Session 7 Handbook

Advisory Board

22 March 2023

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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

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Handbook Contents

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KPMG Barangaroo Office Guide

Our full day deliberative session will be hosted at the KPMG Barangaroo Office.

Address

KPMG, Level 38, International Tower Three
300 Barangaroo Avenue, Sydney NSW 2000
Ph: 02 9335 7621

Visitor arrival guidance

- Building entrance is via Constitution Ave
- Select Level 38 on the lift control panel prior to entering the lift
- Proceed to Level 38 via your allocated lift where you will be greeted by the KPMG Concierge
- *Please note Commercial lobby doors operate between 7am to 7pm.*

Public Transport

- Wynyard is the closest station to KPMG.
- Transport for NSW
- Take Exit 4 to Barangaroo and use Wynyard Walk Tunnel. When you reach the end of the tunnel go up the escalators and walk straight ahead until you see a partly covered walkway. Go down these escalators and KPMG is the first large building on your right with the golden sails.

Parking

- Public parking is available in Sun Parking, 261-293 Kent Street in the basement levels of Westpac Tower
- You can enter the car park via Sussex street and Kent street and collect a car park entry ticket at the boom gates. Do not park in the Reserved bays.
- Head to the commercial lifts and select level 38.
- After your meeting, present your carpark entry ticket to the KPMG concierge team on level 38 so it can be validated.

Our objectives and agenda for Session 7

01
Consider each Expert Panel scenario to examine what customer demand and gas service conditions arise in it, and how the available response options perform

02
Deliberate on what responses perform best across the range of scenarios and would be suitable to put forward to Jemena's Customer Forum for customer testing

03
Agree if there should be any packaging of options for customer testing

Start time	Duration	Agenda item
	15	*Tea and coffee on arrival from 9:15 AM*
9:30 AM	*10*	**Welcome:** Acknowledgement of Country, welcome and introductions
9:40 AM	*15*	**Agenda:** Setting the scene and process for today
9:55 AM	*25*	**Reflections from Session 6:** Feedback and responses
10:20 AM	*30*	**Reorientation:** Plausible scenarios and suite of response options
10:50 AM	*15*	*Morning tea*
11:05 AM	*45*	**Session 1: Scenario exploration of Electric Tortoise**
11:50 AM	*45*	**Session 2: Scenario exploration of Electric Hare**
12:35 PM	*30*	*Lunch*
1:05 PM	*40*	**Session 3: Scenario exploration of Market Hydrogen**
1:45 PM	*40*	**Session 4: Scenario exploration of Big Hydrogen**
2:25 PM	*5*	*Comfort stop*
2:30 PM	*75*	**Consolidation:** Deliberations and what to engage on
3:45 PM	*10*	**Session wrap-up:** Feedback and reflection from today's session
3:55 PM	*5*	**Close:** Next steps

Your Advisory Board Chair

Rosemary Sinclair AM
CEO
auDA

Your facilitator

Dr Matt Pearce
Partner
KPMG National Lead for Energy & Utilities

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How we'll get to our Session 7 outcomes

Our key inputs, questions and outcomes for the full day deliberative session.

Our Gas Network 2050 work to date…

Modelling Inputs

- All response options
  - Viable response options in each scenario
- Expert Panel Scenarios
- Customer Demand per cohort (Blunomy)
- Advisory Board Statement of Objectives

The Gas Network 2050 Model has generated…

Modelling Outputs

- Assessment against Statement of Objectives
- How the response options impact customers over time (2025-50)

Our key questions to answer in Session 7…

for Scenario Exploration:

1. *What options should we consider in 2025 – 30 to be prepared for this plausible future?*
2. *Are there any trade-offs that specifically need to be considered?*

for Deliberations:

5. *What responses perform best across the range of scenarios and would be suitable to put forward to Jemena's Customer Forum.*
6. *How should these preferred options be considered together?*
7. *What information will be important for engagement on these options?*

Our key outcomes for Session 7…

Shortlist of response options to engage on with customers, with some proposed option packaging.

Commentary and discussions throughout the day may be captured for initial narratives to support customer engagement.

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Setting the scene for deliberations today

1. Inform
2. Opportunity to provide insights and thoughts
3. Develop 70-80% alignment on big questions

Our ask of you today

4. 100% agreement on the issues

How does this align to IAP2?

Inform & Consult

Involve & Collaborate

Co-design

Definition of key terms:

Alignment: we are largely comfortable with the big questions, although there may be some minor areas of divergence in the group.

Agreement: we are fully agreed on the issues, and their interpretation and application for future direction.

As outlined above, our aim is to reach **70-80% alignment** today.

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Project, approach, challenges, tools	Explore response areas	Explore response areas	Explore response areas	*Renewable gas opt-in session*	Explore response areas	*Model opt-in session*	**Testing responses**	Equip and engage
Discussing the project and approach Co design engagement principles What success looks like Defining the problem statement, challenge and the tools	**Deep dive 1** • Adjusting our asset management approach • Facilitating renewable gases	**Deep dive 2** • Purpose and use of scenarios • Investing in renewable gases • Market transition • Support for renewable gas generation and demand	**Deep dive 3** • Adjusting our new connections approach • Addressing capital recovering (i.e. depreciation profile over time) • Compensating capital recovery risk	***Optional session (tbc)*** • *Provide key details and a deep dive on renewable gas.*	• Problem statement • Plausible future scenarios, with Expert Panel guest speakers • Gas Networks 2050 Model approach	***Optional session (tbc)*** • *Provide key details and deep dive of the model.*	• Expert Panel Scenario insights of potential responses outcomes • Deliberate on what responses perform best • Prioritising and packaging potential responses	• Recap and refine outcomes and packages of options based on previous meeting • Discuss narrative • Feedback for customer forum approach • Next steps

Co-design
Establish our process

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

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Our Statement of Objectives

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:

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

Context and purpose of the Advisory Board Statement of Objectives

Today we will assess how well the possible response options can meet the objectives in the Advisory Board's Statement of Objectives, above.

The purpose of the Gas 2050 process is to identify 2025-30 actions that Jemena can take to engagement with its customers. To serve its purpose in filtering down the broad set of options to a manageable and targeted set to engage on, the statement of objectives needs to have individual objectives that are:

- Capable of assessment or measurement
- Within Jemena's influence or set out by the outcomes in a given expert panel scenario.

The audience and user of this statement of objectives is the Advisory Board for its deliberative sessions.

Reorientation

Scenarios and response options

Expert Panel plausible future scenarios

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

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 Governments intervene with price caps and direct subsides.

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.

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 a hydrogen export economy in NSW.

Community and shareholder support for net zero leads to significant decline in gas consumption on non-blended networks. Biomethane bridges the gap until significant technology breakthroughs in electrolysis improve the economic viability of hydrogen production. Hydrogen and other renewable gases are deployed to decarbonise industrial customers for both medium and high heat processes.

Many residential customers electrify, but a subset prefer the amenity provided by gas in residential applications, and are willing to pay a premium for hydrogen and renewable gas blends. Synthetic methane has potential as an alternative hydrogen product, mitigating the need for residential appliance replacement, despite low lifecycle efficiency.

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 throughout the market.

Biomethane focus limited to hard to abate / gas-dependent users and Hydrogen is a niche product.

Renewable gas penetration

Biomethane is a stepping stone to the Hydrogen mass market.

Market led vs Government led

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 decarbonisation 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 2030s, 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

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 decarbonisation while hydrogen becomes scalable and viable through technological breakthroughs. Hydrogen is increasingly used by domestic industrial customers.

Residential customers 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 in tailored renewable fuel technologies for residential applications (e.g., bottled biomethane for cooking) 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.

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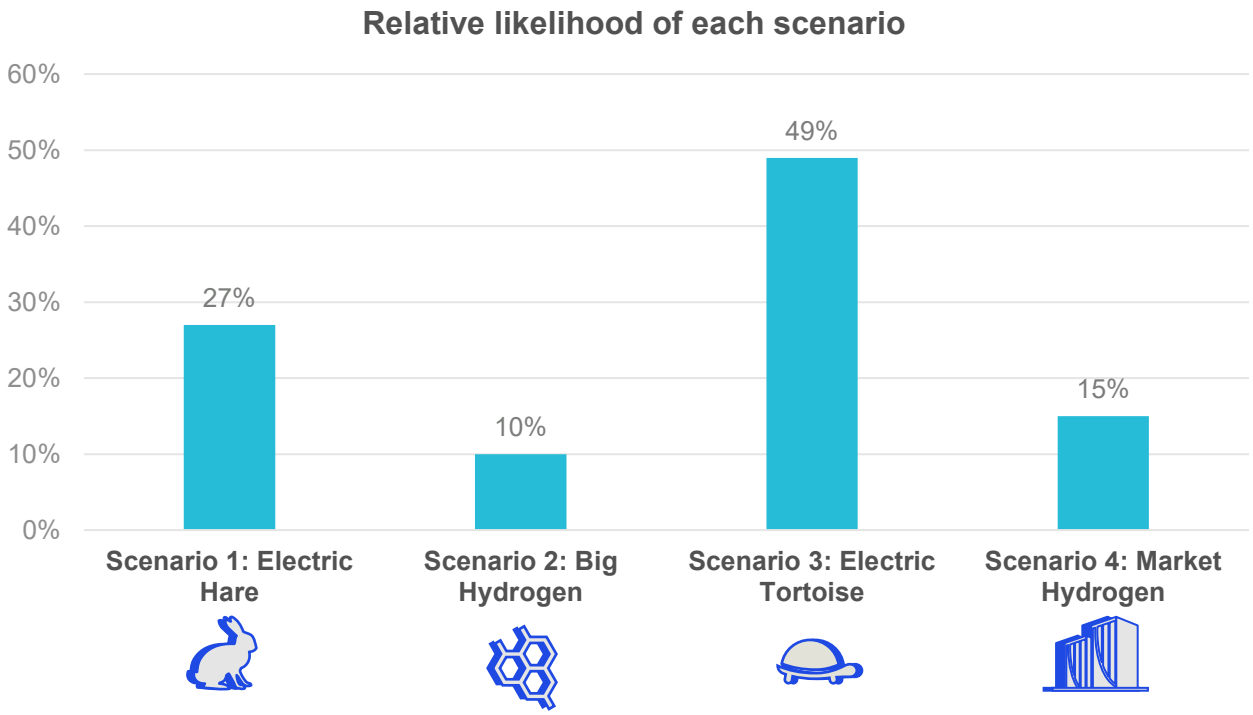
Scenario relative likelihood

A requirement of scenarios, as set out by the Australian Energy Regulator (AER), is that a view is provided in relation to the relative likelihood of a given scenario.

To meet this requirement, each Expert Panellist was invited to cast a vote on the relative likelihood of each scenario by allocating 100% across the four scenarios, based on their own qualitative assessment. *It is noted that Dr Patrick Hartley, who participated in the Expert Panel in his role at CSIRO, requested to abstain from voting.*

Based on the Panellist votes, the relative likelihood of each of the four scenarios is shown below.



Due to rounding, voting results do not add to 100.
Un-rounded results: Electric Hare 26.6%, Big Hydrogen 9.8%, Electric Tortoise 49.0%, Market Hydrogen 14.6%

Response options summary

Response Area 1 | Adjusting asset management approach

Stay in business	Shrink the business	Transition to renewable gases
Continue maintaining and replacing assets at current pace		Replace end-of-life asset with H_2 compatible ones
Replacing at slower pace		Invest in facilitating 10% H_2 blending

2030-50 options embedded in scenarios

- Continue operation: 
- Network pruning: 
- Upgrade network for hydrogen: 

Response Area 2 | Supporting renewable gases

Green gas policy	Market making	Supporting renewable connections
	Measured together based on costs of existing renewable gas advocacy and support	

2030-50 options embedded in scenarios

Renewable gas targets, green gas certificates and competitive market in place for: 

Response Area 3 | Adjusting our connections approach

Increase connection charges	Make connections contestable	Stop connections
Maintain current approach	Not quantified. Similar impact to increase capital contributions	
Increase capital contributions		

2030-50 options embedded in scenarios

- Not specified in scenarios
- Moratorium on new connections: 

Response Area 4 | Addressing existing capital recovery

Shorten asset lives	Change depreciation profile	Compensate recovery risk
Maintain current lives	Maintain current profile	
Shorten asset lives of new assets	Frontend some depreciation	

2030-50 options embedded in scenarios

- Shorten lives to reflect asset utilisation: 
- Frontend depreciation to reflect asset utilisation: 
- Not modelled. Stranding risk to be lessened through depreciation

Icon key:

- Government or policy decision
- Out of scope for Jemena because of rule or legislation change
- Electric Tortoise
- Electric Hare
- Market Hydrogen
- Big Hydrogen

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Introduction to option assessments

Response assessments using the Advisory Board Statement of Objectives

This handbook provides response assessments against the Advisory Board's Statement of Objectives. These cover each available option for each scenario. They:

- assess scenarios with and without the response option to show outcomes as: improved, no change, or worse
- show initial action impacts during 2025-30, medium term impacts in 2030-40, and impacts out to 2050
- provide shorthand reasoning for the outcome and its key drivers.

Measurement approach:

- *Access to reliable and resilient services* – Asset management and service provision outcomes from investment, renewable gas readiness and network pruning in each scenario and response option
- *Stability, affordability & equity in prices* – Gas2050 model outcomes for prices over time
- *A decarbonised energy supply* – Scenario outcomes for energy mix and extent of renewable gas blends, and any changes their timing from the response option
- *Fair returns and risk sharing on investments made by consumers and Jemena* – Gas2050 model outcomes for Jemena's investment recovery and scenario outcomes for customer appliance stranding with or without government support depending on the scenario.

Assessment sample

Electric Hare

Response option: Replacing at slower pace *instead of* continuing maintaining and replacing assets at current pace				
Objective	**2025-30**	**2030-40**	**2040-50**	**Comments**
Access to reliable and resilient services	Worse	No change	No change	Replacing assets at a slower pace reduces capex and RAB growth slightly, but increases maintenance opex. Access to reliable and resilient services worsens due to the increased asset age. In the short to medium term, higher opex outweighs the benefit of a smaller RAB and puts minor upward pressure on prices (+$3-4 p.a.). In the long term, the impact is smaller as opex reduces in line with network pruning. Lower capex slows RAB growth, slightly reducing our stranding risks in new investments but the overall stranding risk remains significant. Network pruning in this scenario forces some customers to disconnect and causes appliance stranding. This could potentially be eased through government electrification support.
Stability, affordability & equity in prices	Worse	Improved	Improved	
A decarbonised energy supply	No change from scenario outcome			
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	Improved	Improved	

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Scenario Exploration

Electric Tortoise

Axes	Market led vs Government led	Renewable gas penetration
	Policy is outcomes-based and low intervention, with a focus on economic affordability. Decarbonisation is driven by the market.	Biomethane focus limited to hard to abate / gas-dependent users and Hydrogen is a niche product.

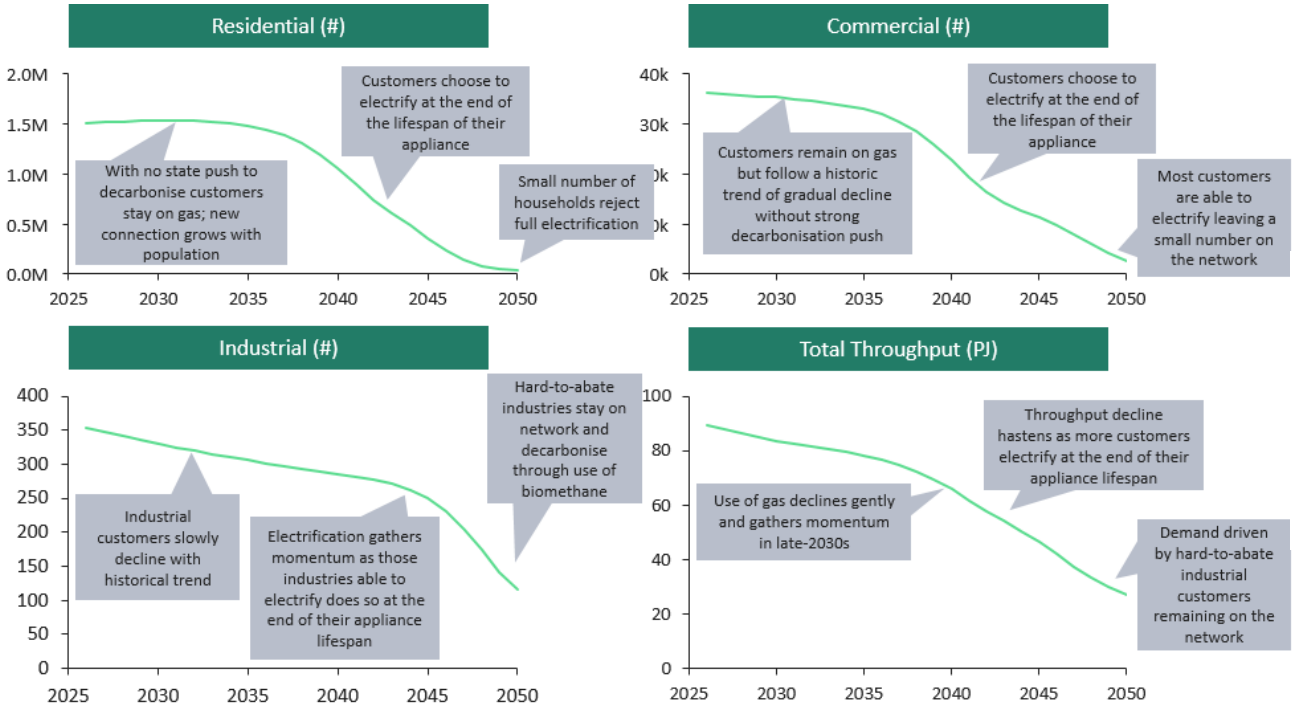
Key attributes of Electric Tortoise

Government	Social	Technology	Economics
Policies reactive to price shocks, falls short of intervention on high conversion costs.	Community focus on affordability. Growing inequity between customer cohorts.	Slow technology development for H2 & biomethane. Deliverability challenges for mass electrification.	High energy prices leads to reactive policy intervention.

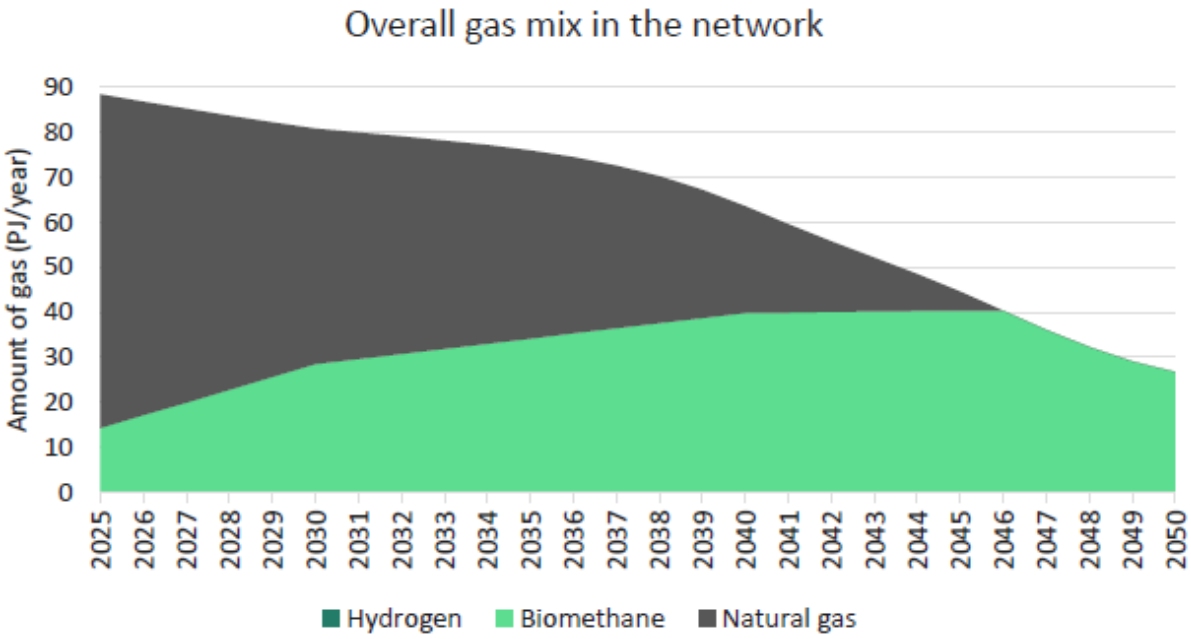
Customers	Pace of decarbonisation	Network scale and role
Slow to convert and unwilling to pay premium for renewable gases.	Slow decarbonisation, extending reliance on natural gas for life of existing appliances.	In 2030s role narrows to distributing biomethane to industry. By 2050, network and remaining customers become stranded over time.

Electric Tortoise | Customer demand & gas blend

Customer and throughput decline occurs as electrification occurs at the end of appliance life (from 2035 for residential/commercial, and from 2045 for industrial)



With hydrogen not viable, the gas blend develops into 100% renewable by 2046 using biomethane



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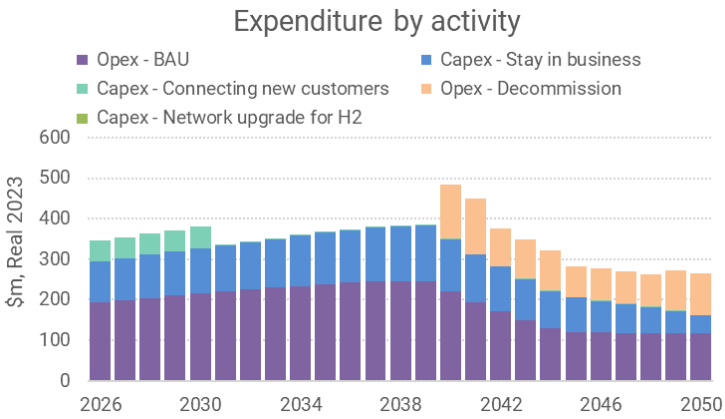
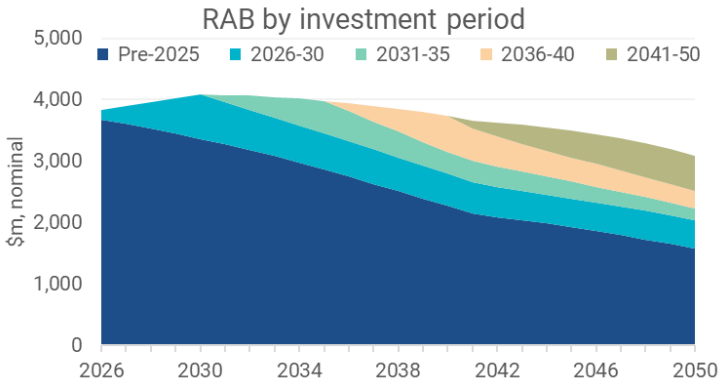
Electric Tortoise | Jemena outcomes

Network continues normal operation until 2040, when customers start dropping off dramatically due to affordability concerns, triggering the death spiral

Stay-in-business capex	Decline from 2040 due to network pruning
Connection capex	Minimal connection capex from 2030 due to affordability concerns
Stay-in-business opex	Opex reduces from 2040 due to reduced network size
Network pruning	Systematic shutdown of medium and low pressure network from 2040
Renewable gas spend	Supplying biomethane blend with no upgrade costs

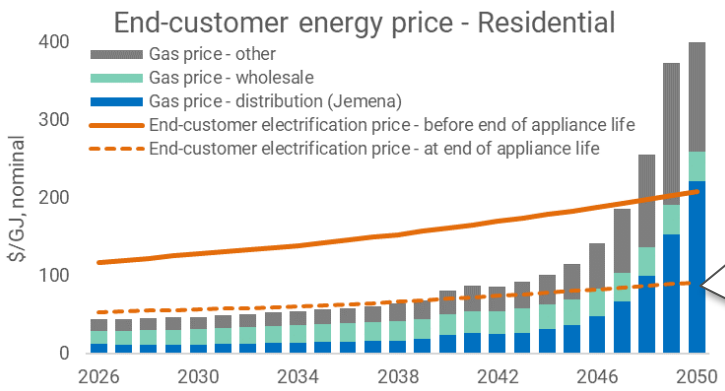


Despite spending minimum capex to keep the network running safely, the unrecovered RAB at 2050 remains significant, creating significant capital recovery risks to Jemena



- Remaining RAB of $3.1B at 2050 will most likely be stranded
- All existing and future investments cannot be fully recovered before asset stranding
- The cost burden (RAB) per customer increases drastically from $2,430 in 2025 to $59,958 in 2050

Customers who can electrify start doing so in late 2030s when costs to electrify fall, leaving customers who are unable to switch carrying a much higher cost burden



From late 2030s, gas becomes uncompetitive for customers at the end of their appliance life.

Customers who can switch to electricity do so gradually.

Customers who can't switch due to affordability barriers of converting appliances or a lack of infrastructure will stay on the network and pay increasingly higher prices.

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Electric Tortoise | Assessments (pg. 1)

Response option: Replacing at slower pace *instead of* continuing maintaining and replacing assets at current pace

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Worse	Worse	Worse	Replacing assets at a slower pace reduces capex and RAB growth slightly, but increases maintenance opex. Access to reliable and resilient services worsens due to the increased asset age. In the short to medium term, higher opex outweighs the benefit of a smaller RAB and puts minor upward pressure on prices (+$2-3 p.a.). In the long term, the impact is smaller as opex reduces in line with network pruning. Lower capex slows RAB growth, slightly reducing our stranding risks on new investments but overall stranding risk remains significant. Network pruning in this scenario forces some customers to disconnect and causes appliance stranding.
Stability, affordability & equity in prices	Worse	Worse	Worse	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	Improved	Improved	

Response option: Accelerate to 10% hydrogen capability *instead of* continuing new and replacement asset transition

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	No change	No change	Brought-forward hydrogen-capable investment does not materially affect access to reliable and resilient services; customers benefit from energy security from fuel diversification in the short term. As hydrogen does not become a viable fuel option, the early investment becomes a sunk cost which puts upward pressure on prices ($3-10 p.a. in 2026-30, $14-140 p.a. in 2030-45), particularly over the medium to long term as customers leave the network. Decarbonisation outcomes improve in 2025-30. The increase in capex and RAB slightly increases our stranding risks. Network pruning in the 2040s in this scenario causes customer appliance stranding for remaining customers at that time.
Stability, affordability & equity in prices	Worse	Worse	Worse	
A decarbonised energy supply	Improved	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Worse	Worse	Worse	

Electric Tortoise | Assessments (pg. 2)

Response option: Advocate for and support renewable gas *instead of* a passive renewable gas approach

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	Improved	Improved	Advocacy and support for renewable gases increases the pace of us heading into a hydrogen future. Access to reliable and resilient gas services improves initially with faster fuel source diversification. Decarbonisation is enhanced by accelerating gas decarbonisation for hard to abate commercial and industrial customers and residential gas loyalists. If we are successful in heading from Electric Tortoise into Market Hydrogen, we will have a larger customer base to share the network costs and keep the prices low for all customers, as well as reduce the likelihood of asset stranding. Customer appliance stranding does not occur because appliance conversion is by customer choice.
Stability, affordability & equity in prices	Improved	Improved	Improved	
A decarbonised energy supply	Improved	Improved	Improved	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	Improved	Improved	

Response option: Increase capital contributions *instead of* continuing low contribution connections

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	No change	No Change	No Change	Increasing capital contributions over 2025-30 preserves our incentives to continue providing access to reliable and resilient services for new customers. While new connections can place downward pressure on prices, there is negligible price impact from 2030 onwards as new connections are limited after 2030. Our stranding risk is slightly improved with minimal adverse impacts. Customer appliance stranding is unchanged.
Stability, affordability & equity in prices	No change	No Change	No Change	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	No change	No Change	

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Response option: Shorten asset lives of new assets *instead of* maintaining current lives

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	Improved	Improved	Shortening new asset lives better preserves our incentives for continued network investment and efficient operation, improving access to reliable services. A shorter capital recovery period increases depreciation and puts upward pressure on prices in the short term. Overall prices are more stable over time. Intergenerational equity is improved. Stranding risk for our new investments is reduced but not fully mitigated due to the fast reduction in customer numbers over 2040-50. Significant stranding risk remains on our existing investments.
Stability, affordability & equity in prices	Worse	Improved	Improved	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	Improved	Improved	

Response option: Frontend some depreciation *instead of* maintaining current profile

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	Improved	Improved	Faster recovery of existing assets helps keep network prices low for a longer period, prolonging customer access our network. It also preserves incentives for efficient operation and investment. In the short to medium term, increased depreciation outweighs the benefit of a smaller RAB, which puts upward pressure on prices. In the medium to long term, a lower return on capital and lower depreciation from a smaller RAB puts downward pressure on prices. Overall prices are more stable over time and intergenerational equity is improved. Front-ending recovery of existing assets reduces our stranding risks. This lessens our incetive for network pruning in the 2040s in this scenario, lowering customer appliance stranding risk.
Stability, affordability & equity in prices	Worse	Improved	Improved	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	Improved	Improved	

Electric Tortoise | Worksheet

1. What options should we consider in 2025 – 30 to be prepared for this plausible future?

2. Are there any trade-offs that specifically need to be considered?

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Electric Tortoise | Notes

Scenario Exploration

Electric Hare

Axes	Market led vs Government led	Renewable gas penetration
	War-time effort, with ambitious policies for net zero and rapid decarbonisation, supported by customers	Biomethane focus limited to hard to abate / gas-dependent users and Hydrogen is a niche product.

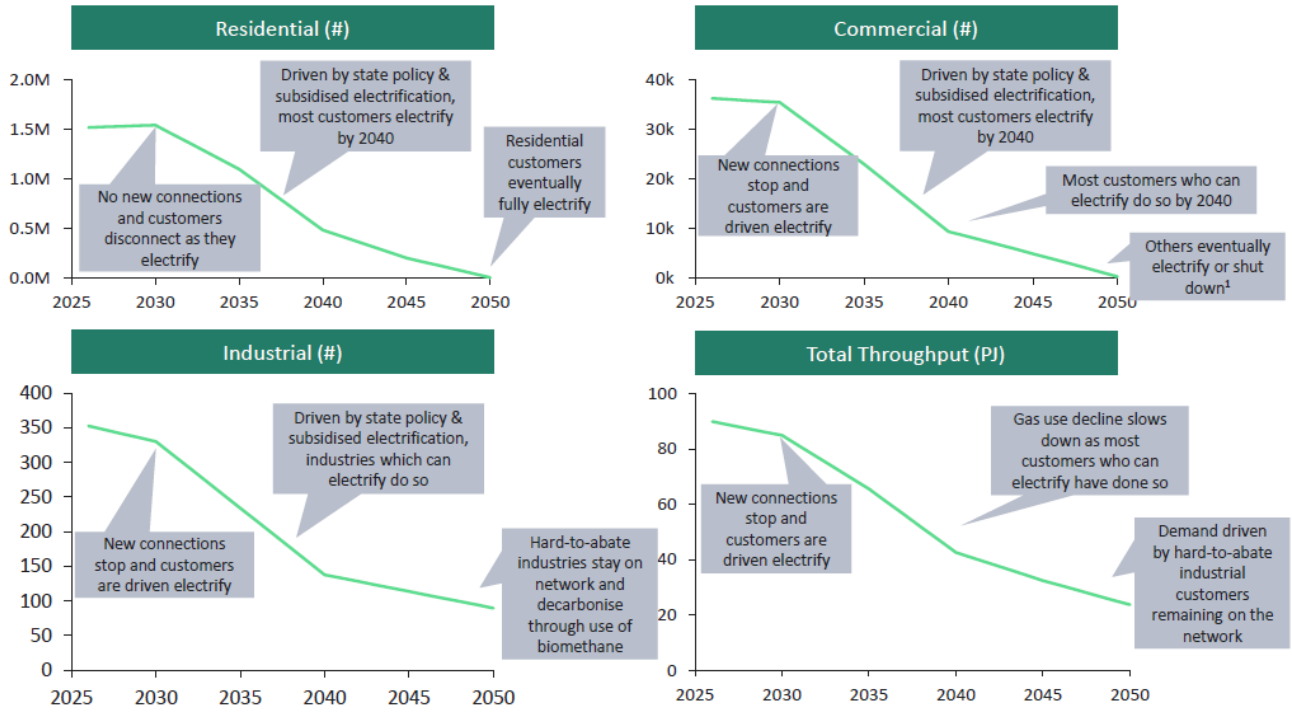
Key attributes of Electric Hare

Government	Social	Technology	Economics
Strong electrification policies: appliance subsidies, moratorium on new gas connections and usage.	Community committed to decarbonisation, concerned with environmental and health impacts of gas.	Slow tech. development for H2 & biomethane. Heavy investment in electrification resolves deliverability barriers.	High energy prices lead to intervention until long term low marginal cost renewable elec. replaces the need for this.

Customers	Pace of decarbonisation	Network scale and role
Rapid adoption of electrification for residential. Industry combines electrification with renewable fuels for high heat / hard to abate processes.	Rapid decarbonisation. Net zero is prioritised over affordability and energy security.	Maintain role through to 2030 while electrification is scaled. By 2050, pruned to limited role servicing niche small industrial customer base.

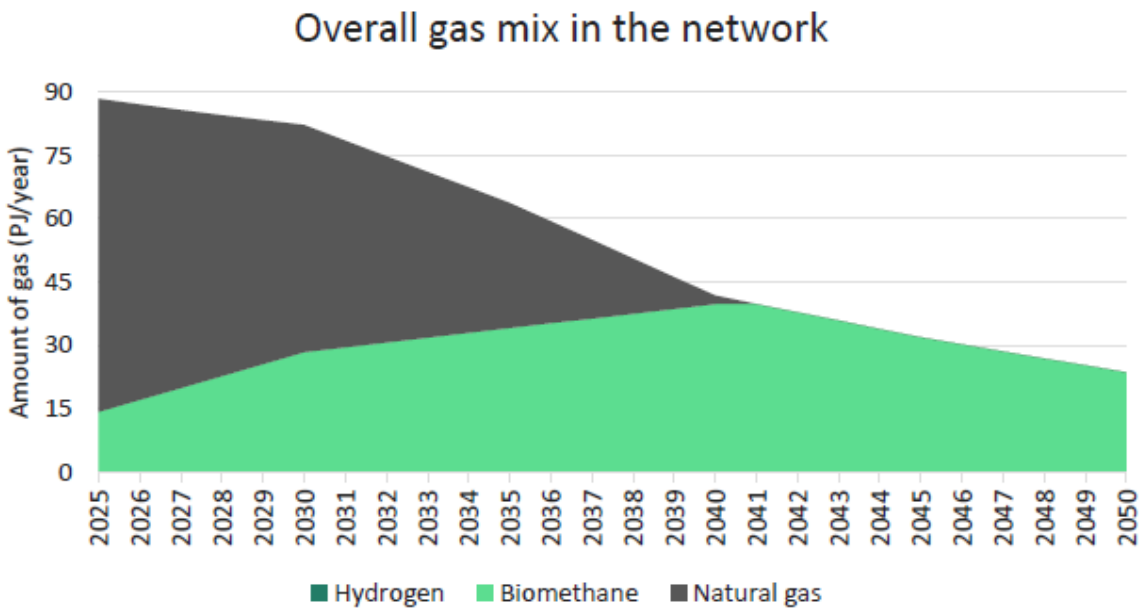
Electric Hare | Customer demand & gas blend

Government intervention drives rapid decline in customers and throughput from 2030, with only a fraction of industrial customers and throughput remaining at 2050



The network begins to be decommissioned from 2035 to reduce ongoing costs

The gas blend is increasingly made up of renewables in the form of biomethane, and is 100% renewable by 2041



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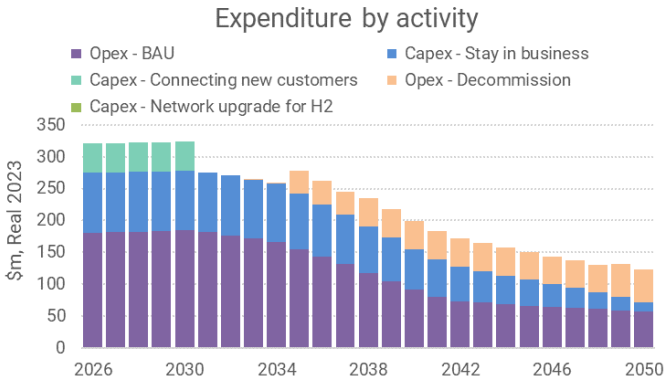
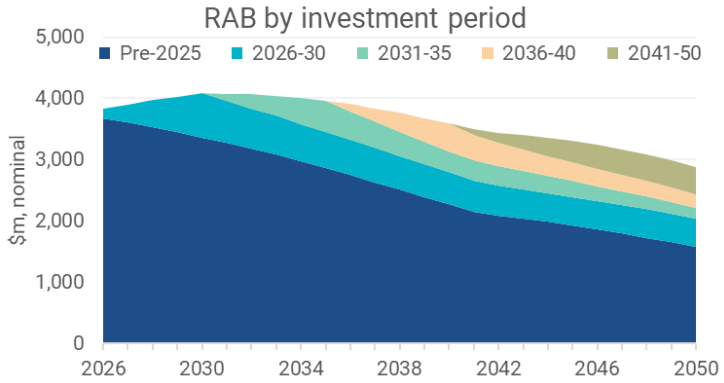
Electric Hare | Jemena outcomes

Government led electrification forces networks to reduce costs by proactively disconnecting customers and reducing service reliability

Stay-in-business capex	Decline from 2035 due to network pruning
Connection capex	No connection capex from 2030 due to moratorium
Stay-in-business opex	Opex reduces over time due to reduced network size
Network pruning	Systematic shutdown of medium and low pressure network from 2035
Renewable gas spend	Supplying biomethane blend with no upgrade costs

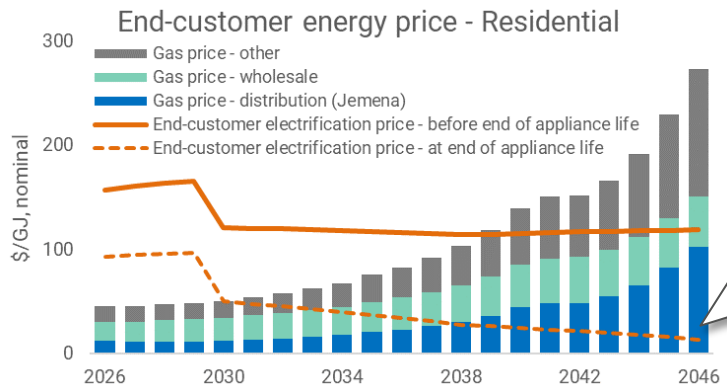


Significant stranding risk remains at 2050 even when we only invest in necessary capex to keep the network running safely and proactively prune the network



- Remaining RAB of $2.9B at 2050 will most likely be stranded
- All existing and future investments cannot be fully recovered before asset stranding
- The cost burden (RAB) per customer increases drastically from $2,430 in 2025 to $142,480 in 2050

Despite network's effort on cost reduction, gas price increases dramatically due to customers leaving the network at faster pace



From 2030, the government subsidy on electrical appliances reduces the electrification costs, accelerating the speed of customers leaving the network.

Remaining customers who are not able to switch carries the cost burden and pay very high gas prices

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Electric Hare | Assessments (pg. 1)

Response option: Replacing at slower pace *instead of* continuing maintaining and replacing assets at current pace

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Worse	No change	No change	Replacing assets at a slower pace reduces capex and RAB growth slightly, but increases maintenance opex. Access to reliable and resilient services worsens due to the increased asset age. In the short to medium term, higher opex outweighs the benefit of a smaller RAB and puts minor upward pressure on prices (+$3-4 p.a.). In the long term, the impact is smaller as opex reduces in line with network pruning. Lower capex slows RAB growth, slightly reducing our stranding risks in new investments but the overall stranding risk remains significant. Network pruning in this scenario forces some customers to disconnect and causes appliance stranding. This could potentially be eased through government electrification support.
Stability, affordability & equity in prices	Worse	Improved	Improved	
A decarbonised energy supply	No change from scenario outcome			
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	Improved	Improved	

Response option: Accelerate to 10% hydrogen capability *instead of* continuing new and replacement asset transition

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	No change	No change	No change	Brought-forward hydrogen-capable investment does not materially affect access to reliable and resilient services; customers continue to benefit from energy security from fuel diversification in the short term. As hydrogen does not become a viable fuel option, the early investment becomes a sunk cost which puts upward pressure on prices ($3-7 p.a. in 2026-35, $9-37 p.a. in 2035-45), particularly over the medium to long term as customers leave the network. Decarbonisation outcomes improve in 2025-30. The increase in capex and RAB slightly increases our stranding risks. Network pruning in this scenario forces some customers to disconnect and causes appliance stranding. This could potentially be eased through government electrification support.
Stability, affordability & equity in prices	Worse	Worse	Worse	
A decarbonised energy supply	Improved	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Worse	Worse	Worse	

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Electric Hare | Assessments (pg. 2)

Response option: Advocate for and support renewable gas *instead of* a passive renewable gas approach

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	Improved	Improved	Advocacy and support for renewable gases increases the chances of us heading into a hydrogen future. Access to reliable and resilient gas services is improved due to gas source diversification and avoiding moratoria on gas connections. Decarbonisation is improved by accelerating gas decarbonisation for hard to abate commercial and industrial customers and residential gas loyalists. If we are successful in heading from Electric Hare into Big Hydrogen or Market Hydrogen, we will have a larger customer base to share the network costs and keep the prices low for all customers, as well as reduce the likelihood of asset stranding. Customer appliance stranding does not occur because appliance conversion is by customer choice.
Stability, affordability & equity in prices	Improved	Improved	Improved	
A decarbonised energy supply	Improved	Improved	Improved	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	Improved	Improved	

Response option: Increase capital contributions *instead of* continuing low contribution connections

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	No change	No change	No change	Increasing capital contributions over 2025-30 preserves our incentives to continue providing access to reliable and resilient services for new customers in that period. Because new connections are banned from 2030 onwards, the impact of this response on prices and our stranding risk is limited to 2025-30 and is negligible from 2030 onwards. Customer appliance stranding is unchanged.
Stability, affordability & equity in prices	Improved	No change	No change	
A decarbonised energy supply	No change from scenario outcome	No change from scenario outcome	No change from scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	No change	No change	

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Response option: Shorten asset lives of new assets *instead of* maintaining current lives				
Objective	**2025-30**	**2030-40**	**2040-50**	**Comments**
Access to reliable and resilient services	Improved	Improved	Improved	Shortening new asset lives better preserves our incentives for continued network investment and efficient operation, improving access to reliable services. In the short to medium term, increased depreciation outweighs the benefit of a smaller RAB, which puts upward pressure on prices. This scenario has price increases accelerating from 2040, which still occurs under this option but to a lesser extent, thereby improving intergenerational equity across the 3 assessed time horizons. Stranding risk for our new investments reduces in the short to medium term. However, as customers continue to leave the network due to significant government interventions, our stranding risk remains significant.
Stability, affordability & equity in prices	Worse	Improved	Improved	
A decarbonised energy supply	No change from scenario outcome	No change from scenario outcome	No change from scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	Improved	Improved	

Response option: Frontend some depreciation *instead of* maintaining current profile				
Objective	**2025-30**	**2030-40**	**2040-50**	**Comments**
Access to reliable and resilient services	Improved	Improved	Improved	Faster recovery of existing assets helps keep network prices low for a longer period, which prolongs customer access our network. It also preserves incentives for efficient operation and investment. In the short to medium term, the increased depreciation outweighs the benefit of a smaller RAB, which puts upward pressure on prices. In the long term, a lower return on capital and lower depreciation from a smaller RAB puts downward pressure on prices. Overall prices are more stable over time and intergenerational equity is improved. A lower RAB reduces our stranding risks. However, as customers continue to leave the network due to significant government interventions, our stranding risk remains significant even with faster capital recovery. Reduction in our stranding risk helps delay network pruning in this scenario, though pruning still forces some customers to disconnect and causes appliance stranding. Appliance stranding could be partially eased through government electrification support.
Stability, affordability & equity in prices	Worse	Improved	Improved	
A decarbonised energy supply	No change from scenario outcome	No change from scenario outcome	No change from scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	Improved	Improved	

Electric Hare | Worksheet

1. What options should we consider in 2025 – 30 to be prepared for this plausible future?

2. Are there any trade-offs that specifically need to be considered?

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Electric Hare | Notes

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Scenario Exploration

Market Hydrogen

Axes	Market led vs Government led	Renewable gas penetration
	Policy is outcomes-based and low intervention, with a focus on economic affordability. Decarbonisation is driven by the market.	Biomethane is a stepping stone to the Hydrogen mass market.

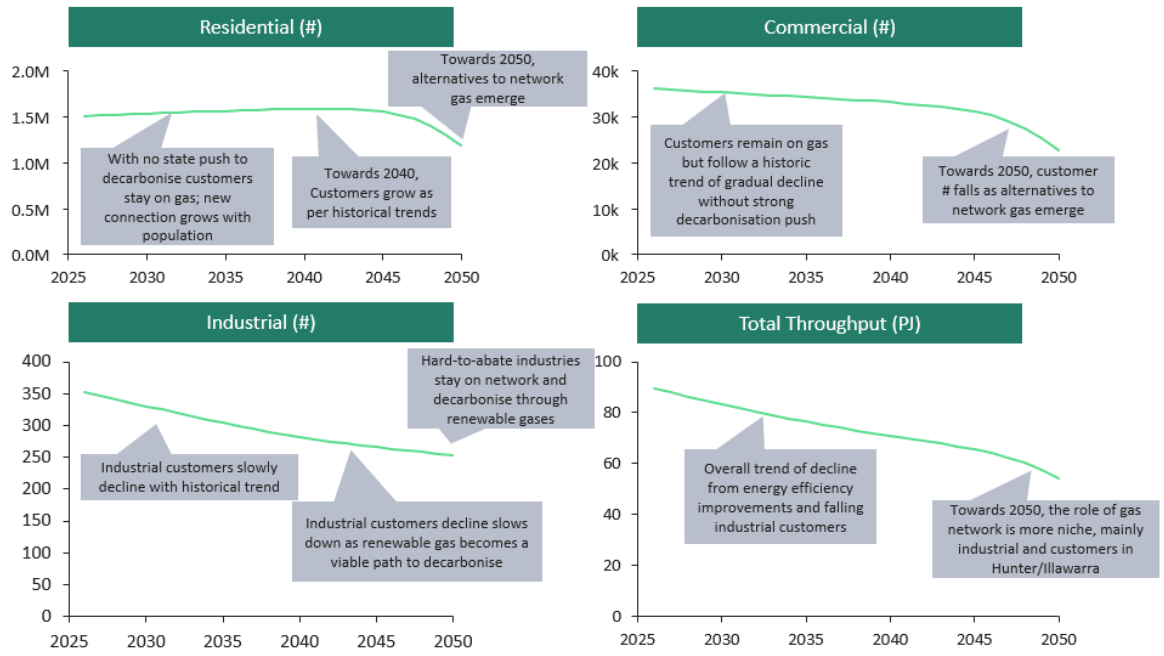
Key attributes of Market Hydrogen

Government	Social	Technology	Economics
Policies based on incentives & price signals, rather than direct intervention.	Community focus on affordability. Business shareholders prioritise ESG commitments.	Rapid technology development for H2 & biomethane, inc. residential applications.	Commercially competitive H2 market and new competitors enter the gas market.

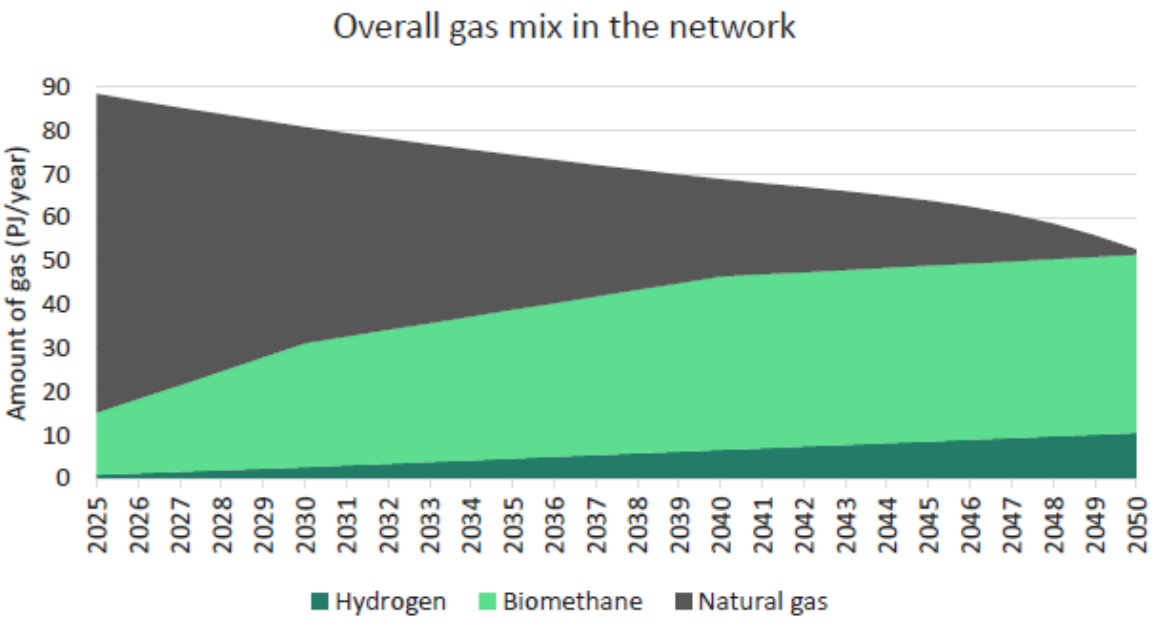
Customers	Pace of decarbonisation	Network scale and role
Some residential customer reject full electrification and pay premium for renewable gas amenity, extending demand for residential gas appliances.	Slow decarbonisation. Net zero is achieved through a fragmented and diverse energy mix.	Role declines slowly, serving residential and commercial customers in 2030. By 2050, a small but meaningful role supporting heavy industry.

Market Hydrogen | Customer demand & gas blend

Residential customers grow as a portion of population growth, while a slow decline in commercial and industrial customers continues per historical trend. Throughput declines due to energy efficiency improvements and reductions in industrial customers. Towards 2050, alternatives to network gas emerge, leading to larger customer and throughput declines



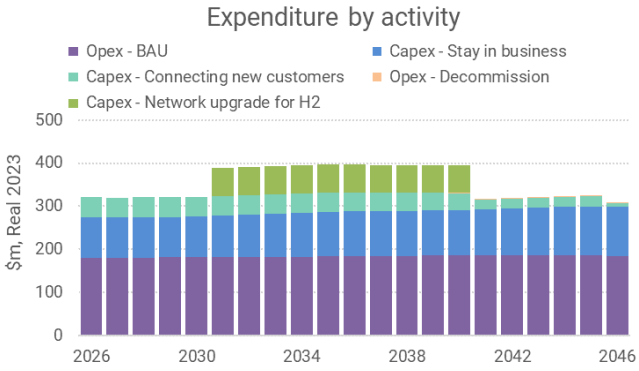
The gas blend slowly increases the proportion of biomethane and hydrogen, with the exact mix driven by market prices



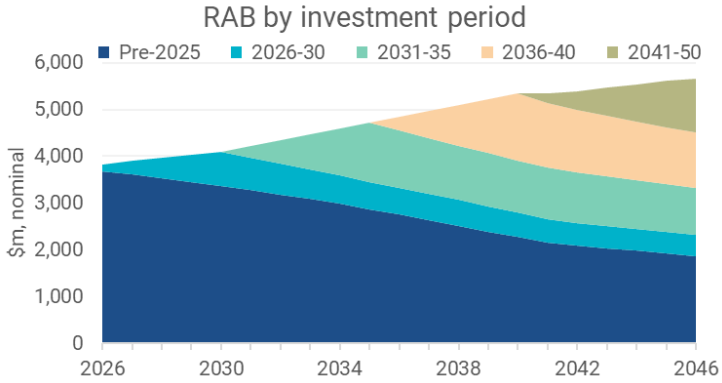
Market Hydrogen | Jemena outcomes

Market led gas decarbonisation pushes network upgrade based on locational economics of customer demand, including industrials seeking to decarbonise gas

Stay-in-business capex	Replacement costs remain at stable pace with scale in line with network size
Connection capex	Declines with connection demand
Stay-in-business opex	Inspection and maintenance costs increase in line with the increase in hydrogen blends
Network pruning	Decommissioning based on economics to maintain network
Renewable gas spend	Supplying biomethane blend initially and upgrade to facilitate hydrogen over 2030-40

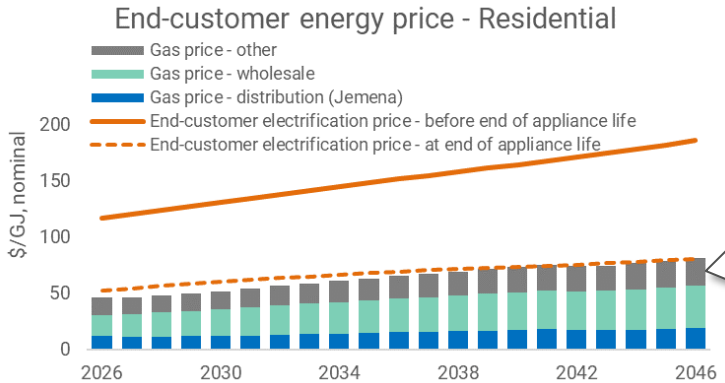


RAB continues to grow despite reduction in customer demand, due to the continued need to maintain safe operation of our network and network conversion costs, which creates capital recovery risks



- The misalignment between RAB growth and demand reduction creates capital recovery risks from 2040
- Remaining RAB of $5.7B at 2050 is spread across a smaller customer base, reducing the likelihood of capital recovery beyond 2050
- The cost burden (RAB) per customer increases from $2,430 in 2025 to $4,511 in 2050

Gas remains competitive until mid 2040s with less customers willing to pay higher prices to stay on the gas network



Gas with higher renewable blending remains cheaper than the electrification option for customers at the end of their appliance life until 2040s

From 2040 onwards, less customers are willing to pay a higher premium for gas

As a result, network costs are spread over a smaller customer base, which further increases costs for remaining customers

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Market Hydrogen | Assessments (pg. 1)

Response option: Replacing at slower pace *instead of* continuing maintaining and replacing assets at current pace

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Worse	Worse	No change	Replacing assets at a slower pace reduces capex and RAB growth slightly, but increases maintenance opex. Access to reliable and resilient services worsens with increased asset age until 2040 when the network has been fully upgraded for hydrogen. Higher opex outweighs the benefit of a smaller RAB and puts upward pressure on prices (+$3 p.a.). Lower capex slows RAB growth slightly, reducing our stranding risks on new investments in the short term when the future gas demand is uncertain. As hydrogen becomes viable in the medium to long term, the risk of stranding diminishes. As appliance conversion is by customer choice, customer appliance stranding is avoided.
Stability, affordability & equity in prices	Worse	Worse	Worse	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	No change	No change	

Response option: Accelerate to 10% hydrogen capability *instead of* continuing new and replacement asset transition

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	Improved	Improved	Brought-forward hydrogen-capable investment leads to customers gaining access to renewable gasses in 2025-30 (where supply is available) and supports improved energy security from fuel diversification. In the short term, the increase in capex puts minor upward pressure on prices ($4 p.a.). In the medium term, as the network is upgraded for higher hydrogen blending, the earlier investment reduces the investment required at this stage, which puts minor downward pressure on prices (-$2 p.a.). Decarbonisation outcomes improve in 2025-30. The increase in capex and RAB increases our stranding risks initially when the future gas demand is uncertain. As hydrogen becomes viable in the medium to long term, the risk of stranding diminishes. As appliance conversion is by customer choice, customer appliance stranding is avoided.
Stability, affordability & equity in prices	Worse	No change	Improved	
A decarbonised energy supply	Improved	No change from the scenario	No change from the scenario	
Fair returns and risk sharing on investments made by consumers and Jemena	Worse	No change	No change	

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Market Hydrogen | Assessments (pg. 2)

Response option: Advocate for and support renewable gas *instead of* a passive renewable gas approach

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	No change	No change	Advocacy and support for renewable gases increases the chances of us heading into a hydrogen future. Access to reliable and resilient gas services improves with gas source diversification and less need for network pruning. In a hydrogen future, the larger customer base helps keep network prices low. Decarbonisation is enhanced by initially accelerating gas decarbonisation for hard to abate commercial and industrial customers and residential gas loyalists. Return and stranding risk outcomes for Jemena and our customers do not materially change from this hydrogen scenario.
Stability, affordability & equity in prices	No change	No change	No change	
A decarbonised energy supply	Improved	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	No change	No change	No change	

Response option: Increase capital contributions *instead of* continuing low contribution connections

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	No change	No change	No change	Increasing capital contributions preserves our incentives to continue providing access to reliable and resilient services for new customers. In the short term, this slightly reduces RAB growth. The impact on customer prices is minimal. The reduction in capex reduces our stranding risks for new assets. As hydrogen becomes viable in the medium to long term, the risk of stranding diminishes. Customer appliance stranding risk remains unchanged.
Stability, affordability & equity in prices	Improved	Improved	Improved	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	Improved	Improved	

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Response option: Shorten asset lives of new assets *instead of* maintaining current lives

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	Improved	Improved	Shortening new asset lives better preserves our incentives for continued network investment and efficient operation, improving access to reliable services. In the short to medium term, increased depreciation outweighs the benefit of a smaller RAB, which puts upward pressure on prices. In the long term, a lower return on capital and lower depreciation from a smaller RAB puts downward pressure on prices. As wholesale gas prices increase with increased hydrogen and biomethane blending, lower network prices in later periods smooths the end-customer gas price and improves affordability of renewable gas to more customers. Stranding risk for our new investments reduces in the short term. As hydrogen becomes viable in the medium to long term, our risk of stranding diminishes.
Stability, affordability & equity in prices	Worse	Improved	Improved	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	No change	No change	

Response option: Frontend some depreciation *instead of* maintaining current profile

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	Improved	Improved	Faster recovery of existing assets helps keep network prices low for a longer period, prolonging customer access our network. It also preserves incentives for efficient operation and investment. In the short to medium term, increased depreciation outweighs the benefit of a smaller RAB, which puts upward pressure on prices. In the long term, a lower return on capital and lower depreciation from a smaller RAB puts downward pressure on prices. As wholesale gas prices increase with increased hydrogen and biomethane blending, lower network prices in later periods helps smooth the end-customer gas price and increase affordability of renewable gas to more customers. A lower RAB reduces our stranding risks in the short term. As hydrogen becomes viable in the medium to long term, the risk of stranding diminishes for our investments and our customers appliances as gas price continues to be affordable in the long term.
Stability, affordability & equity in prices	Worse	Improved	Improved	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	No change	No change	

Market Hydrogen | Worksheet

1. What options should we consider in 2025 – 30 to be prepared for this plausible future?

2. Are there any trade-offs that specifically need to be considered?

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Market Hydrogen | Notes

Scenario Exploration

Big Hydrogen

Axes	Market led vs Government led	Renewable gas penetration
	War-time effort, with ambitious policies for net zero and rapid decarbonisation, supported by customers	Biomethane is a stepping stone to the Hydrogen mass market.

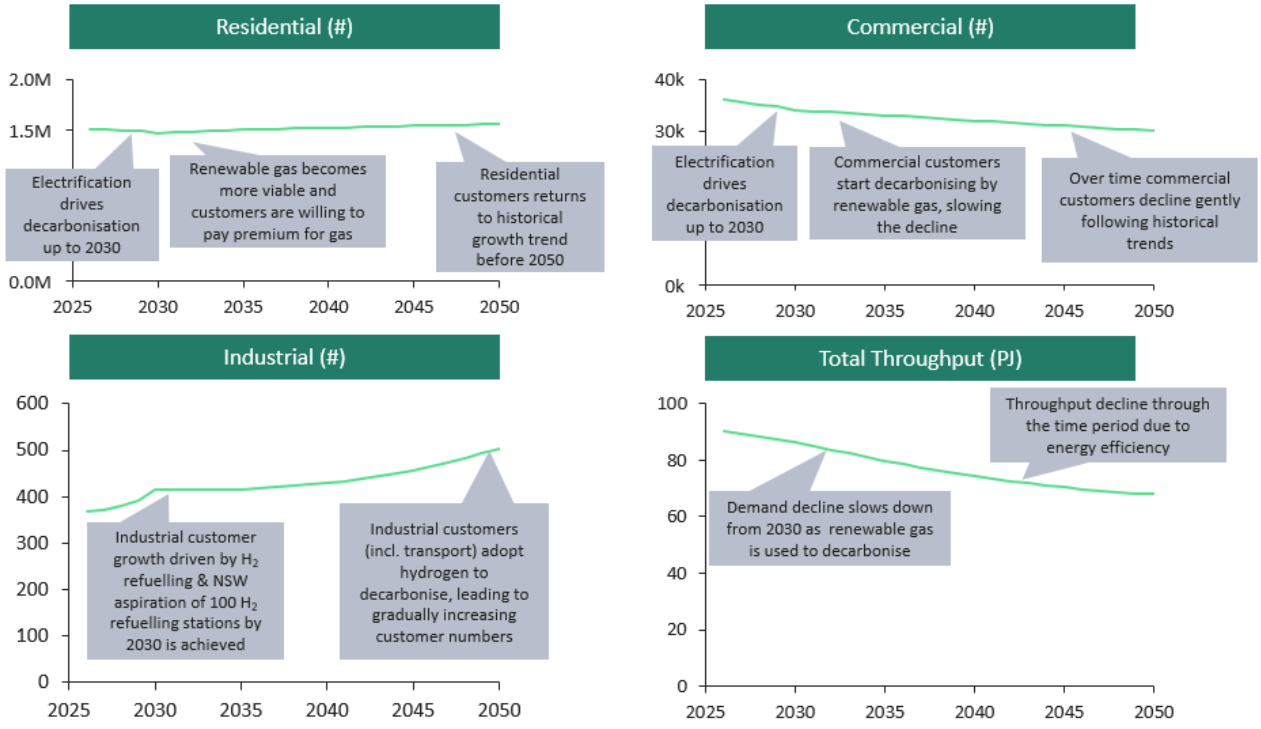
Key attributes of Big Hydrogen

Government	Social	Technology	Economics
Strong renewable fuel policies: renewable gas targets and renewable fuel certification.	Community and shareholders committed to net zero and concerned about environmental impacts of gas.	Electrification drives decarb. until rapid technology development for H2 & biomethane	High costs initially, but rapidly fall leading to competitive domestic industry and H2 exports.

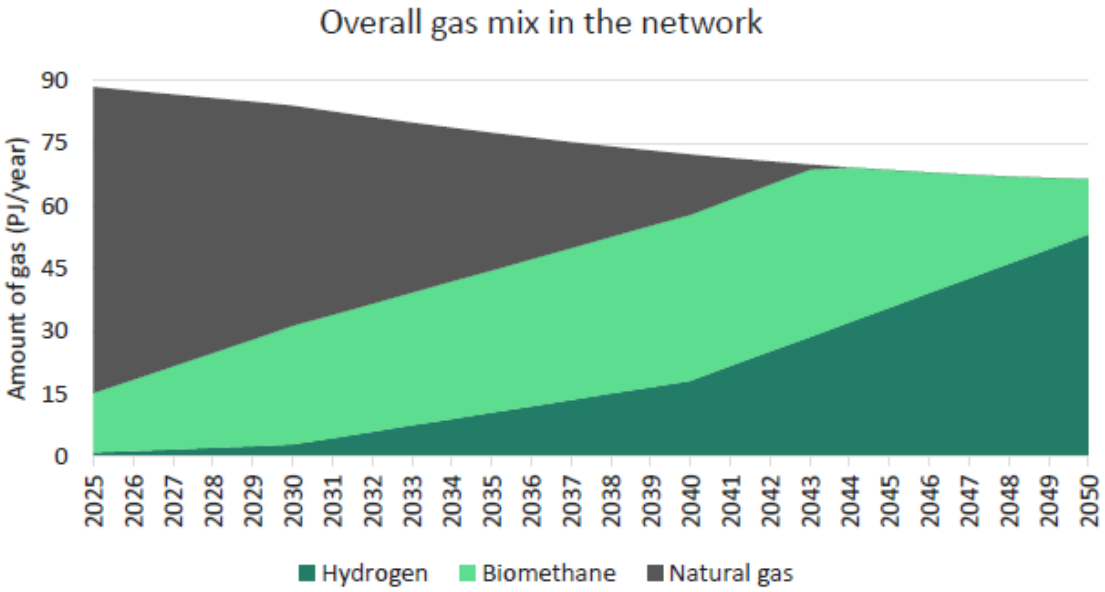
Customers	Pace of decarbonisation	Network scale and role
Some households continue to use natural gas, while others pay premium for renewable gas amenity	Rapid decarbonisation through electrification, H2 and certification for biomethane.	Continue current trajectory in 2030s with 10% H2 blend. Resurgence and significant role providing H2 and renewable gas in 2050.

Big Hydrogen | Customer demand & gas blend

Residential customers grow slowly, while commercial customers slowly decline following historical trends. New industry opportunities based on hydrogen use spur increases in industrial customers. Throughput declines due to energy efficiency improvements.



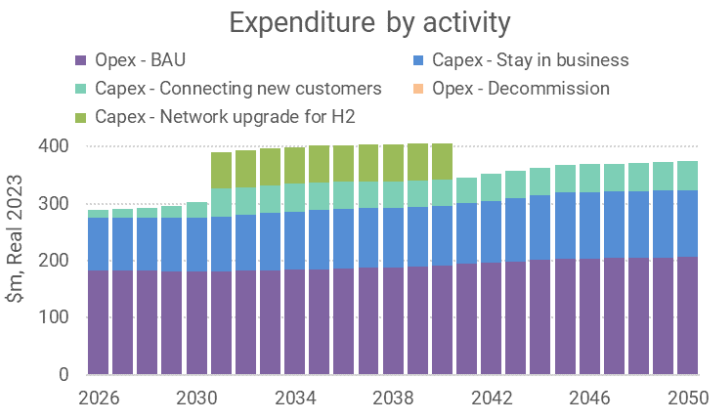
Biomethane is a transition fuel, the gas blend will be fully renewable by 2044, and mostly overtaken by hydrogen by 2050



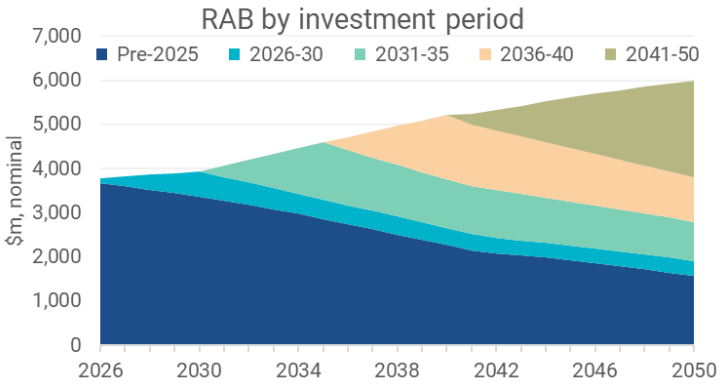
Big Hydrogen | Jemena outcomes

Government and technology led hydrogen price reductions drive rapid network hydrogen conversion

Stay-in-business capex	Replacement costs increases gradually over time in line with network size
Connection capex	Capex grows with connection demand
Stay-in-business opex	Inspection and maintenance costs increase in line with the increased hydrogen blend
Network pruning	None
Renewable gas spend	Upgrade network to facilitate hydrogen in 2030s

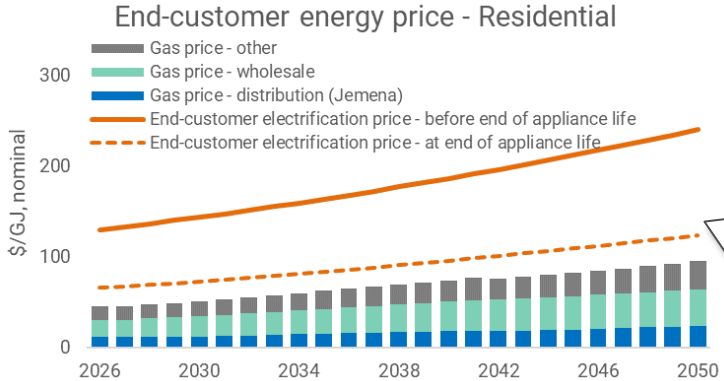


RAB continues to grow in line with customer demand for renewable gas. The risk of capital recovery is small.



- Remaining RAB of $6.0B at 2050 is spread over a growing customer base
- The growth in customer base is slower than the growth in RAB, with the cost burden (RAB) per customer increases from $2,430 in 2025 to $3,770 in 2050
- Existing and future investments have a reasonable expectation of being recoverable

Competitive hydrogen prices drive down end-customer gas price, making renewable gas more affordable than the electrification option through to 2050



End-customer renewable gas price remains below the cost of electrification due to:

- Strong government policy support, with renewable fuel certifications, subsidies and tax offsets, driving down hydrogen production cost.
- Strong customer base supporting lower network costs.

Big Hydrogen | Assessments (pg. 1)

Response option: Replacing at slower pace *instead of* continuing maintaining and replacing assets at current pace

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Worse	Worse	No change	Replacing assets at a slower pace reduces capex and RAB growth slightly, but increases maintenance opex. Access to reliable and resilient services worsens due to the increased asset age until 2040 when the network has been fully upgraded for hydrogen. Higher opex outweighs the benefit of a smaller RAB and puts upward pressure on prices (+$3 p.a.). Lower capex slows RAB growth slightly, reducing our stranding risks on new investments in the short term when future gas demand is uncertain. As hydrogen becomes viable in the medium to long term, the risk of stranding diminishes. As appliance conversion is by customer choice, customer appliance stranding is avoided.
Stability, affordability & equity in prices	Worse	Worse	Worse	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	No change	No change	

Response option: Accelerate to 10% hydrogen capability *instead of* continuing new and replacement asset transition

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	Improved	Improved	Brought-forward investment to prepare for eventual 100% hydrogen means customers access renewable gas sooner and supports improved energy security from fuel diversification. In the short term, the increase in capex puts minor upward pressure on prices ($4 p.a.). In the medium term, as the network is upgraded for higher hydrogen blending, the earlier investment reduces the investment required at this stage, which puts minor downward pressure on prices (-$2 p.a.). Decarbonisation outcomes improve in 2025-30. The increase in capex and RAB increases our stranding risks initially when the future gas demand is uncertain. As hydrogen becomes viable in the medium to long term, the risk of stranding diminishes. As appliance conversion is by customer choice, customer appliance stranding is avoided.
Stability, affordability & equity in prices	Worse	No change	Improved	
A decarbonised energy supply	Improved	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Worse	No change	No change	

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Big Hydrogen | Assessments (pg. 2)

Response option: Advocate for and support renewable gas *instead of* a passive renewable gas approach

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	No change	No change	Advocacy and support for renewable gases increases the chances of us heading into a hydrogen future. Access to reliable and resilient gas services improves initially due to earlier gas source diversification and less need for network pruning. In a hydrogen future, the larger customer base helps keep network prices low. Decarbonisation is enhanced by initially accelerating gas decarbonisation. Return and stranding risk outcomes for Jemena and our customers do not materially change from this hydrogen scenario.
Stability, affordability & equity in prices	No change	No change	No change	
A decarbonised energy supply	Improved	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	No change	No change	No change	

Response option: Increase capital contributions *instead of* continuing low contribution connections

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	No change	No change	No change	Increasing capital contributions over 2025-30 preserves our incentives to continue providing access to reliable and resilient services for new customers and connections remain strong because it is offset by the willingness to pay for renewable gasses. Although capital contributions reduce capex and RAB growth, the impact is minor and customer prices are unchanged. The reduced capex going into the RAB results lowers our stranding risks on new assets. Customer appliance stranding is unchanged.
Stability, affordability & equity in prices	No change	No change	No change	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	Improved	Improved	

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Big Hydrogen | Assessments (pg. 3)

Response option: Shorten asset lives of new assets *instead of* maintaining current lives

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	Improved	Improved	Shortening new asset lives better preserves our incentives for continued network investment and efficient operation, improving access to reliable services. In the short to medium term, increased depreciation outweighs the benefit of a smaller RAB, which puts upward pressure on prices. In the long term, a lower return on capital and lower depreciation from a smaller RAB puts downward pressure on prices. As wholesale gas prices increase with increased hydrogen and biomethane blending, lower network prices in later periods helps smooth the end-customer gas price and improves affordability of renewable gas to more customers. Stranding risk for our new investments reduces in the short term. As hydrogen becomes viable in the medium to long term, the risk of stranding diminishes.
Stability, affordability & equity in prices	Worse	Improved	Improved	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	No change	No change	

Response option: Frontend some depreciation *instead of* maintaining current profile

Objective	2025-30	2030-40	2040-50	Comments
Access to reliable and resilient services	Improved	Improved	Improved	Faster recovery of existing assets helps keep network prices low for a longer period, prolonging customer access our network. It also preserves incentives for efficient operation and investment. In the short to medium term, the increase in depreciation outweighs the benefit of a smaller RAB, which puts upward pressure on prices. In the long term, a lower return on capital and lower depreciation from a smaller RAB puts downward pressure on prices. As wholesale gas prices increase with increased hydrogen and biomethane blending, lower network prices in later periods helps smooth the end-customer gas price and increase affordability of renewable gas to more customers. A lower RAB reduces our stranding risks in the short term. As hydrogen becomes viable in the medium to long term, the risk of stranding diminishes. As gas price continues to be affordable in the long term, the appliance conversion is by customer choice, so customer appliance stranding is avoided.
Stability, affordability & equity in prices	Worse	Improved	Improved	
A decarbonised energy supply	No change from the scenario outcome	No change from the scenario outcome	No change from the scenario outcome	
Fair returns and risk sharing on investments made by consumers and Jemena	Improved	No change	No change	

Big Hydrogen | Worksheet

1. What options should we consider in 2025 – 30 to be prepared for this plausible future?

2. Are there any trade-offs that specifically need to be considered?

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Big Hydrogen | Notes

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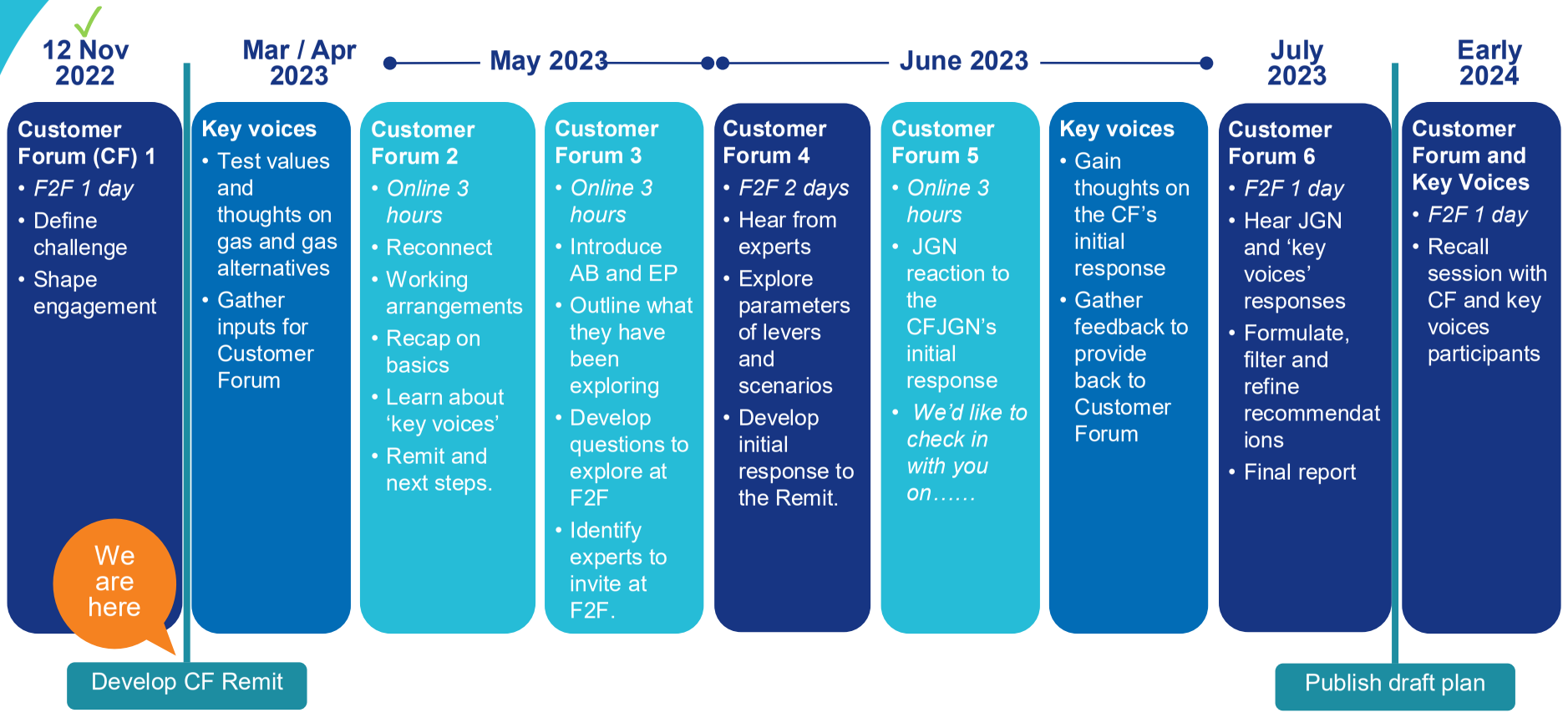
Consolidation: Deliberations and what to engage on

Including Jemena preferred response options and customer engagement timeline

Overview of 2023 Engagement Program



What we've heard from customers so far:

- 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.

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Deliberation | Worksheet (pg. 1)

1. What response options perform best across the range of scenarios and would be suitable to put forward to Jemena's Customer Forum?

Deliberation | Worksheet (pg. 2)

2. How should these preferred options be considered together?

Deliberation | Worksheet (pg. 3)

3. What information will be important for engagement on these options?

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Deliberation | Notes

Next steps

Final Advisory Board session to be held on 18 April 2023

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Draft agenda for Session 8

The final Advisory Board session will be held via Teams on 18 April 2023.
Objectives for our final session and a draft agenda are shown below.

Objectives

1. Recap and refine outcomes and packages of options (based on AB7 outcomes)
2. Discuss narrative to accompany filtered and packaged options
3. Feedback for customer forum approach and planning for that next stage
4. Thank you and feedback
5. Where to from here for the Advisory Board

Topics we will cover

Section 1: Welcome & Introductions

Acknowledgement of Country, introduction and objectives for today

Section 2: Reflections from Session 7

Feedback and responses

Section 3: What to engage on: discussion on the narrative and packages of options

What are the options available to us, rechecking what we will engage on and narratives

Break

Section 4: How to engage: early feedback on the engagement program design

How we plan to engage with customers at the Jemena Customer Forum on the shortlisted response options

Section 5: Thank you, feedback, program wrap-up

Rosemary's Playback

Feedback: What did we do well during our time together? What would you want if we did this again?

Overview and next steps: Outputs and outcomes report

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Thank you

Please contact us if you have any questions or feedback.

Dr Matt Pearce
KPMG Partner
National Sector Lead, Power & Utilities
E: mpearce1@kpmg.com.au

Ana Dijanosic
General Manager Regulation
Jemena
E: Ana.Dijanosic@jemena.com.au

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