

# Gas Networks 2050

## Access Arrangement

### Small Business Forum 1

Outcomes Report  
18 October 2023  
3.00pm-4.30 pm



# Methodology: What we did in the session



## Objectives

Our session objectives were to introduce Jemena, provide an overview of the future scenarios developed, update customer feedback, and get small businesses' initial thoughts and questions on specific response areas within the 2025-30 Access Arrangement. **Attendees**

Seven randomly recruited representatives from seven small businesses attended through an independent market research company. They're all main gas users and the primary decision-makers on energy in their business, ranging across various industries, including hospitality, medical, manufacturing and information technology sectors from across Greater Sydney (see the breakdown on the following page). Participants were paid stipends to attend and complete the pre-reading in line with industry standards.



## Format

The session ran for one and a half hours online on Microsoft Teams. Participants had been sent a 13-page pre-reading booklet as background material. To ensure coverage of in-depth topics and time to consider all the options, we ran two forums with the same group – one on 18 October and one on 1 November.

## Overview Summary

### Section 1: Introductions and about Jemena (30min)

This section was dedicated to attendees introducing themselves via an icebreaker activity and a short presentation about Jemena. Afterwards, participants responded to what they'd heard with questions, a discussion about what they value about gas and any insights on whether they were stopping or continuing their gas use in future.



### Section 2: Explore (40min)

In this section, we introduced the regulatory response options that Jemena can act on and asked small businesses a series of questions to explore the response options in more detail.

### Section 3: Conclusion (10min)

To conclude, we asked small businesses what they thought about the details discussed so far, their general feedback on the session, and what we would make them feel that Jemena had listened to small business voices.



# What they said: session playback



**Affordability and reliability is a key concern:** small businesses at the session expressed their reliability on gas for high heat for example sterilising equipment, for cooking food, and for food manufacturing. One expressed concern about having to shut down if they transitioned to electric appliances because of the cost. Another expressed they had no plans yet to transition off gas. Although everyone present understands the need to transition to net zero, there is anxiety about the transition, and questions about how they, as users heavily reliant on gas will be impacted including the costs for changing appliances are expensive. Several had questions as to how they may be supported during the transition.



**Interest in renewable gas role and government policy role in the speed and process of the transition:** because of their reliance on gas as a fuel and the difficulty shifting off gas, this group is particularly interested in using renewable gas in future. They are also cognisant of the government's role in the transition and that Jemena operates in a regulated environment.



**Response options:** the options that attendees are most interested in hearing about are renewable gas, how Jemena manages its assets, a new approach to connections, and digital metering.



**Small businesses expressed appreciation at having an in-depth conversation at an early point in the planning process:** satisfaction was expressed and interest in being asked key questions at this stage in the process about such big-picture topics about the future of the business and how the decisions impact them.

*"It's all frightening as far as we're concerned that we're so dependent on gas for our machinery."*

*"It does concern me that if you stay on gas, then your cost to your business are going to be going up. So that's a worry."*

*"Same with sterilising equipment in theatre, we can't run those on electric options, so it has to be by gas."*

*"This new concept of getting the energy source from the hydrogen, I think that could be a game changer."*

*"it's not just the one way forward, right?"*

*"You're listening now, which is an advance on the past."*

*"Taking our opinion is a good thing."*

*"I actually feel quite privileged to be involved in such an important transition here, and have, you know, inside at such a fairly early stage in this."*

*"Like the transparency from Jemena."*

# Introduction: Initial questions from small businesses

Initial questions and discussions from small businesses focused on Jemena's reinvestment into innovation, the progress on renewable gas technologies, and adjusting to new government policies on Net Zero 2050. Several were interested in what that may mean for small businesses and Jemena.

*"Our business, well, our location in Sydney's a converted house into a corporate office and it has a kitchen for staff. It is run on gas, hot water, and gas cooking. And we did get a letter from the City of Sydney Council. About them cancelling gas at some point in the future, but yeah, I don't know what's happening around a lot of that. I don't know whether the landlord who we rent the corporate space offers to make a provision for that, but I guess this is something that we're all going to have to grapple with."*

*"Do you see foresee either the utility companies or the state government or the federal government, or possibly even there, you know, local governments which are down subsidising that transition in any way?"*

*"Can you have a short-medium-term plan for biomethane, and then a longer-term plan to eventually switch to Hydrogen as technology improves and it becomes more cost-effective?"*

*"I presume a percentage of what you would have previously assign to profit would go back into considering renewable energy sources – to try to protect your business keep going for a longer period."*

*"Would you have a plan B if everything is decided and something changes?"*

# Explore: small business insights and questions about the response areas

- We presented the seven response areas and asked for some initial thoughts from small businesses on this.
- Some participants were interested in the possibility of Jemena diversifying into electrification. Jemena mentioned that this is impossible under the rules (called ringfencing).
- Others were interested in renewable gas technology and when it might be scalable. Some asked about renewable gas or transition learnings from other countries. This will be addressed in the next session.
- Other participants asked why Jemena is investing in hydrogen – they are concerned about safety. Jemena representatives clarified that Jemena is not investing in it; instead, it is partnering with other organisations that invest because of the rules.
- Others asked about the \$1200 fee for permanent disconnections and the customer feedback on paying this. Jemena mentioned this would be answered in the next session when we detailed household customer feedback.
- Participants grappled in their comments around any potential impacts on the small business sector of government policy and how they would respond.

*“Why not consider diversifying and investing in where energy consumption is headed, ie electrification?”*

*“My question was mainly just because I'm part of the corporate body and we have a couple of other fast food chains are in the same corporate bodies. Say for example, one person decides to leave, but I don't want to leave. So where does the policy play out in this place?”*

*“So I understand Jemena they've been getting big time into this biomethane and green hydrogen mixing that with the natural gas. So may I know how much percentage of that is really operational at the moment?”*

*“Can you have a short-medium-term plan for biomethane & then a longer term plan to eventually switch to Hydrogen as technology improves & it becomes more cost effective?”*

*“What responses do you get from those customers when you say them that it's \$1200 for them as a charge?”*



# Reflection: listening to small business voices

- Jemena asked about the level of information presented, whether it was too much, and what would make small business customers feel like they had been listened to in this process.
- Generally, participants felt the level of transparency and information was reasonable. They appreciated the opportunity to give feedback as part of this access arrangement that involves big questions about the energy transition and being engaged at this early stage.
- One participant expressed interest in the coffee shop parable (see slide 20) and how things are moving forward, but there may be several pathways.

*"The fact that you're asking us questions like what do you think of this \$1200 disconnection for that actually would indicate that you know, you're really caring about how the end user is feeling."*

*"It's great to know that our input is valuable."*

*"The transparency from Jemena. Thanks for that."*

*"It's nice to get the information from you because it's frightening out there."*

*"I think the fact that you're asking these questions is an indication that you're worried about your business as much as we are worried about ours. So that's very, very good feedback."*

*"Also it's not just how the business is going to operate going forward and also it's taking our opinion is a good thing."*

*"Maybe noting down the concerns to make it easier in the next few years."*

*"It's not as simple as the coffee example that was taken. So it's going forward, definitely, it's not one way forward, right? It's a combination of smaller things."*

# Session slides

Wednesday 18 October 2023

# Acknowledgement of Country

We acknowledge the Traditional Owners of the lands upon which we operate and recognise their continuing connection to land, waters, and culture.

We pay our respects to their Elders past, present, and emerging.

Pictured: artwork by Aboriginal artist Chern'ee Sutton from Mount Isa for our Group's Reflect Reconciliation Action Plan





# Welcome!

**01**

Purpose and context,  
introduction to  
Jemena



**02**

Exploring concepts,  
topics and your  
preferences on the  
response areas



**03**

Thank you, feedback  
and next steps.



## Your guides for today



**Andre Kersting**

Gas Networks  
Regulation Manager  
Jemena



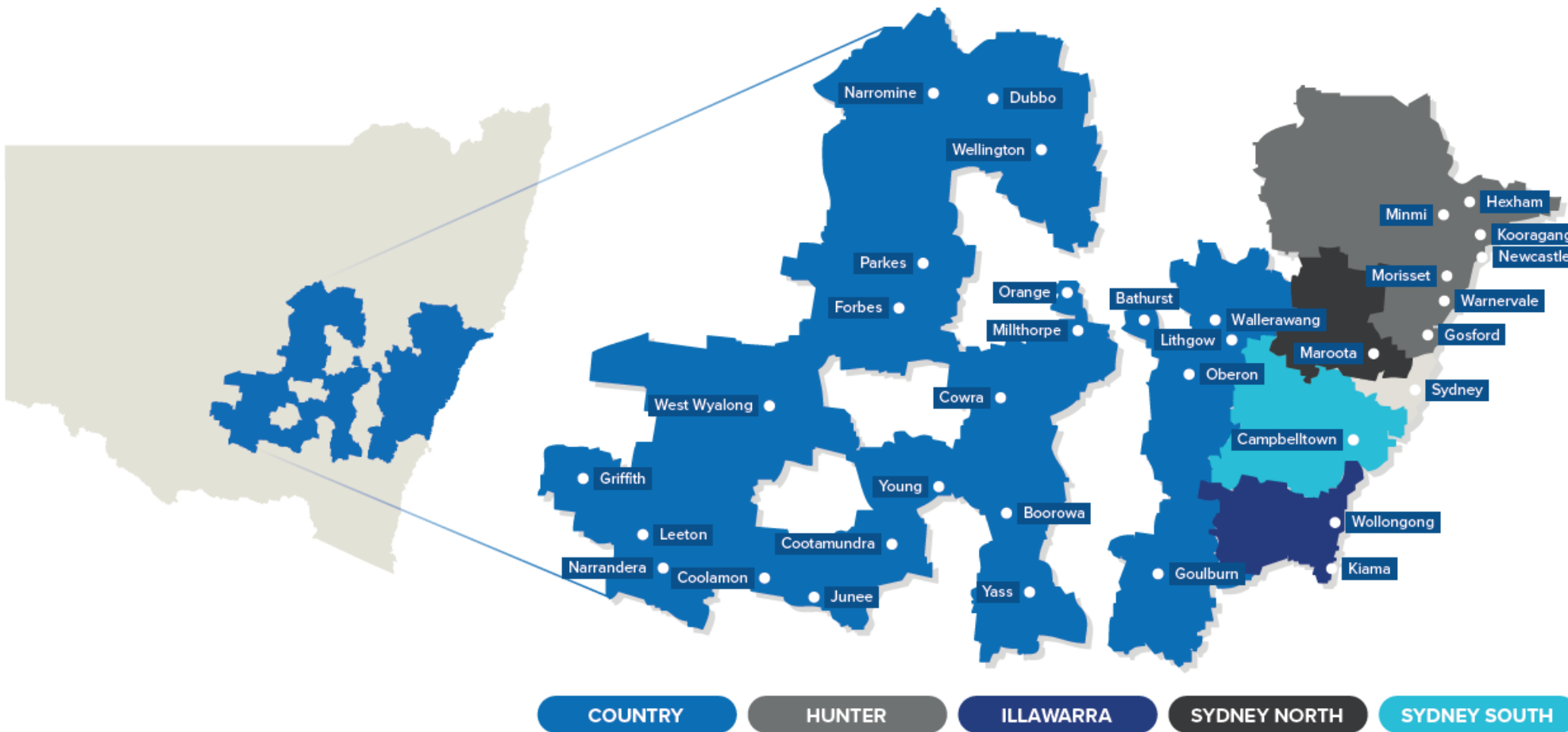
**Merryn Spencer**

Engagement Lead  
Jemena

This session is being recorded

# About Jemena Gas Networks

## Our area of operation



- Founded in 1837 to light Sydney using gas.
- The largest gas distributor in New South Wales.
- More than 25,000 kilometres of pipe distributing natural gas to over 1.5 million customers each year.
- Supplies residential, business, and industrial sites in Sydney, Newcastle, the Central Coast and Wollongong.
- Network covers over 20 regional centres, including the Central West, Central Tablelands, South Western, Southern Tablelands, Riverina and Southern Highlands regions of New South Wales.



# About the rules we operate under

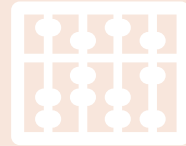


The Australian Energy Regulator (**regulator**) regulates gas pipelines in all states except Western Australia and Tasmania.

The rules ensure that networks do not favour their own businesses to the disadvantage of competitors, or use money from regulated services to fund their own businesses.



Our shareholders fund the investments required to run, grow and maintain the gas network, with the expectation of a return on that investment.



The **regulator** sets a 'rate of return' (return on investment) for capital investments. This rate of return is a benchmark rate of return, which is applied to all regulated gas and electricity networks.



**Every five years**, we provide information on the costs of our investments to the regulator. The regulator reviews our investments to ensure that they are prudent and efficient.



# Net Zero: government and industry are responding

## Government commitments to net zero

### AUSTRALIA

- » Committed to Paris Agreement
- » 23.5% of large-scale renewable electricity generation by 2020
- » National Hydrogen Strategy

### NT

- » Draft aspirational target for net zero emissions by 2050
- » 50% renewable electricity by 2030
- » Northern Territory Renewable Hydrogen Strategy

### WA

- » Net zero emissions by 2050
- » Renewable hydrogen is distributed in a WA gas network by 2022
- » 10% hydrogen in gas pipelines and networks by 2030
- » Western Australian Renewable Hydrogen Strategy

### SA

- » Net zero emissions by 2050
- » Net 100% renewable electricity target in the 2030's
- » South Australia's Hydrogen Action Plan

### VIC

- » Net zero emissions by 2050
- » 50% renewable electricity generation by 2030
- » Victorian Hydrogen Investment Program

### QLD

- » Net zero emissions by 2050
- » 50% renewable electricity generation by 2030
- » Queensland Hydrogen Industry Strategy 2019-2024

### NSW

- » Net zero emissions by 2050
- » 35% emission reduction by 2030
- » Aspirational 10% hydrogen in gas networks by 2030

### ACT

- » Net zero emissions by 2045
- » 100% renewable electricity by 2020
- » ACT Sustainable Energy Policy

### TAS

- » Net zero emissions by 2050
- » 100% renewable electricity by 2022
- » Tasmanian Renewable Hydrogen Action Plan

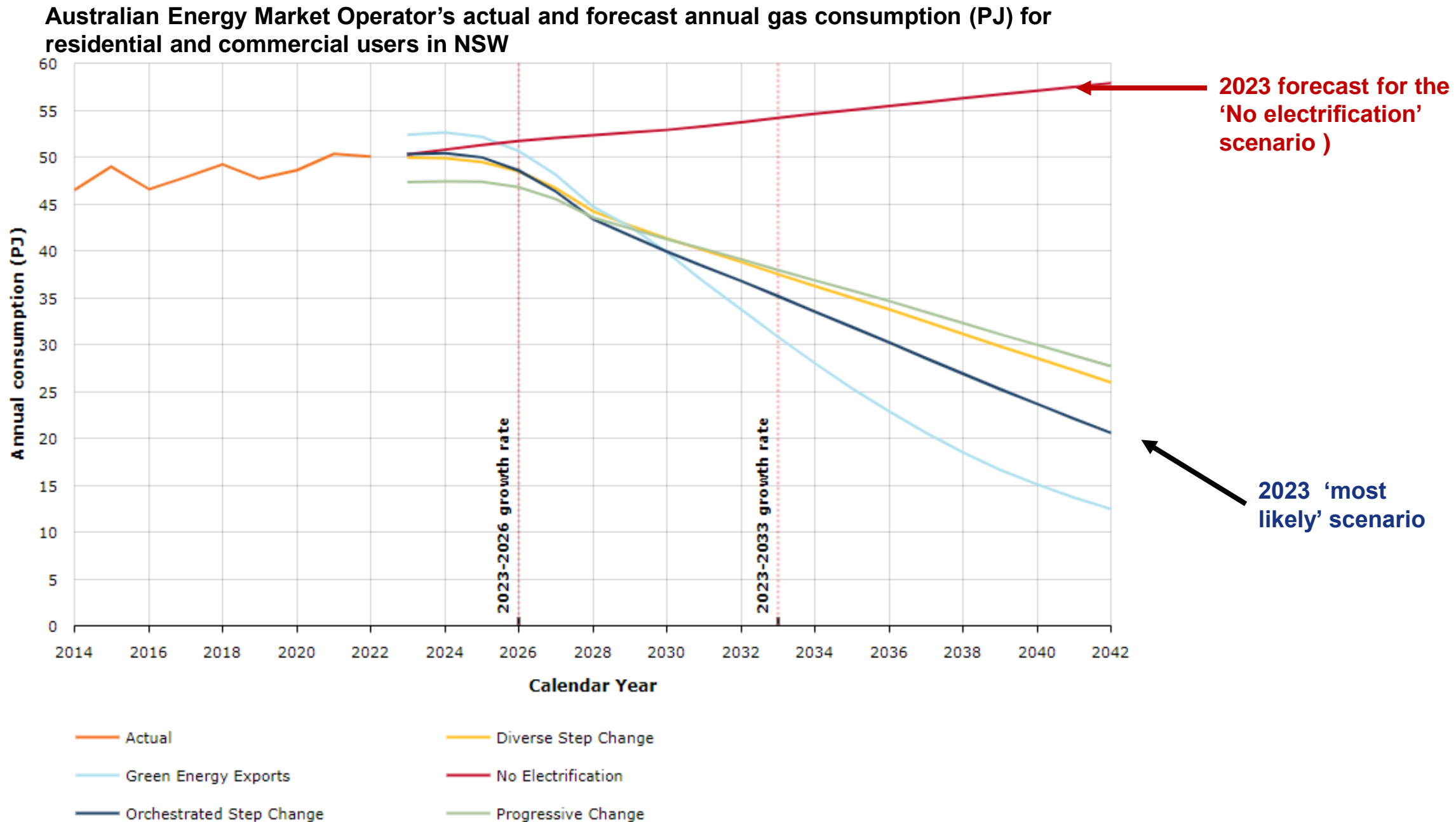
Source: Energy Networks Australia analysis (2020)

## Two-thirds of the ASX 200 have emission reduction targets



*"This Bill records the Government's ambition to take the country forward on climate action – and it reflects our determination to bring people with us. It will help open the way for new jobs, new industries, new technologies and a new era of prosperity for Australian manufacturing."*

# The future is uncertain



# Expert Panel scenarios

*War-time effort, with ambitious policies for net zero and rapid decarbonisation, supported by customers*



## Scenario 1: Electric Hare

Decarbonisation is supported by strong government policy driving electrification across industry and residential customers, with limited use of green fuels for hard to abate sectors



## Scenario 2: Big Hydrogen

Government policy support underpins a hydrogen export economy with a renewable gas target and certification, subsidies, and tax-offsets, driving down the cost of hydrogen production

*Biomethane focus limited to gas-dependent users and Hydrogen is a niche product.*



## Scenario 3: Electric Tortoise

Residential customers slowly electrify and industrial users transition to biomethane, as hydrogen remains not commercially viable. Transition is market-led and is less centrally coordinated

*Biomethane is a stepping stone to the Hydrogen mass market.*



## Scenario 4: Market Hydrogen

A near-term technological breakthrough driven by the market results in renewable gases becoming competitive with electrification, creating a diverse energy mix.

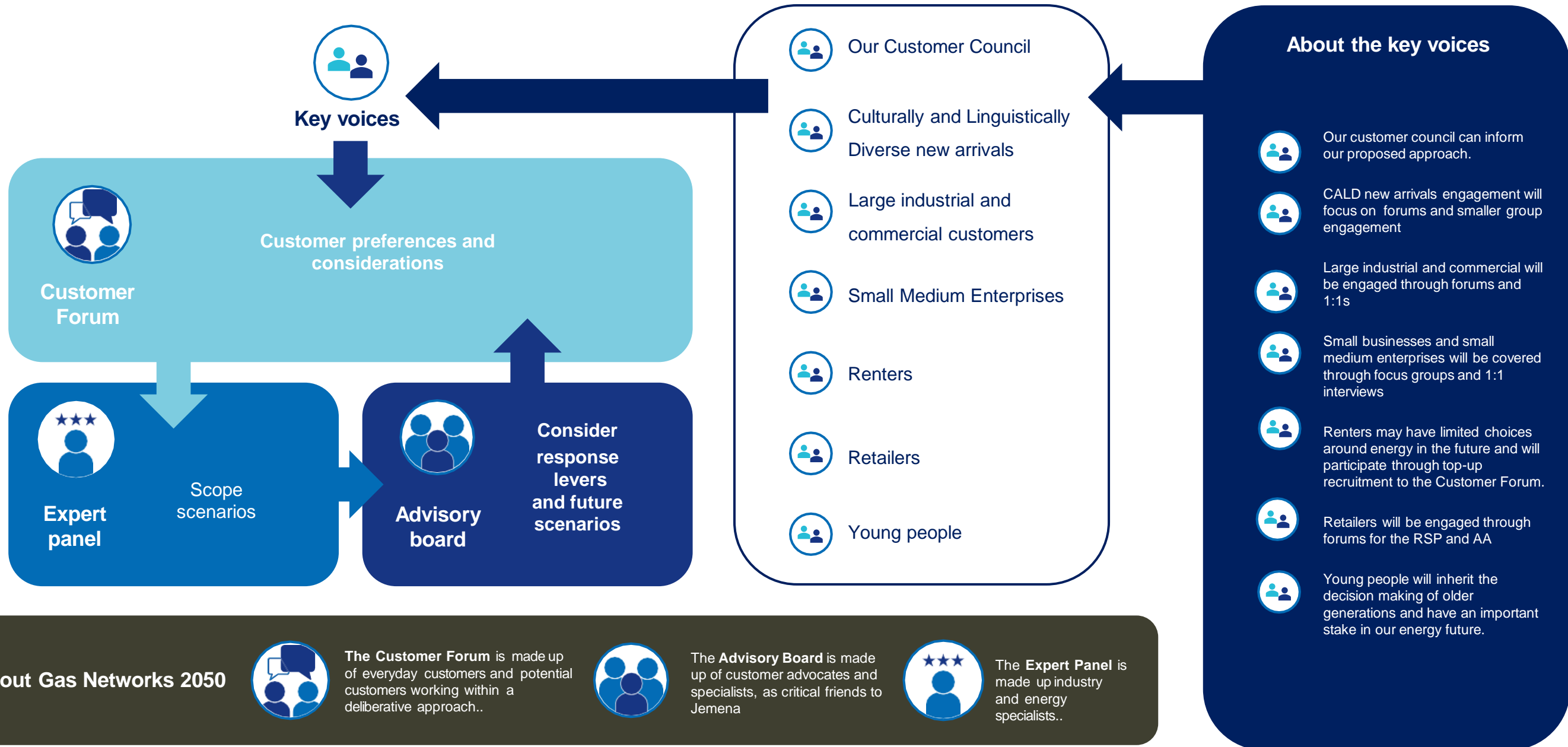
**Renewable gas penetration**

**Market led vs Government led**

*Policy is outcomes-based and low intervention, with a focus on economic affordability. Decarbonisation is driven by the market.*

## Who we're engaging

Engagement for Jemena's access arrangement will be authentic, and rich to really listen to the diverse needs of our customers.





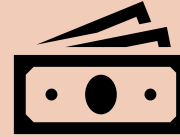
# Screeners survey: your initial thoughts

## About you



*What customer values are most important to you?*

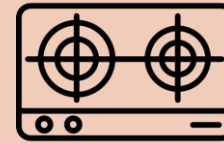
- Affordability
- Environment
- Reliability
  - Safety
  - Choice
- Planning for the future
  - Fairness



*You are the joint or main decision maker about utilities and use mains gas*



*Gas for hot water*



*Gas for cooking (cooktop)*



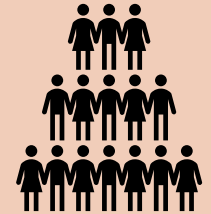
*Gas for a fireplace*



*Gas for a heating system*



*Gas for  
Cooking  
(oven)*



*From across the Greater Sydney area, a diverse mix of employee numbers and sectors*

**Q: Are you aware your Council area has introduced a ban on new gas connections?**

*"No. Very surprised."*

*"Yes. I am aware of the ban imposed by the government on new gas connections."*

*"No. I would be interested to know more."*

*"I think this decision was made in a rush and it would negatively impact small businesses like small little restaurants, takeaways, and also work issues for plumbers etc."*

*I do understand this move is eventually good for the environment but the way this is handled is not fair and should have put more thought and make it staggered."*

# Our questions for you:

What questions do you have for Jemena?

What do you value about gas?

Are you thinking about leaving the gas network? Why or why not?

How do you see your gas use in future?

# What response options are available to Jemena?

- 1) Moving towards renewable gas
- 2) Accelerating capital recovery
- 3) How Jemena manages its assets
- 4) A new approach to connections
- 5) Supporting vulnerable customers
- 6) Digital metering
- 7) Permanent disconnections





# The parable of the coffee shop

Imagine you are a coffee shop owner.

You have a monopoly of the street you operate in so the prices you charge customers needs to be approved by the regulator.

You invest in a coffee machine every 7 years. You just invested in one this year.

The government then announces that there may be a phasing out of coffee in the future. Some people think coffee is unhealthy which is starting to gain momentum via social media and published expert reports!

There is a risk that customer's may start reducing their demand for coffee causing uncertainty on what the future looks like for the coffee shop.

## Hummingbird coffee shop



How do you invest your money and set prices to address the uncertainty caused by the possible decline on coffee demand?

1. **Increase prices** immediately (before customers stop drinking coffee), to recoup your investment in the coffee machine
2. **Re-vamp your coffee machine and shop** into a tea and coffee café and start introducing customers to teas.
3. **Both?**



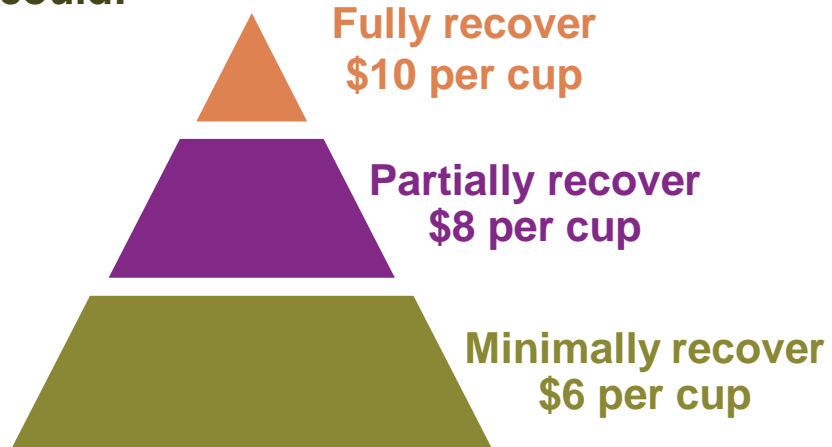
# Making coffee under uncertainty

## Recovering the cost of the coffee machine

As the Coffee shop owner, you currently charge \$5 per cup of coffee as approved by the regulator. Would you increase prices now, before customers stop drinking coffee, to recover the cost of your coffee machine?

### Hummingbird coffee shop

Subject to regulatory approval you could:



## Revamping to tea

As the Coffee shop owner. Would you start investing in revamping your coffee shop and equipment to provide tea and coffee? And start introducing customers to teas?

### Sip 'n' Petals tea house

*Do people like tea?*

*What's the competition?*

*Will I recoup my costs?*

Partially revamp

Fully revamp

Don't revamp



## How do you decide?

Would you just do one? Or both?  
Are there other measures you would take?



# Contextualising the short and long-term

As a gas network, we can take a range of short-term and long-term actions to address risk. There are pros and cons of anything we do to address uncertainty. We need your help deciding what we should do.



## Managing financial risk

### Coffee shop

Recovering the cost of the coffee machine by charging more for a cup of coffee

### Natural gas network

Increase network prices now, before customers leave, so that we can recover our costs (and future customers avoid a price shock)



## Re-vamping our network to carry renewable gas

Redesigning the coffee machine to make coffee and tea

Re-vamp our network so that it can carry renewable gases



## Reducing maintenance

Repair the coffee machine once a year instead of once every 6 months

Maintain ageing pipelines less often

# What is renewable gas?

## Biomethane

Biomethane is a form of renewable methane which is captured from decomposing organic materials such as agricultural waste, landfill and sewerage. It has the same properties as natural gas, and therefore it requires no customer appliance changes.

### Malabar Biomethane Injection Plant

Demonstration project where gas is generated by anaerobic digestion of sewage sludge at Malabar, Sydney.



## Green Hydrogen

Green hydrogen is made when renewable electricity is used to split water into hydrogen and oxygen through a process called electrolysis.

### Western Sydney Green Hydrogen Hub

Demonstration project and storage trial



## Synthetic Methane

Synthetic methane is a variety of natural gas alternatives that have the same properties as natural gas. Depending on the fuel source, Synthetic Methane can be a low-carbon or even carbon-free substitute for fossil fuels e.g., Methanation

### CSIRO Methanation Trial

Supporting a project testing the methanation of green hydrogen





# Coffee shop parable: accelerating capital recovery

Every **7 years**, you invest **\$7,000** in a new coffee machine



La Pavoni Commercial Volumetric  
2 Group Espresso Machine

You sell **200 cups** of coffee per year...  
at **\$5 per cup**.

Each year, you get **\$1,000** in revenue  
(\$5 X 200 cups)

It takes **7 years** to recover your coffee machine.  
(\$1,000 X 7 years)



However, the government has announced that:

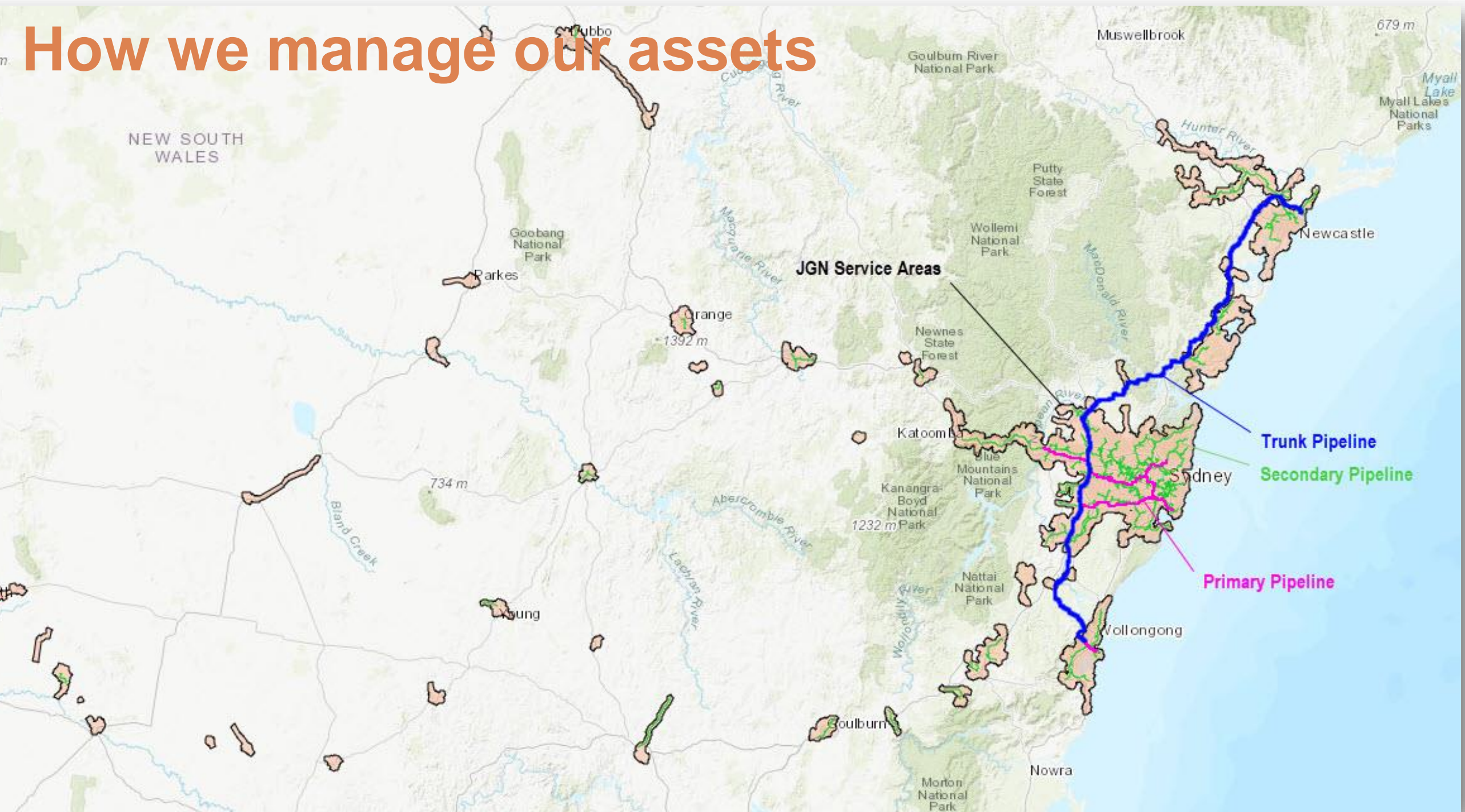
- There may be a phasing out in coffee in the future
- There is a risk that demand for your coffee will start declining in the next 7 years.

**How do you price your coffee after the government announcements?**

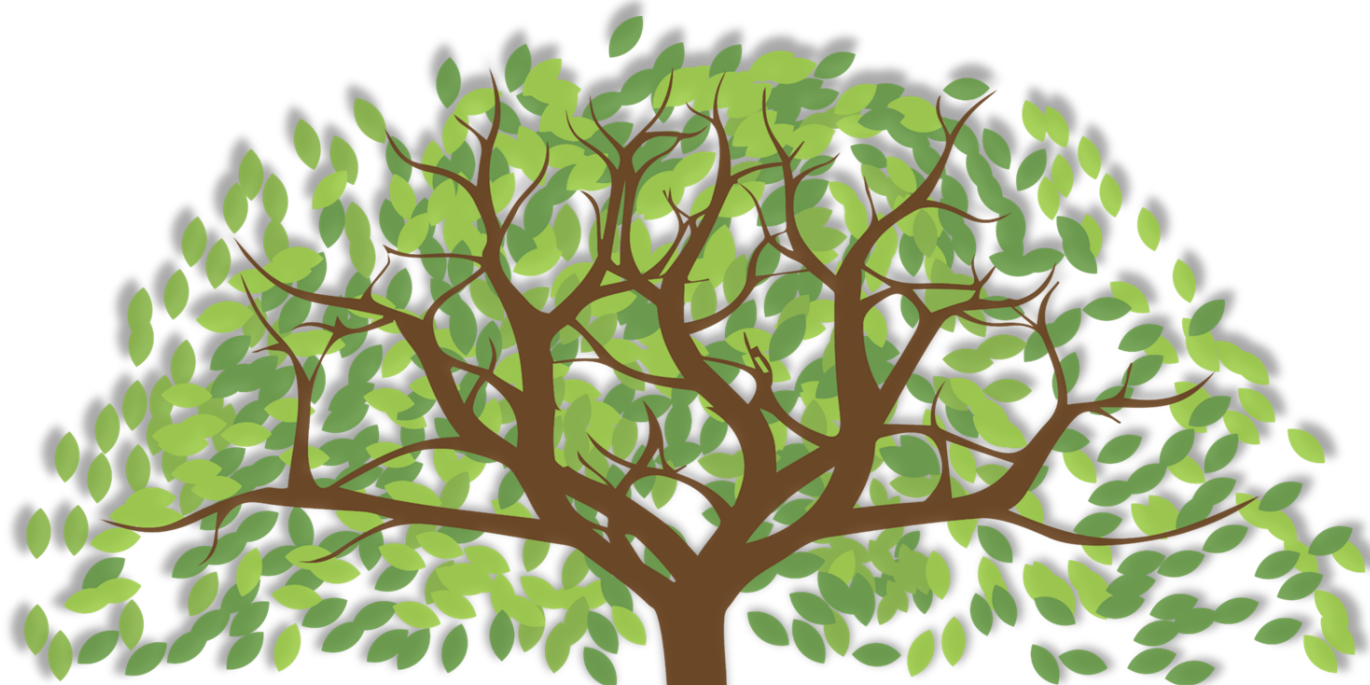
With the challenges resulting from the uncertain future role of gas networks how fast should we speed up our recovery of assets?



# How we manage our assets



# Your network



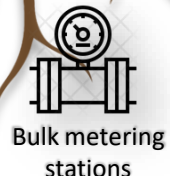
Trunk  
271 km

Primary & Secondary  
1598 km

Medium & Low Pressure  
24,430 km



Gas meters



Bulk metering stations



Gas Valve



Gas Regulator

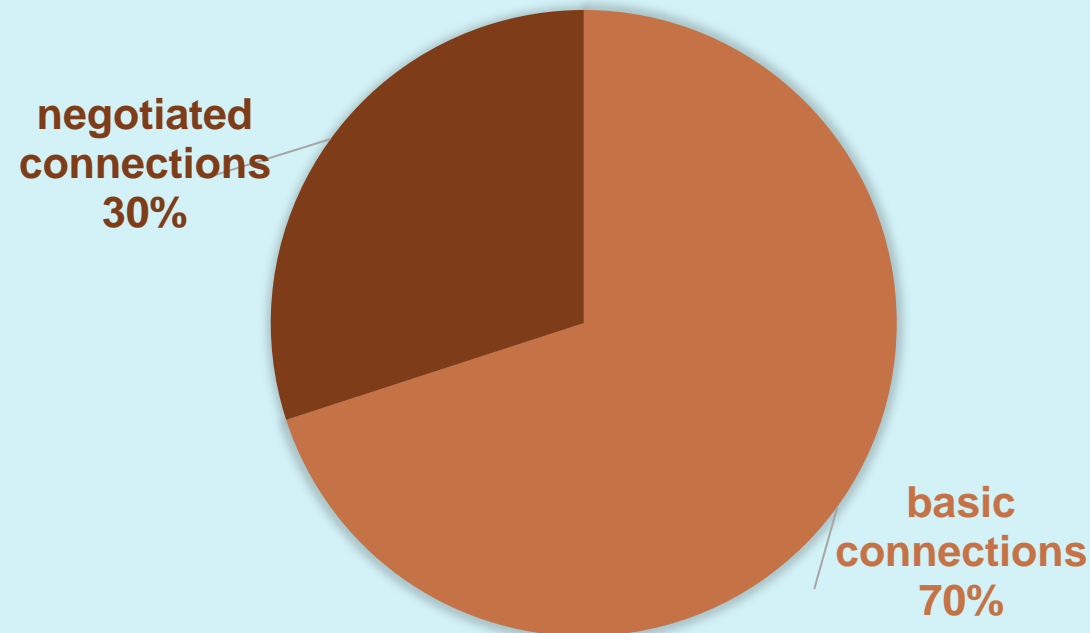


# A new approach to connections – connecting to our network

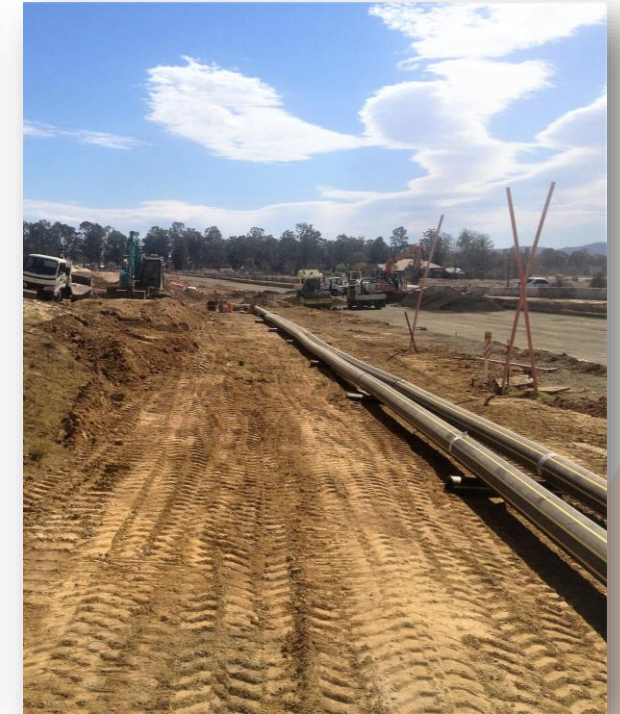
Currently, the costs of 'basic connections' are largely shared by customers across the network.

- **Basic** connections refer to **simple** connections, e.g. connections to new homes
- **Complex** connections are typically **negotiated**, e.g. new connections to high rise buildings and industrial customers

Given the future uncertainty of the gas network, consideration should be given to how we charge for new connections.



Example of a connection to a residence (a basic connection)



Example of a connection to a new estate (a negotiated connection)

Should 'basic connections' continue to be shared amongst the broader customer base?

# Supporting vulnerable customers

**Voices for Power 'Train the Trainer' Project (NSW)**

**Uniting Energy Assist Program**

**Bring your bill days (VIC)**

**Aboriginal Workforce Mentoring Program**

**Community Grants Program**

**Sponsorships and donations**

**Energy Charter #BetterTogether - Knock to Stay Connected (Trial)**

**Energy Charter #BetterTogether - Cost of Living Initiative**



# About digital gas meters

## Challenges

- Safety
- Sudden high bills
- Safe and timely disconnection
- Location and accessibility of meters

## Solution

- Accurate and on-demand reads
- Able to disconnect remotely
- Ease of energy consumption monitoring
- Smaller size

*But they're not a cheap solution!*



## Examples of digital gas meters





# About permanent disconnections



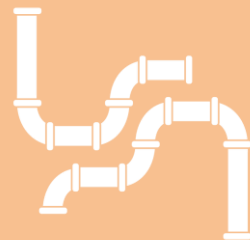
A request for a permanent disconnection from the gas network is received.



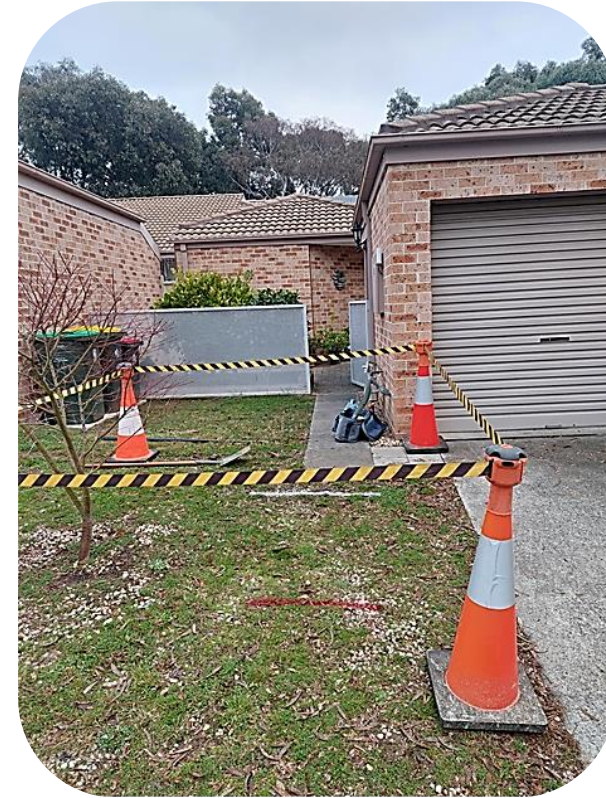
A customer may permanently disconnect if they decide to remove all their gas appliances.



For safety reasons, a customer must be disconnected if they are renovating or developing the site.



The meter is removed, the gas service is cut from the gas mains.



**Above: some of the many steps involved – marking off the area, excavating and clamping the pipe.**

Should the individual customer continue to pay for the disconnection cost or should it be shared amongst the broader customer base?

# Questions:

- What questions do you have about these areas?
- Thinking about these responses, is there anything you want Jemena to keep in mind?
- Which ones are interested in exploring in more detail in the next session?
- What are the critical issues for you?

# Final words from you

- How are you feeling about what you've discussed today?
- In 30s seconds: what would make you feel that Jemena has listened to small business voices?



# Thank you!

We will see you online for our next session

Wednesday 1 November 3pm-4.30pm

Any feedback:  
[GasNetworks2050@jemena.com.au](mailto:GasNetworks2050@jemena.com.au)

CRNRSTONE Research will be in touch with  
your stipends!

