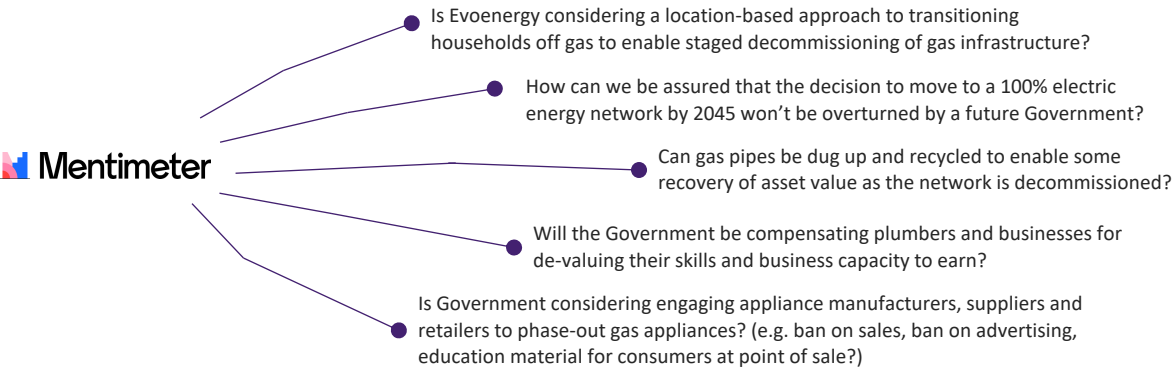
As costs go up, those left behind on the gas networks must pay the rising costs. How are vulnerable people considered in this aspect of the strategy?

**Minister Shane Rattenbury** responded that the ‘death spiral’ is inevitable, but it is about managing this equitably and affordably, which is a question that has not yet been answered and will require further investigation.

**Peter Billing** commented that over \$400 million worth of fixed costs in the gas networks cause this financial phenomenon and that the Australian Energy Regulator has been engaged to address this.

**Dr Emma Campbell** questioned whether the cost will be passed on or absorbed by Government.

Attendees were also encouraged to submit questions through an online tool called Mentimeter. Below are the questions submitted through this tool that were not answered during the Q&A session:



# Energy network modelling: Underpinning our decision to electrify

November 2022

Everyday climate choices →



**Cath Collins**  
Director, Regulatory Policy  
Gas transition/Integrated Energy

ThinkPlace

## Financial and economic modelling

Cath Collins, Director Gas Transition Regulatory Policy

Cath Collins, Director Gas Transition Regulatory Policy, spoke to the financial and economic modelling that underpins the ACT Government's Electrification Pathway, with the intent to bring all attendees to the same level of baseline understanding.

### Key notes:

- > The demand side of gas usage is forecast to decline in overall consumption and increase in cost-of-living costs.
- > Modelling suggests electricity would see an increase in demand, with rooftop solar providing a quarter of the ACT's electricity.
- > The base case examples have a range of assumptions built in, excluding recent geopolitical and market factors.
- > Significant investment in the electricity network would be required to see this transition through to completion.

1 Supporting households on lower incomes

Overview

Concessions, rebates and other financial incentives were identified as an important support for vulnerable groups. The discussion largely centred on how vulnerable groups who access these concessions should be defined. It was noted that the current support mechanisms available are focussed on specific groups and may not be accessible to all affected consumers who require support. It was noted that energy retailers can potentially play an important role identifying vulnerable consumers and connecting them with supports.

Group participants were also encouraged to identify approaches so that consumers do not avoid using energy due to higher costs. A key theme was the importance of energy efficiency measures to improve thermal comfort (e.g. insulation, fittings) and reduce energy use. Education and information on how to improve energy efficiency was acknowledged as important, but also that this information needed to be targeted and avoid language that ‘talked down to’ or ‘patronised’ consumers.

The final topic of the breakout was how to ensure rental providers are incentivised to replace gas infrastructure in their properties. The recently announced ACT minimum energy efficiency standard for rental properties was highlighted as a good step forward, and it was suggested that similar regulation could be introduced over time to support electrification in rental properties. The discussion highlighted potential risks of costs being passed through to tenants, the importance of robust enforcement measures as part of implementation, and the opportunity for incentives to also be considered.

Breakout session insights

The following are responses received from attendees that participated in breakout theme 1 during the forum. These themes have been collated and do not capture words verbatim.

Q1: How can we best engage and support low income and vulnerable people to transition from gas to electric appliances?

There is low awareness in the community around this transition.	100% rebates for appliances like heat pumps and do this first. This will open markets.	Impact of utilities concession applied to electricity account may mean gas bills are still very high.	Focus on the businesses rather than the consumers.
Identify gaps from current incentives/policy. Who is missing out?	Clearly identify barriers: financial, tenure, access to knowledge, technical.	Onus on retailers to identify low-income/vulnerable.	Broaden the categories for what is low-income.
Better consumer awareness that closing a gas account does not incur any cost.			
Buy-back scheme.	Retailers to engage.	Grants to support markets to support demand.	Barrier: people are not being identified to access supports.

Q2: How can we ensure consumers do not avoid using energy to warm in winter as gas prices increase?

Better education around how to heat more efficiently.	Possibility of regulation of retail gas prices by ICRC (or social tariff?).	‘Fabric first’ – a warm, tight home that needs less heating.
Thermal comfort focus.	Consider a gas cap on pricing.	Seasonal concessions during peaks.

Q3: How can we best support residential tenants to transition off gas and ensure rental providers are incentivised to replace gas infrastructure in their properties?

Addressing power imbalance between renters and landlords.	Explore land tax exemption scheme for landlords to make improvements.	Robust enforcement mechanisms required for any minimum standard regulations.	Requiring landlords to install electric heaters, with this requirement increasing over time.
Encourage minimum rental standards and enforce them.	Regulation and enforcement of rental standards.		Investigate options for compensation for those who don’t have access to energy efficient products.
CEFC home loans for efficient homes.	Gas appliance buyback.		

2 Transitioning complex buildings

Overview

The groups noted that all buildings will have elements of complexity, as well as the environment around them, with concerns raised about infrastructure that supplies the buildings (upgrade of feeders, substations, reticulation of cables). Other technical issues were discussed, including hot water gas meters and the lack of electric equivalents, the chronic overestimation of energy and appliance needs, space and infrastructure requirements for electrification, and the difficulties of dealing with embedded networks.

Concerns were raised for businesses that require niche gas uses to operate (such as vehicle repairs), and the need for clear transition planning and an understanding of the potential consequences of electrification for these businesses.

Participants discussed the need to approach electrification in a strategic way – whether this is sector-by-sector, or suburb-by-suburb, in order to achieve economies of scale and the data the on the existing building stock that is required to do this. Participants overwhelmingly agreed that this area is especially challenging and will require careful planning and support to effectively transition.

Breakout session insights

The following are responses received from attendees that participated in breakout theme 2 during the forum. These themes have been collated and do not capture words verbatim.

Q1: What building types are more likely to face difficulties with transition away from gas use?

Older Canberrans: - retirement/aged care complexes including embedded networks - older homes - downsized-apartment complexes.	For renters: - regulation of minimum standards for energy efficiency.	Embedded carbon associated with retrofitting.	CT metering.
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Q2: Are there any particular buildings in the ACT that will be especially complex?

Lower Molonglo water treatment center.	Life of the building?	Hospital waste – gas furnaces.	Zoo and Aquarium.
Heated swimming pools.	Commercial laundries.	Heritage buildings.	Museum and Art Gallery.

Q3: How can we best transition these more complex, existing buildings away from fossil fuel?

Convenience and outages for consumers.	Meters to measure hot water delivery – electricity network that meters this usage.	Green building incentive require energy transition plan for each building.	Peak energy usage (determining network works).	Cost incentives of transformation to electric.	
Heavy investments.	Renovation opportunities.	Driving gas fitting businesses out of post-trade study.	Clarity on what ‘new’ connection means.	Don’t lose sight of energy efficiency.	
Keeping / retaining buildings – embodied energy as incentive.	Overlap with Evs.	Legal and social barriers.	Workforce to support gas transition.	Estate development / district planning.	
Strata and body corporates requires guidance.	Broadscale audit of all existing building stock and gas assets.	Infrastructure needs for supply.	Space and electrical capacity constraints in existing buildings can be an issue.	Critical timings and a planned exit from the gas network.	Space, weight, and plumbing engineering considerations.

3 Finding alternatives for specific gas requirements

Overview

Conversations in this group noted that there are a range of activities and industries in the ACT that do not currently have suitable gas alternatives. This included both individual household settings (use of LPG and gas cooktops), multi-residential settings such as apartments and townhouses and industrial manufacturing settings such as asphalt plants. Attendees were able to identify the behavioural and sociocultural issues associated with gas usage, outlining the cultural attachment many households have with gas usage. The issues with new building developments and their standards not aligning to the current pathway were also raised, along with a perceived prioritisation misalignment for the transition.

Teams highlighted several ways in which the Government can play a role easing the transition. This included the need for significant investments in infrastructure, in tandem with well prioritised schemes, grants and incentives for business and individuals. The conversations included the concept of financial ownership and who would bear the transition costs, with many concerns raised for small businesses that have had to survive the recent pandemic who may not be able to afford this change. Questions were raised about how Government is going to help all stakeholders, with some outlining the need for more comprehensive research into the stakeholder landscape in its entirety.

Breakout session insights

The following are responses received from attendees that participated in breakout theme 3 during the forum. These themes have been collated and do not capture words verbatim.

Q1: What activities do not have an easy, existing electrical alternative or infrastructure?

Heavy rental market.	Asphalt plants - 3 in ACT.		Pacemakers and issues around use of induction cooktops.		Have ACT Govt. made a statement on bottled gas?	
Backyard mechanics Wreckers EV Battery recycling.	Germany – example of Government supporting complex apartments to install solar and heat pumps.		Work on standards yes, but time is of the essence. Concerns need to be heard.		Domestic heating - people not transitioning to gas might go to firewood alternatives.	
Many of these problems are more around behavioral change than regulation or tech improvements.		There are many new buildings in Canberra not up to standard.	We are worried about LPG being installed incorrectly if there is a spike in people taking cooking implements that use LPG.		There will still be large upfront costs. These sums of money need to be considered.	
					If one option is taken away, another option must be given.	
Multi-storey buildings: - Access to upgrades - Service lines - Access to areas - Multi-storey buildings access to solar		In residential settings, it's user preference. There is a prioritisation issue	Are there other difficult transitions we can take learnings from?	Is there a sense that we could knock down as it might be cheaper than retrofitting?	Is there research around people in CALD to transition?	
					“Do I have to use an electric BBQ?”	
Glassworks, smash repair industry.	Body corps may refuse to put up solar.	Large upfront cost in switching away from gas.	The consequences of each unsafe use of bottled gas.		There are cultural attachments in homes that come at a cost.	Austria case study.



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### Q2: What role could Government play to ease the transition for small business?

When considering specific uses, look for the best bang for buck.

Regulatory, legislative, planning rules, restrict ability to change.

Where do you draw the line who bears the burden?

We need to see large investments in capital.

Heavy duty manufacturing.

Better regulation of landlords.

What schemes, what grants, what incentives that are ubiquitous to all people small and large?

When talking to mum and dad businesses about decarbonisation, their focus is less on decarbonisation and more on how to find and train the right staff staff.

Understand who is not going to be impacted? What are the timeframes?

Spreading costs to wider areas of the community – but being mindful of the spread.

What of businesses that have had to survive covid and cannot afford this?

Low incomes were shocked that it didn't include and electric bike option.

Vienna a case study of retrofitting units.

### Q3: How can we manage the cost of electrification, so it's shared equitably across the community?

It is a difficult conversation to have around not passing costs along.

It depends where the costs are distributed i.e.; big shopping malls flows to small business owners – how can Government prevent this?

Retraining people in certain industries?

Laws of economics don't change; other countries have caps to their costs.

Opportunity for policy to make these things more financially viable.

How is government going in to help? i.e. batteries.

4 Opportunities for the workforce and the economy

Overview

Opportunities for the workforce and economy focused on the the current workforce landscape and potential actions to drive the transition to electrification. It was mentioned that, despite the ACT leading the way in the national electrification space, there is significant work required from a technical and behavioural lens to manage the transition. Technically there are significant skills gaps prevalent with training time lags that need to be addressed. Behaviourally, there is also a perceived barrier for the workforce and industry. Conversation touched on the market factors at play in the economy, including the lack of skilled migrants currently available and population increases that have not been factored into modelling.

The conversations mentioned the financial and policy implications on the workforce and the economy, including the need for education to be aligned across a federal and state level and funding flowing towards future-oriented careers in electrification. There were also calls for greater workforce modelling to take place to provide greater certainty. Finally, opportunities for the economy include the potential to market the ACT as the sustainable, global-leader in the electrification space to attract skilled and dedicated workers.

Breakout session insights

The following are responses received from attendees that participated in breakout theme 4 during the forum. These themes have been collated and do not capture words verbatim.

Q1: What innovative business and economic opportunities should be explored to support this transition and contribute to the growth of the ACT

Funding for planning and training is limited.	Workforce modelling is critical.	How to bring migrant workforce back into the fold?
Has awareness and education of this strategy trickled down to community yet?	People need to be given time to transition, including re-training, and will need to be supported to do so.	Communication piece; pitch to all current workers and provide some comfort/reassurance.
Need more engagement with education institutions.	Difficult to innovate ideas when the ACT has limited revenue options.	Macro issues impacting Q1. Population, migration, etc.
ACT leading the way on electrification, but a perceived barrier for workforce opportunities. How to attract skilled, ambitious workers in electrification and create a leading workforce market?	Not enough plumbers and gas fitters to see this strategy through to the end.	Opportunity to market the ACT as the environmentally responsible place to run your business.
	Skills shortages are a national issue, not just for ACT.	
	Community transport considerations (school buses, ZEVs for tradies and support workers).	Funding needed for educational rejuvenation and facilities.

Q2: What workforce and industry capabilities are required to transition to new and emerging energy sources?

Education time-lag: 3 years to become licensed electrician, 6 years for plumbing.	What new skills are required? Hydrogen?	Setting up training for new skills is not quick or easy. It takes considerable planning.	Upskill lag: - No training facilities - Limited capacity in educational institutes (CIT).	Gas fitters might just move to a state that values them and has work opportunities. Losing segment of workforce.
Training pipeline.	Direction and allocation of training and funding.		Not all plumbers are gas fitters.	Transferrable skills.



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### Q3: How can we support and enhance local job opportunities to prepare workers for the future?

Need to consider those in the workforce that have not undertaking professional training in a while and what their experience in this transition might be like.	There is no manufacturing of electric appliances in the ACT.	Opportunity for Government to influence and shape the future of TAFE courses.	Policy viewpoint: ensure benefit of strategy flows to the right people.
Understand and clarify who is affected.	Mapping which industries and stakeholders are most affected.	Opportunity for alignment between federal and state Governments on training.	Federal government funding.
Need to consider what will drive people to the jobs that are needed.	There could be more engagement with schools and colleges.	Transfer of interstate licences needed.	Work experience as well as training is needed.
			There is a perception that the plumbing professional has been de-valued.

### Q4: What key uncertainties should the Integrated Energy Plan take into account? And what could the Government's role be in reducing these uncertainties?

Factors internal and external to the Territory (i.e. other state strategies?	Cultural workforce inclusion (or lack there of in the room).	Market conditions (pre- and post-covid) affect the long-term workforce (i.e. migrants, skills).	Identifying credible operators can be hard (industry standards).
Significant workforce shortages.	Electric industry not represented today.	ACT procurement guidelines hinder the benefit flow-on.	Workforce issues across sectors.
			Timelines and projections. Government has role to play with transition planning.

5 The future of the electricity and gas networks

Overview

Conversations around the future of the gas network focused on innovative ways to sustainably use the infrastructure and to prepare for safe abolishment of residential gas connections. Some alternative uses for the ACT’s existing underground gas pipes were to store electric cables that are largely above ground and run across private property or to store hydrogen or seasonal energy or lease them to private industry among others. Safety concerns such as the danger of empty pipes without the pressure of gas filling them.

Discussions around the future of the ACT’s electricity network focused on improving the quality of infrastructure and workforce to increase efficiencies, updating regulation to allow for a de-risked transition to electrification that was open to innovation and for the Government to facilitate better intelligence gathering and sharing with industry. Concerns were raised about the burden of gas network maintenance falling to those least able to transition to electric.

Breakout session insights

The following are responses received from attendees that participated in breakout theme 5 during the forum. These themes have been collated and do not capture words verbatim.

Q1: What potential future uses might there be for the gas network infrastructure?

Alternative gas pipeline use:

- “They’re just pipes – they could be used for anything.”
- Grey water, recycled water or district heating (hot water) systems
- Rental opportunities to lease existing gas pipes to other industries
- Not LPG – worse environmental outputs
- Other created energy – need to consider regulation changes about what can be in those pipes
- Can cables be run through them?
- Future green gas.

Need to consider the ongoing cost of protecting gas networks vs the initial high cost (but not ongoing) of removing the infrastructure at the start.

Gas precincts:

- For historic and complex buildings
- For industries like asphalt making
- Potential to localise areas for gas use
- Could this work if they are not geographically close?

Safety concerns:

- Empty pipes are dangerous
- Higher uptake of LPG as an alternative.

Above ground gas infrastructure is limited and would not provide much additional land if it were decommissioned.

Hydrogen

- Storage for hydrogen produced by solar
- Can be distributed in ACT’s poly pipe network
- Can be unstable
- Expense and safety concerns, would every connection need to be inspected first
- Unknown whether it is suitable for household use.

Housing electric cables underground

- Canberra’s aesthetic town planning means that cables are off the street and can be hard to access
- Backyard cables are unsafe and expensive to make safe.



Continued...

## Q2: What do you think ACT Government need to consider for the future planning for the electricity network?

### Better data and intelligence collection:

- Understanding workforce capacity and needs into the future
- Data about small buildings is difficult, or impossible, to collect which is becoming a bigger concern with infill projects – Evoenergy and ACT Government are currently unable to access data about transitioned households
- Evoenergy doesn't have access to meter data anymore as it is under different ownership
- Lack of visibility of network needs is a big barrier
- We need to understand who and how many will always need gas – complex buildings? Heritage buildings? How will gas be distributed to them?

### Better data and intelligence sharing:

- Data sharing is critical for pathway to electrification
- Retailers could collect data and connect with industry and Government
- Regulation means that there is little visibility or sharing – this needs to be upgraded if we're to move collaboratively to electrification.

### Updating regulation to suit consumer needs:

- One-stop consumer facing needed for metering, connecting; currently decentralised which is confusing and costly, and disincentivises transition
- Building planning laws prevent off grid.

### Workforce:

- "Every electrician is already flat out. You can't get a sparky in the ACT."
- Announcement came as shock to plumbing industry.
- Gas fitters may move rather than re-skill in ACT
- University advertising/messaging has been successful in enrolments, but this means there is a workforce shortage in apprentices already
- ACT has lowest funding available to apprentices.

### Improving quality of current electric infrastructure:

- Electricity network losses are high
- Better quality cabling would make electricity more efficient
- Moving cables underground could make cables safer, maintenance more efficient and less costly
- Physics – daily peaks.

### Abolishing or disconnecting gas:

- Non-consuming meters should be identified
- Some retailers don't have a process for abolishing gas connections
- Communication from retailers can be confusing, e.g. even when you've intentionally disconnected/abolished gas connection with retailer, they may contact you to ask if you need a new gas connection
- Phasing by areas? Suburbs?

### Keep the door open to innovation:

- We don't know what technology might be available in 10-12 years
- De-risk future by not restricting thinking to just electrification
- Fossil fuels are dispatchable energy, renewables are non-dispatchable energy – needs considering and innovating.

### Impact on consumers, especially low income and vulnerable:

- Depreciation of gas network needs to be quicker
- Costs should be borne by Government
- People are not future-proofing their homes even with government incentives.

### Solar energy and long-term electrification storage:

- No long-term storage solution
- People do not act rationally when it comes to energy
- Battery storage/solutions needed from ACT level and scaled all the way down to the household and community level
- EVs are batteries on wheels
- Buildings could be batteries to maximise use.

# Pathway To Electrification

## Appendix

Organisation present at forum			
Master Builders ACT	Canberra Institute of Technology	Engineers Australia	Green Building Council Australia
Care Incorporated	ACTCOSS	Better Renting	Plumbers Union
Property Council	Housing Industry Association	Energy Networks Australia	Canberra Business Chamber
The Social Deck	ACT Climate Change Council	Master Plumbers Association	ActewAGL
Conservation Council ACT	Riverview Projects	COTA ACT	Tuggeranong Community Council
Ipact	AMC Architecture	ACT Government	MTA ACT
Water Tight Plumbing Canberra	Australian Sustainable Built Environment Council	Evoenergy	Building Designers Association
Plumbing and Pipe Trades Employee Union			