Advisory Board

Session 8, 18 April 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

Recap outcomes and packages of options based on AB7, discuss narratives for these options 02

Feedback for customer forum approaches and planning for the next stage

03

Thank you, feedback and next steps.

Your Advisory Board Chair



Rosemary Sinclair AM CEO auDA

Your facilitator



Dr Matt PearcePartner
KPMG National Lead for Energy & Utilities





Our session today

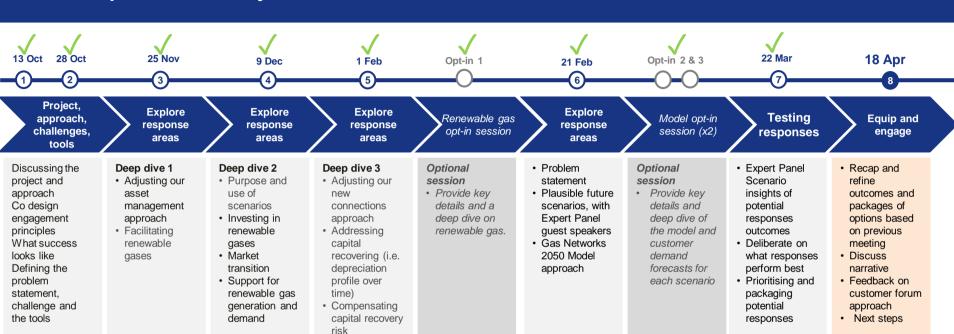
Topics we will cover	Duration
Section 1: Welcome & Introductions	5 total
Acknowledgement of Country, introduction and objectives for today	5
Section 2: Reflections from Session 7 and draft report	60 total
Feedback on session 7 and draft report	30
Recap the shortlisted options to engage on and option packaging, and refine narratives	30
Break	5 total
Section 3: How to engage: early feedback on the engagement program design	100 total
How we plan to engage with customers at the Jemena Customer Forum on the shortlisted response options (Rachel Fox, BDi)	100
Section 4: Thank you, feedback, program wrap-up	20 total
Rosemary's Playback	5
Feedback: What did we do well during our time together? What would you want if we did this again?	10
Overview of next steps	5

In order to...

- Recap and refine outcomes and packages of options (based on AB7 outcomes report)
- 2 Discuss narratives for these options
- 3 Feedback for customer forum approach and planning for that next stage
- 4 Thank you and feedback
- Where to from here for the Advisory Board.



Recap: Advisory Board series overview







Inform & Consult

Understand and investigate ways Jemena could respond



Involve & Collaborate

Target which response options to engage our customers on, and how we will do so



Recap: Our journey

In the context of an accelerating energy transition driven by community expectations and government emissions reduction policies, Jemena commits to being a trusted partner, delivering safe gas connection and transport services and meeting consumer and community expectations for:

- Access to reliable and resilient services.
- Stability, affordability & equity in prices
- A decarbonised energy supply
- Fair returns and risk sharing on investments made by consumers and Jemena.

We voted on the Advisory Board Statement of Objectives

Response areas

Adjusting our asset management approach

Supporting renewable gases

Adjusting our connections approach

Increase connection charges

Adjusting our connections approach

Adjusting our connections approach

Increase connection charges

Connections

Contractable

Stop connections

Connections

Connections

Connections

Connections

Connections

Stop connections

Compensate recovery

Not permitted in regulation or policy not set

We explored different response options during our deep dive sessions

- What responses <u>perform best</u> across the range of scenarios and would be suitable to put forward to Jemena's Customer Forum.
- 2. How should these preferred options be considered together?
- . What information will be important for engagement on these options?

We deliberated to filter response options for 2025–30 and trade-offs

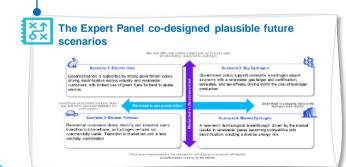
Objectives

Plausible future scenarios Response areas and options

Response option assessments

Filtering options to test with customers

Jemena AA Customer Engagement



Response options were assessed against the Statement of Objectives Response option: Replacing at slower page instead of continuing maintaining and acing assets at current pace 2025-30 2030-40 2040-50 Comments Objective Repipoing assets at a slower page reduces it and Access to sepex and RAS growth slightly, but Worse No change No change increases maintenance opex. Access to reliable and reliable and resilient services worsens due rind Stability, affordability & outweights the benefit of a smaller RAD and puts minor upward pressure on prices (+93.4 p. c.). In the lung term, the impost is smaller as open reduces in the with notwork pruning. Lower capes shows RAD growth, slightly Worse Improved Improved equity in prices A decarbonised No change from scenario reducing our stranging risks in new invostments but the overall stranging risk remains significant. Nelseark pruning in this energy supply Fair returns and scenario forces some customers to disconnect and causes appliance risk sharing on stranding. This could potentially be eased through government electrification support Improved Improved Improved made by consumers and Jemene

Jemena's AA engagement and option testing





Reflections from session 7



Summary of deliberation outputs and proposed packaging

Response area	Response option	Advisory Board sentiments	Jemena next steps for customers
Adjusting asset management approach	1. Replacing at slower pace instead of continuing to maintain and replace assets at current pace	Strongly supportedCreates optionality.	 Take forward for engagement at Customer Forums.
Adjusting our asset management approach	2. Accelerate to 10% hydrogen capability instead of continuing new and replacement asset transition	 Only supported in limited scenario set Focus on informing customers Affected by current and timing of scale of H2 production. 	 Take forward for engagement with specific customer groups who cannot, or do not wish to, stop using gas Engagement will distinguish
Supporting renewable gases	3. Support renewable gas instead of a passive renewable gas approach	 Only supported in limited scenario set Some view that Jemena should do this anyway Many thought that the focus should be on informing and educating customers More directed to bespoke industrial user conversations now Need to support the social licence of hard-to-abate large users and industrial customers. 	between biomethane and hydrogen, as our network and customer appliances are already biomethane ready • There's potential to package option 2 and 3 for engagement. • Consider the use of different language aligned to informing and educating.

Summary of deliberation outputs (ctd)

Response area	Response option	Advisory Board sentiments	Deliberation outputs			
Adjusting our connections approach	4. Increase capital contributions instead of continuing low contribution connections	Strongly supportedUser pays principle.	 Take forward for engagement at Customer Forums. 			
Addressing existing capital recovery	5. Shorten asset lives of new assets instead of maintaining current lives	 Strongly supported Supports intergenerational equity The regulatory compact has changed Managing risk for investments made by Jemena and customers Can be adapted for new information at each regulatory review. 	 Take forward for engagement at Customer Forums. Potential to package with option 6 for engagement. 			
Addressing existing capital recovery	6. Front-end some depreciation instead of maintaining current profile		 Take forward for engagement at Customer Forums. Potential to package with option 5 for engagement. 			

Draft Advisory Board Series Outputs Report



- 1. Is the draft report accurate?
- 2. Do you have any feedback and reflections on the draft report?
- 3. Subject to your feedback, can we agree this record of Advisory Board deliberation outputs?



Refining the narratives for engagement

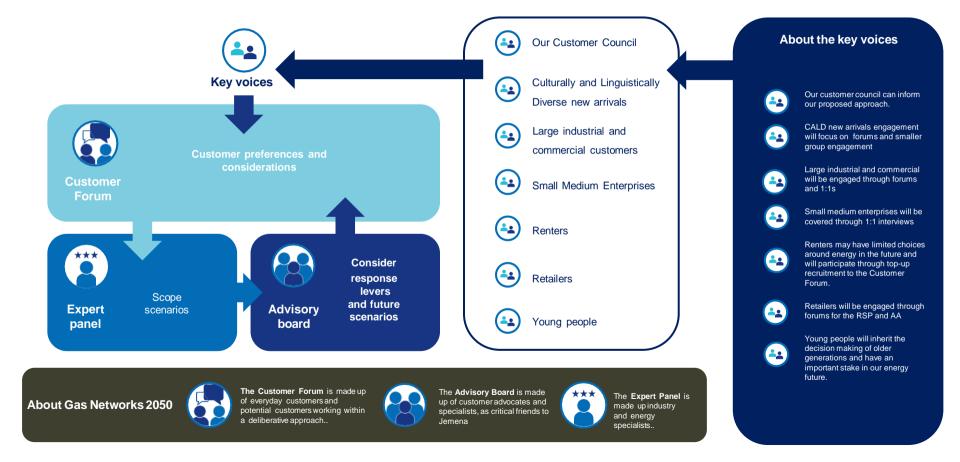
- 1. What key considerations should Jemena take into account when engaging on the response options?
 - 2. What might be the challenges and opportunities when engaging with customers?
 - 3. What issues and/or trade-offs should be emphasised?





Who we're engaging: engagement for Access Arrangement (AA) 2025-2030

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



Who we're engaging – demographics

Customer Forums - Where & when? Who? 41 Are new other than English Age groups

Young People and Culturally and Linguistically Diverse 5 diverse vouna

Age group: 18-24

from NSW Ethnic

Our engagement principles

The 3 core principles adopted for our engagement reflect the culture of the business and ensure our 2025-2030 Plan continues to enable a customer focus in all that we do.

Let our
customers and
stakeholders
views shape our
regulatory
proposal

Build trust and collaborate with customers in our regulatory proposals

3

Continue to support growth of Jemena's customer focused culture

IAP2 Core Values

We are inspired by the International Association for Public Participation





- Choice of gas
- Vulnerable customer initiatives
- Connections
- Willingness to pay for renewable gas and innovation
- Expectations of access into the future

- Reliability and security of supply
- Dealing with uncertainty (across the four demand scenarios) through accelerated depreciation and charging for connections
- Tariff reform options and fairness.





Engagement Overview

Gas Networks 2050

What is deliberation?

DELIBERATION | noun | de-lib-er-a-tion |

A long and careful consideration or discussion.

When used with the term 'democracy', deliberation is about participants¹ considering relevant facts from multiple points of view, talking with others to think critically about options before them and enlarging their perspectives, opinions and understandings.

¹A random and representative sample of participants is necessary to achieve integrity with the process.

Engagement narrative

Story to communicate to customers

Context and regulatory plan

Context of uncertainty > Move to electrification > Impact to customers depending on the future we plan for

Are there any refinements to the narrative that you can suggest?

Adjusting asset management approach

Adjusting our connections approach

Addressing existing capital recovery

Supporting renewable gases

Questions to guide the engagement

- How adaptable do you feel customers might be to the energy transition?
- What is in the best interests of customers to reach Net Zero?
- To what extent should we explore renewable gas alternatives that could make use of our existing network?
- How can we continue to support customers who don't have an option to disconnect from gas?
- How can we limit the impact to remaining gas customers who face paying for a larger portion of the network due to a declining customer base?
- What happens to the investments we have already made if customers continue to move away from gas?

Do these questions cover the aspects that you feel are needed?

Engagement remit and recommendations

 Reporting and recommendations will include remit response + analysis of response options

Sets the challenge and gets to the heart of the problem

Remit

Australia is transitioning to net zero carbon emissions by 2050. We see a role for Jemena Gas Networks in the transition and beyond 2050. However, there is more and more uncertainty in the energy sector, and cost of living pressures and energy prices are rising. We want to adapt and take action now, but we need the support of customers to do this. Can we do this in a way that is fair for customers over the next five years, and beyond, whilst managing uncertainty and remaining affordable in the future.

Scenarios

- Exploring possible futures with the Customer Forum is a key outcome
- We want the Customer Forum to examine the possible futures through the lens of technical experts
- Technical experts can help with providing (and educating) context regarding timeframes for decarbonisation, progress of technology and associated costs.



Scenario 1: Electric Hare

In strong commitment to achieving net zero, Governments take proactive steps to reduce emissions through highly coordinated measures supporting electrification.

Community concern with the impact of the environmental and health impacts of gas, shapes everyday decisions of many households and small businesses who heavily invest in electrification.

Investments in the development and proliferation of hydrogen and other alternative renewable fuels do not yield significant results and they remain cost prohibitive, while commercial and technology breakthroughs overcome the deliverability challenges of mass electrification. New generation infrastructure and distributed electrification drives electricity prices up until Ooverments intervene

Shareholder pressure leads industrial customers to combine electrification and renewable fuels to decarbonise their high heat and hard to abate processes.

A moratorium on new gas connections prevents expansion and leads to network pruning, and by 2050, networks have a limited role servicing a niche small industrial customer base.

Biomethane focus limited to hard to abate / gasdependent users and Hydrogen is a niche product.

Renewable gas penetration

throughout the market.

Biomethane is a stepping stone to the Hydrogen mass market

> s

Scenario 3: Electric Tortoise

This scenario relies on market-led incentives and pressures to transition the sector. The community prioritises affordability and are generally unwilling to pay for the rewiring or building remediation associated with electrification, nor a price premium for renewable fuels.

The market push to electrify has deliverability challenges, as the resources required to build key infrastructure at scale are in high demand across the globe. In contrast to Electric Hare, with less direct government funding or investment to bridge the gap between the decabronisation ambition and the deliverability of the infrastructure build required, the transition to net zero is slower. The lack of progress in closing the commercial and technical gaps in hydrogen become a significant barrier to adoption. Industrial customers are unable to electrify and seek to decarbonise with biomethane, with the majority of these renewable fuels produced onsite and remotely for injection into gas networks.

Residential customers gradually electrify, while others remain connected to gas, as they experience affordability or infrastructure barriers to transition, negatively impacting the most vulnerable groups.

The role of gas networks remains significant throughout the 2035, with the gas networks distributing biomethane to industrial users, however, as 2050 approaches, electrification erodes gas network scale and with rising costs and further disconnections, the network becomes stranded.

Scenario 4: Market Hydrogen

Scenario 2: Big Hydrogen

Strong government policy support, with renewable

fuel certifications, subsidies and tax offsets, drives

down the cost of hydrogen production and leads to

Community and shareholder support for net zero

leads to significant decline in gas consumption on

until significant technology breakthroughs in electrolysis improve the economic viability of

renewable gases are deployed to decarbonise

hydrogen production. Hydrogen and other

non-blended networks. Biomethane bridges the gap

industrial customers for both medium and high heat

Many residential customers electrify, but a subset

applications, and are willing to pay a premium for

methane has potential as an alternative hydrogen

The pace of decarbonisation is rapid. Throughout 2030, networks scale up hydrogen projects, and as

2050 approaches, gas networks see a resurgence

in their customer base and are responsible for

providing hydrogen and renewable gas blends

product, mitigating the need for residential appliance

prefer the amenity provided by gas in residential

hydrogen and renewable gas blends. Synthetic

replacement, despite low lifecycle efficiency.

a hydrogen export economy in NSW.

The path to decarbonisation is forged by market incentives and pressures, and while less coordinated, it achieves net zero through a diverse yet fragmented energy mix of electricity, natural gas (with CCUS), biomethane, and hydrogen, each being used in their optimal use cases and supported by investments in new technologies.

CCUS and biomethane initially support doctrobnisation while hydrogen becomes scalable and viable through technological breakthroughs. Hydrogen is increasingly used by domestic industrial customers.

Residential oustomers are cost driven and over time as electrification costs decline (including rewiring and building remediation), electrification is ultimately cheaper for consumers. Those who prefer the amenity of gas for residential applications eventually have their needs met as the market invests intallored renewable that lethonlogies for residential tallored renewable that lethonlogies for residential for those willing to pay the premium.

The pace of decarbonisation is relatively slower than Big Hydrogen; in 2030 gas networks scale up hydrogen projects with expansion into 10% hydrogen blending, so that in 2050 the gas networks have a small but meaningful role in industrial and commercial regions.

Policy is outcomes-based and low intervention, with a focus on economic affordability.

Decarbonisation is driven by the market.



Exploring possible futures



Future is marked by uncertainty



Participants should still explore possible futures



Customer Forum can explore through experts



Customer Forum will:

- Explore adaptability to the future
- Determine societal timeframe

Response options

#	2	3	1	4	5	6	Policies		
Current wording	Hydrogen Capability	Advocate for renewable gases	Asset replacement	Capital contributions	Asset lives	Capital recovery	Vulnerable customers	Smart metering	Abolishments
Reframing	Moving towards renewable gas		Slowing network growth		Managing Jemena's financial risk		Supporting customers through the transition		
Focus	moving	mapping on towards able gas							
		Evalu	ation against	t reliability, af	fordability, fa	irness, choic	e and enviroi	nment	

Feedback on the engagement program

- Are there any refinements to the program that you can suggest?
- Does the engagement speak to the AB outputs from Session 7?
- Does the engagement program target a reasonable representation of Jemena's gas distribution customer base?
- Are you satisfied that the engagement program provides adequate opportunity to 'close the loop' with customers in terms of how their expectations have informed Jemena's AA proposals?







Overall feedback for Jemena on the Advisory Board process

- 1. What did we do well?
- 2. What could we do even better?
- 3. What would you want if we did this again?



Further feedback for Jemena

Do you have any further advice or feedback for Jemena?



Next steps

- Advisory Board on an as-needs, opt-in basis for specific topic areas as we progress.
- Invitation to opt-in to the customer forums (noting BD's recommendation to minimise observers at in-person sessions)
- Advisory Board to reconvene to review the draft plan closing the loop (we suggest March 2024).





Thank you

Please contact us if you have any other feedback for us.

■: GasNetworks2050@jemena.com.au

