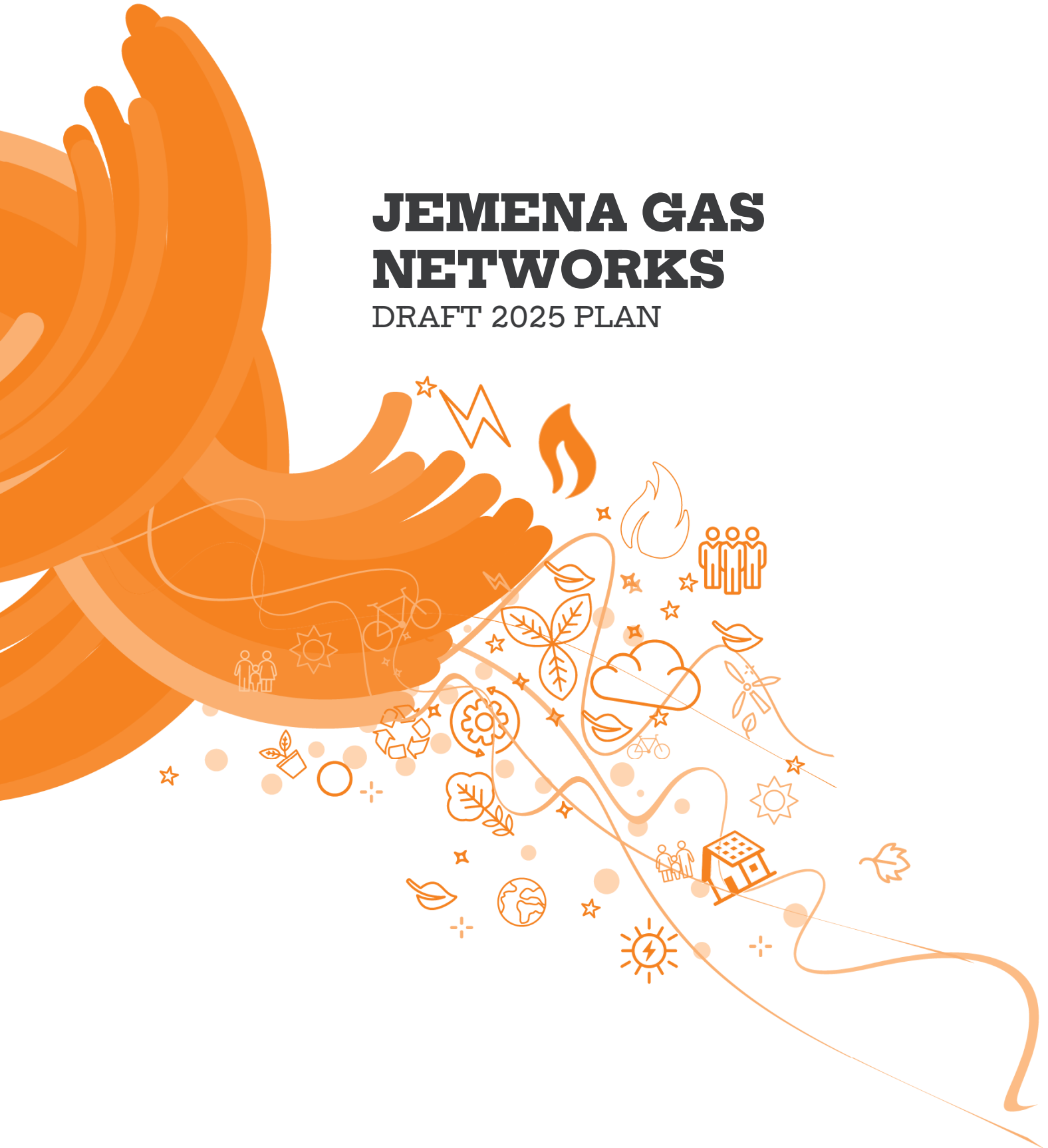



# JEMENA GAS NETWORKS

DRAFT 2025 PLAN



FEBRUARY 2024



The origins of the name Jemena is from the Wagiman people in the Northern Territory (spelt Jemenna in the Wagiman language). It means “to hear, to listen, to think”.

We have been operating with permission from the Wagiman people under the variant name Jemena since 2008.

**JEMENA GAS NETWORKS (NSW) LTD**  
2025-30 ACCESS ARRANGEMENT REVIEW

Dollar values are reported in the value of a dollar in 2025 and exclude the impacts of inflation.

# Planning for customers now and in the future

## A message from our Chairman



Each day, our New South Wales gas network safely transports gas to more than 1.5 million homes and businesses that rely on it for a range of applications such as cooking, space heating, and to produce hot water.

The energy system both here in Australia and globally is undergoing a once-in-a-generation transformation. As a result, this Draft Pricing and Services Plan for 2025 to 2030 (our Draft 2025 Plan) is arguably the most important one we have produced to date. With this in mind, we set about developing a Draft 2025 Plan which reflects the needs of our customers today, as well as their aspirations for tomorrow. We were humbled by the willingness of our customers and stakeholders to contribute to the development of our Draft 2025 Plan and thank you for your input, passion, and insights.

You told us that issues of affordability – particularly in a context of rising inflation – continue to be front-of-mind. At the same time, we also heard about how important it is to ensure the most vulnerable members of our community are supported through the energy transition – a sentiment we share and have reflected in this Draft 2025 Plan.

Responding to these concerns, it is clear we still have an important responsibility to supply gas to customers when they need it. We also have a responsibility to pursue alternatives like renewable gases such as green hydrogen and biomethane, and believe they have a role to play in the energy system of the future. Our customers are also focused on choice in the future and being able to access different sources of energy if they need it.

This and other feedback from our customers is woven into our Draft 2025 Plan and you'll see tangible examples in this document of how we have brought it to life. As a next step, Jemena and our Board will carefully consider your feedback on our Draft 2025 Plan, following this we will complete our final Pricing and Services Plan for our Gas Distribution Network.

**Jiang Longhua**  
Chairman of the Board  
SGSPAA (parent company of Jemena)

## A message from our Managing Director



Because of the significant challenges presented by the energy transition, developing this Draft 2025 Plan to deliver a balanced approach has required difficult decisions to be made.

While there is much we do not know, we are certain that working collaboratively with our customers, governments, community members, and other stakeholders will be necessary throughout. That's why our Draft 2025 Plan incorporates insights and views gained from stakeholders as part of a thorough engagement process. Through that engagement process we held more than 88 face-to-face and virtual meetings and spent more than 181 hours hearing from over 221 customers. As a result we are confident our Draft 2025 Plan accurately reflects the things which are most important to our customers today and tomorrow.

Our customers told us they value affordable and reliable energy, while also wanting to exercise choice over how they power their lives. They also told us they care deeply about the environment and want us to invest in new technologies which will help lower carbon emissions as Australia strives towards achieving its net zero ambitions. We heard that flexibility and adaptability are essential in Jemena's context and planning horizons. Our engagement spanned 18 months, and in that time, we learned so much from these discussions and what we're building, with a shared vision of our future between our customers and stakeholders.

Our Draft 2025 Plan balances the needs of our customers and communities today with future generations and what we can do for them, mainly through upfront investment now, focusing on no one being left behind. We would love to hear your thoughts on this Draft 2025 Plan.

**David Gillespie**  
Managing Director

## Summary

The energy system is undergoing a once-in-a-generation transformation. We are operating in a period of significant uncertainty surrounding the future role of gas networks in the Australian energy landscape. This presents a complex challenge for us and our customers as we seek to develop a 2025 Plan which is in the long term interests of consumers.

Whilst we believe that our network can play an important role in supporting an orderly and least cost transition to net zero, there is still much uncertainty about both the exact pathway and pace of the energy transition.

The Australian Energy Market Operator (AEMO) forecasts residential and small commercial consumption to gradually decline in the short term, with electrification to reduce natural gas usage more significantly in the medium to longer term as the economy transitions to meet net zero emissions by 2050.<sup>1</sup>

This uncertainty adds complexity to our planning processes but it is clear that the need to act now is imperative – the earlier we start to address the challenges presented as a result of the rapid energy transition, the smoother the pathway to net zero will be. Our 2025 Plan proposes to implement a number of initiatives based on the best available information, and provides flexibility to adjust these initiatives in the future as new information becomes available.

We have undertaken an extensive engagement program with our customers and key stakeholders over an 18-month period to understand their expectations of the services we provide, and their views about how we should best plan for, and support, the energy transition in the face of uncertainty.

This Draft 2025 Plan summarises what we have learned from our customers and stakeholders, and explains how their views have shaped our initiatives for our gas network over the period, 1 July 2025 to 30 June 2030.

By publishing our Draft 2025 Plan for consultation, we aim to test whether we have correctly heard and understood the needs and expectations of our customers. This includes testing whether they are satisfied that our Draft 2025 Plan, when considered as a whole, supports the long term interests of our customers.

The priorities of our customers - which can be summarised by their key values of affordability, reliability and safety, fairness, choice, and the environment—have played an important role in shaping our Draft 2025 Plan.

Regardless of how we respond to the energy transition, we must also continue to meet our regulatory obligations in regards to safety, reliability, security, and the environment, which are key drivers of our expenditure forecasts for the 2025 Plan period.

In developing our Draft 2025 Plan, we have also sought to ensure that it is consistent with the National Gas Objective, including its recent update to recognise Commonwealth and State Government emissions targets and to account for the recognition of biomethane and hydrogen blends within the regulatory framework. These new measures will take effect in mid-2024.

Customer and stakeholder feedback on this Draft 2025 Plan will inform our Access Arrangement Revision Proposal that we will submit to the Australian Energy Regulator (AER) on 30 June 2024

### How we are responding

Our Draft 2025 Plan will ensure that we can continue to provide our customers with a safe and reliable service over the 2025 Plan period, and proposes a number of initiatives aimed at supporting a fair and equitable energy transition for customers over the long term.

These initiatives include:

- **Investing in renewable gas connections:** We believe that renewable gas can play a role in meeting challenges presented by the energy transition. Supporting renewable gas connections from biomethane suppliers will enable customers to access renewable gas sooner, and will provide greater energy security from fuel diversification. As the supply of renewable gas grows, this will help retain some of our customer base and lower the risk of asset stranding.

<sup>1</sup> AEMO, Gas Statement of Opportunities, March 2023.



- **Asset Management:** We propose to change our approach to asset management by taking a more targeted approach to our mains replacement program by using digital tools to better understand the condition of our assets. Replacing assets in a targeted manner will reduce the capital expenditure that we incur, and the growth of our regulatory asset base.
- **New connections:** The proposed changes to our connections policy will mean more customers are required to make an up-front contribution if they wish to connect to our network. This change will help to reduce the growth in our asset base, and lower asset stranding risk with minimal impact on customer prices.
- **Accelerated depreciation:** By speeding up the capital recovery of our assets we can avoid the potential for any inequitable recovery of our investments, and ensure more stable prices in the future by reducing the amount of our asset base that must be recovered in future periods.

We are also making **changes to our tariff structures** so they can be more adaptable and ensure fairness in the way we charge for the provision of our gas network services. This will be combined with our **proposal to move away from a price cap tariff variation mechanism**—which sets the way we adjust prices annually over the 2025 Plan period—to a hybrid

mechanism. This will share volume risks between us and customers and address the AER's concerns around gas networks earning higher than forecast revenues by limiting revenue earned through volume outperformance.

“We believe that any decisions should be made with the future of all Australians in mind, and be measurable, tangible and proactive. Many of the preferences fall into a ‘middle ground’ which may slow change in either direction. If these decisions continue to be delayed, we only pass these issues on to the next round of participants in the Jemena public forum in 5 years..”

#### **Customer Forum Recommendation**

In formulating these initiatives, we assessed how they performed across a number of plausible future energy scenarios and how they interact together. These initiatives are not mutually exclusive and in some cases are complementary, which has been an important consideration to ensure we have taken a balanced and equitable approach when developing our Draft 2025 Plan.

## What our Draft 2025 Plan means for customers

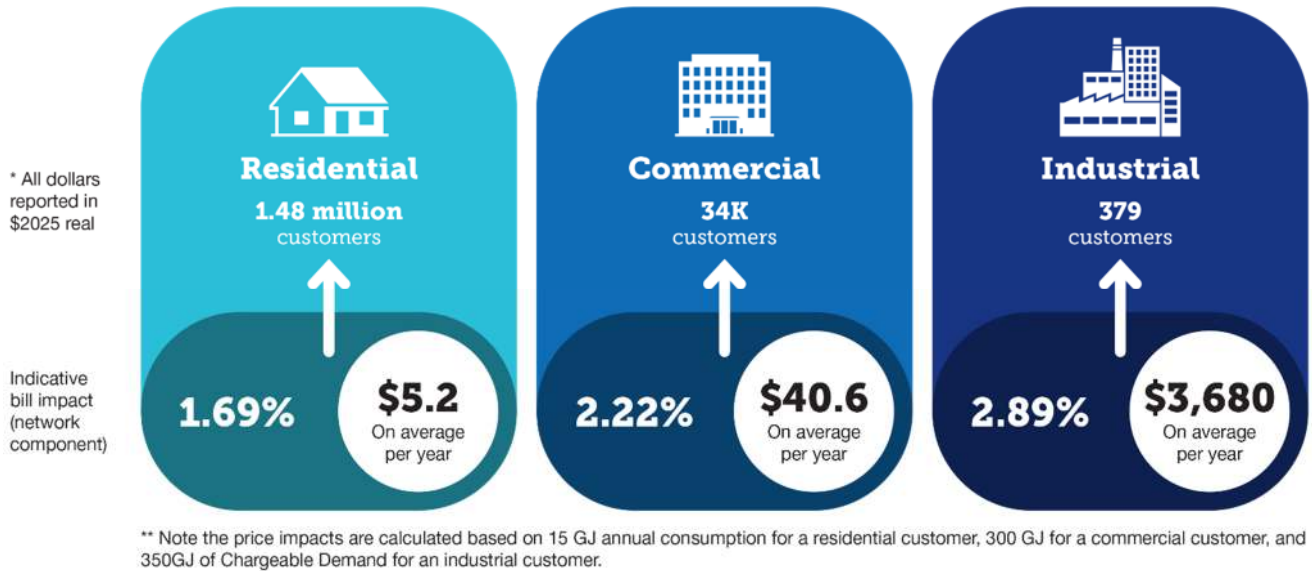
Our Draft 2025 Plan will result in a real bill increase of 1.69% per year over the 2025-30 period, or \$5.20 per year for an average residential customer. These bill increases exclude the impact of inflation and are presented as other financial information throughout the Draft 2025 Plan, using the value of a dollar in 2025.

For our large industrial customers, our Draft 2025 Plan will result in a real bill increase of 2.89% per year over the 2025-30 period. This is because we are proposing to gradually increase the revenue proportion we recover from our demand customers to enhance the cost reflectivity of our tariffs.

In developing our Draft 2025 Plan, we have been cognisant of the price impacts on customers both now

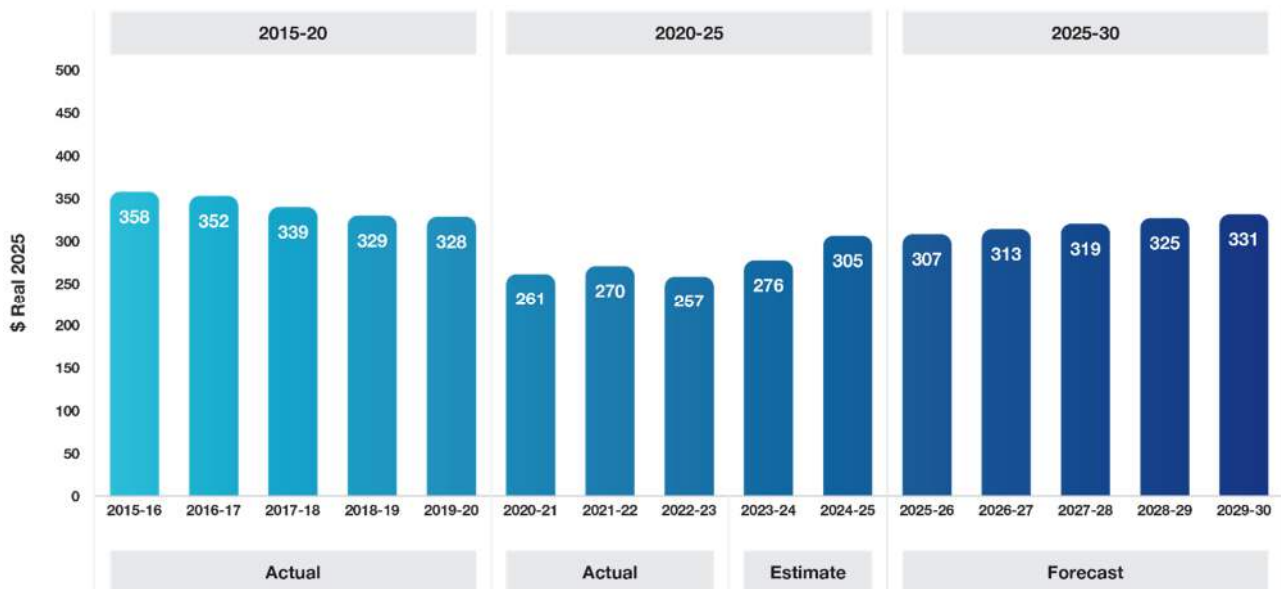
and into the future. While some of the initiatives place an upward pressure on customers' bills in the next five-year period, they will help provide greater stability to prices over the long term, and support the efficient future utilisation of our gas network. Recognising affordability and cost of living pressures impacting customers today, we have sought to carefully balance the need to take action now against the short-term price impacts of our plans. We believe that our Draft 2025 Plan, which has been shaped by the feedback of our customers, reflects a balanced approach. Importantly, if we delay taking action during the 2025 Plan period, customers will be worse off over the long term.

Figure S.1: Network impacts of our Draft 2025 Plan (excluding the impacts of inflation)



Recognising that price fluctuations in the cost of services like gas can negatively impact customers' ability to balance household budgets, we have worked towards achieving a smooth network bill by maintaining steady bills over the 2025 Plan period, as shown in Figure S.2.

Figure S.2: Annual network bill for a typical residential customer consuming 15GJ per annum



(1) In the 2020-25 period, a \$207M downward adjustment was made to our 2020-25 building block costs to return revenue over-recovered during the 2015-20 period. Without this downward adjustment, the annual network bill would be higher over the 2020-25 period.

## What our customers have told us

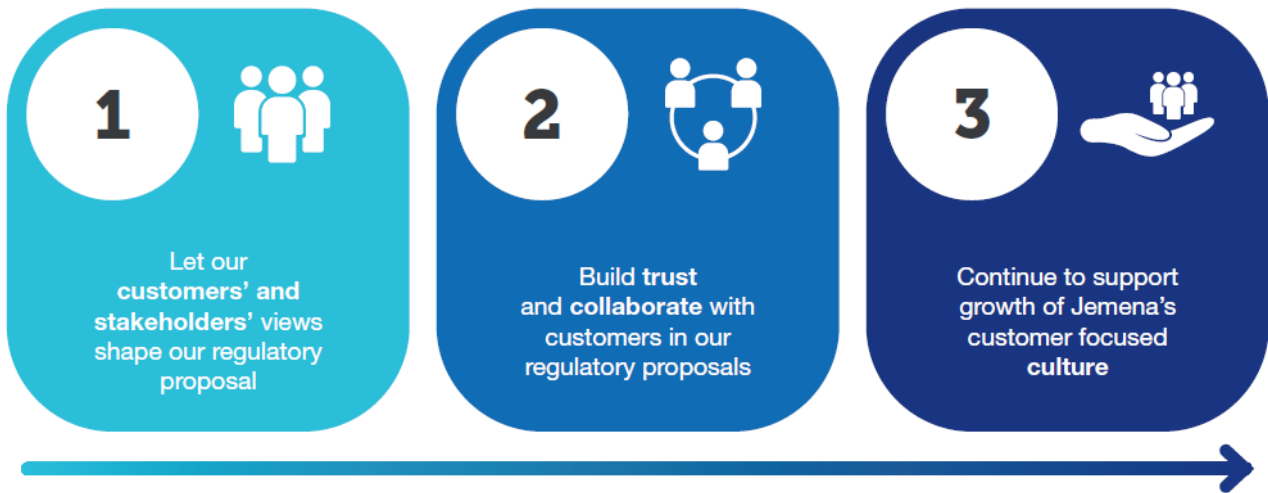
To understand the needs and expectations of our customers and stakeholders, and to ensure that our 2025 Plan could be truly shaped by them, we have undertaken an extensive engagement program over an 18-month period, which has tackled head-on, the key challenges associated with the energy transition towards net zero, and uncertainty surrounding the future role of gas networks.

In addition to understanding customer views and preferences on the services we will provide over the 2025 Plan period, we have also sought to genuinely engage on the full spectrum of possible initiatives that

can be implemented to help us manage uncertainty. To enable this, our customers have considered the long term implications of each initiative under a range of plausible future scenarios. This has enabled them to better understand the risks, consequences and trade-offs that we must consider in our Draft 2025 Plan, and the implications of our decisions for customers over the long term.

Our engagement objectives have guided our engagement with our customers and stakeholders, and align to our Jemena value of ‘Think like a customer’.

Figure S.3: Our engagement objectives



Throughout the course of our engagement program, most customers and stakeholders we spoke to recognise the need for action now to meet the challenges ahead, and to support the transition to net zero emissions by 2050. Our customers have provided their views and insights on what they want and value about their gas service, and what they would like us to prioritise as we plan for an uncertain future. They believe that any decisions we make should be made with the future of all customers in mind. Many of their preferences fell into a ‘middle ground’ to ensure that our initiatives are set in a balanced manner and that we have the flexibility to readjust our initiatives as we learn more about the energy transition.

Central to our customer engagement program was our commitment to consult with a wide array of customers to ensure that we understand the diverse perspectives of customers’ needs and expectations on our services, and on the initiatives. We tasked the Customer Forum to vote on the package of initiatives and reach consensus to ensure that the proposals put forward in the Draft 2025 Plan represents the diverse perspectives of our customers in a balanced and equitable manner.

We have given primacy to the Customer Forum recommendations, but have also considered the views of other key customer groups in formulating our Draft 2025 Plan. This includes feedback and views from large customers, small businesses, and retailers.

The Draft 2025 Plan will take the first steps towards achieving the Customer Forum recommendations and our broader customer preferences. We have used this feedback, which can be summarised into the five key customer values, to help shape the Draft 2025 Plan.

“Need to consider diversity.”

**Young People’s Forum**



## Affordability

“Gas is reliable and affordable.” (Culturally and Linguistically Diverse Customer Forum)

**We heard that balancing the rising cost of living is a priority for our customers so that no one is left behind due to the energy transition.**

**Our customers want us to consider affordability over the short and long term when making decisions.**

Our Draft 2025 Plan:

- Reflects a prudent approach to planning by carefully balancing the need to take action now to support the energy transition, whilst also ensuring that our network charges remain stable and affordable over the 2025-30 period
- Includes a number of initiatives – like accelerated depreciation - that seek to ensure prices remain stable and equitable over the long term
- Will enhance our vulnerable customer strategy to better support customers experiencing vulnerability.



## Reliability and safety

“Safety and reliability are important factors to ensure sustainable use of energy in the long run.” (Customer Forum)

**We heard that customers want a safe and reliable gas service.**

Our Draft 2025 Plan:

- Includes a prudent and efficient amount of expenditure that will ensure the ongoing safety and reliability of our network
- Helps support the security of gas supply across the network by facilitating the connection of renewable gas production facilities into our network
- Adopts a more targeted approach to the assets we replace by using technology that enables us to detect gas leaks more efficiently
- Includes investments in digital platforms and Information, Communication and Technology (ICT) systems to support system reliability, and make improvements to the end customer experience.



## Fairness

“To have it fair and equitable for all. Equality and equity and justice is maintained” (Customer Forum)

**Our customers wanted us to consider fairness in context of the energy transition, and its impacts on both existing and future generations, and on our more price-sensitive customers.**

In our Draft 2025 Plan:

- We have developed a range of initiatives to help us manage the challenges presented by the energy transition
- To ensure that these initiatives are set in a balanced manner that is fair to customers, we developed an economic model with four gas demand outlooks out to 2050. The modelling enabled us to assess the initiatives and understand how best to manage affordability and mitigate asset stranding risks and intergenerational equity issues in the long run as the energy system transitions.



## Choice

“Banning gas is not speaking for people, and allowing choice.” (Customer Forum Recommendation)

**We heard that customers want the choice to be able to use gas both now and into the future, and that there should be diversity of supply.**

Our Draft 2025 Plan:

- Will invest in renewable gas connections to support the supply of renewable gas which enables customers the choice to keep using gas in their homes and businesses.



## Environment

“By utilising the biomethane, as an option, we are protecting the environment by having another renewable gas option.” (Customer Forum Recommendation)

**We heard from customers that they want us to contribute to a more sustainable environment in the future.**

In our Draft 2025 Plan, we propose to:

- Invest in renewable gas connections - with a focus on biomethane – that can help reduce overall carbon emissions across the gas supply chain
- Invest in new technology that will enable us to better detect and repair gas leaks which will help reduce our greenhouse emissions.

Q: Have we captured the correct values to represent the different views of customers?

## Revenue we require to support the Draft 2025 Plan

We recover the costs of providing our distribution network services from the customers who use them. We do this by charging for these services through our network prices. In developing our Draft 2025 Plan we have sought to balance the recovery of our investments between current and future customers in light of the uncertainty about future gas demand.

The revenue that we require to deliver our 2025 Plan is \$421M higher than the revenue allowance for the current 2020-25 planning period as shown in Figure S.4. The increase in revenue leads to an average increase in revenue per customer of \$42<sup>2</sup>, but is stable (on a per customer basis) when compared over the three planning periods from 2015-16 to 2025-30. There are three key drivers for this difference:

- For the current 2020-25 planning period we included a downward adjustment to our 2020-25 revenue requirement allowance, to return approximately \$207M of revenue over-recovered from the 2015-20 period
- The forecast revenue for the 2025-30 period includes recovery of \$300M accelerated depreciation – which is one of our key initiatives - which was not included in our 2020-25 revenue allowance

- Our operating expenditure forecast reduced by \$43M reflecting efficiency improvements we achieved over the 2020-25 period.

The revenue requirement recovers our forecast operating expenditure for the 2025 Plan period which includes the need to replenish unaccounted for gas, the transition to cloud and other ICT services, investment in gas leakage detection technology to meet our decarbonisation goals and compliance with legislative requirements. We are also proposing to enhance our vulnerable customer program to help customers understand their bills, increase involvement in community support programs and co-design new support initiatives with customers.

The revenue requirement also recovers the depreciation on our assets, the amount we need to recover over the 2025 Plan period so that we will recoup our capital costs over the expected lifetime of each asset.

Figure S.4: Our revenue requirements over the 2015-2030 period



<sup>2</sup> In the 2020-25 period, a \$207M downward adjustment was made to our 2020-25 building block costs to return revenue over-recovered during the 2015-20 period. Without this downward adjustment, the revenue per customer would be \$28 higher over the 2020-25 period, and the increase in revenue per customer in 2025-30 period would be \$18.

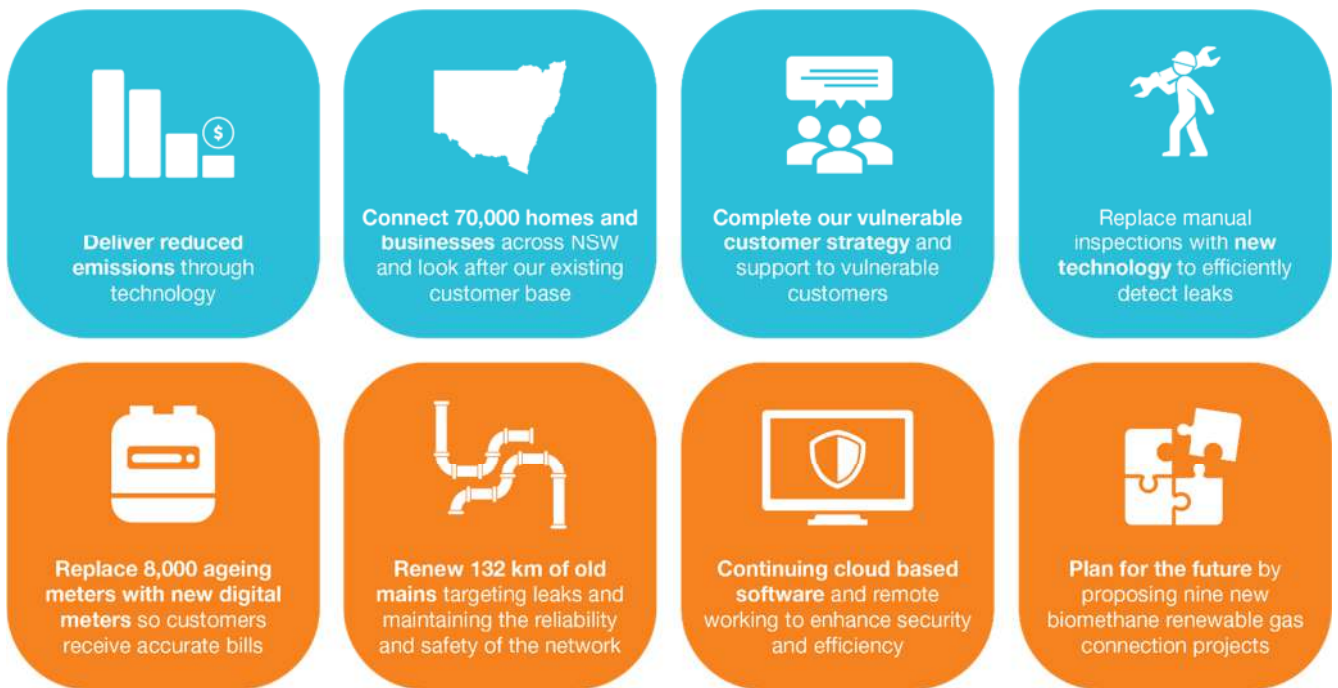


## What the Draft 2025 Plan will deliver for customers

The proposed revenue will help us provide customers with services they expect and deliver on the outcomes we have set out in Figure S.5. Recognising affordability and cost of living pressures impacting customers today, we have also sought to carefully balance the need to take action now against the short-term price impacts of our planned outcomes. Starting to address the

challenges presented as a result of the rapid energy transition will help support a smoother transition to net zero. We believe that our Draft 2025 Plan, which has been shaped by the feedback of our customers, supports the long term interest of our customers.

Figure S.5: What our Draft 2025 Plan will deliver





## Please tell us what you think!

Our Draft 2025 Plan is available for comment at:

[yournetwork.jemena.com.au](https://yournetwork.jemena.com.au)

Give your feedback before Monday 4 March 2024.

For details on how to give feedback, see section 1.5.

# Contents

Planning for customers now and in the future.....	iii
Summary.....	iv
1. Background: setting the scene.....	1
2. How our customers have shaped our plans.....	6
3. Responding to the energy transition .....	34
4. Our planned capital investments.....	44
5. Our operating expenditure requirement .....	64
6. The revenue we require to deliver our 2025 Plan .....	76
7. Forecasting new connections and gas consumption.....	88
8. Accessing our network.....	95
9. Pricing for current and future generations.....	99







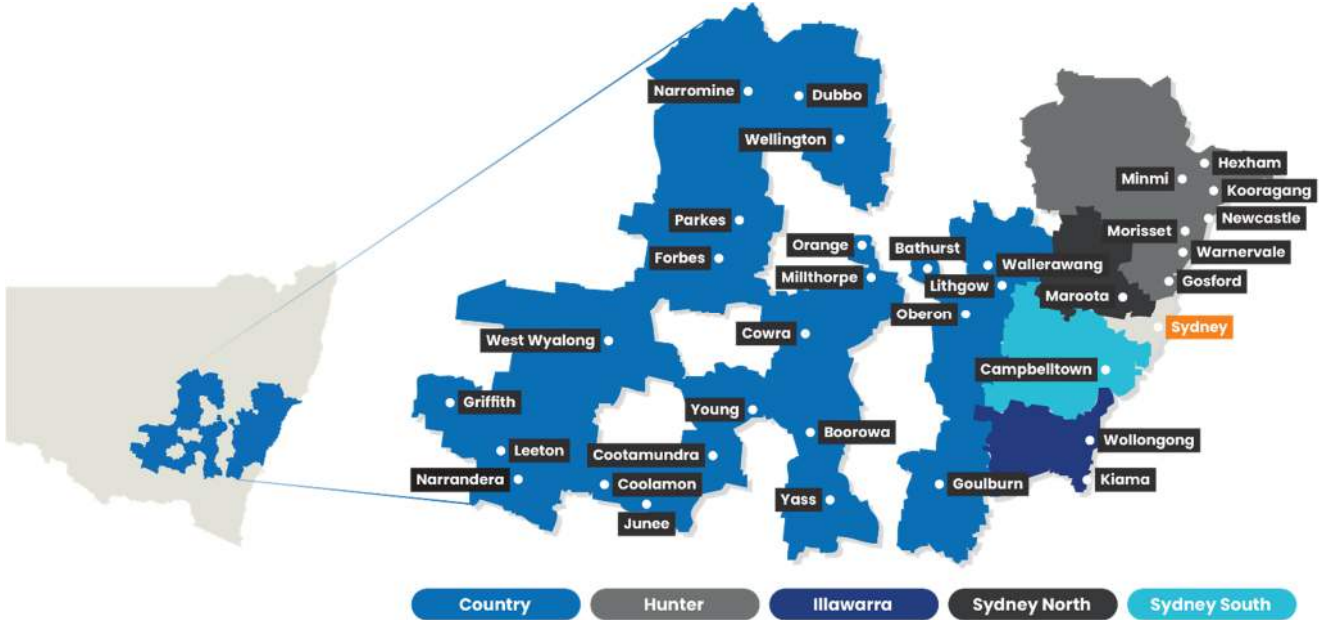
# 1. Background: setting the scene



# 1.1 About Jemena

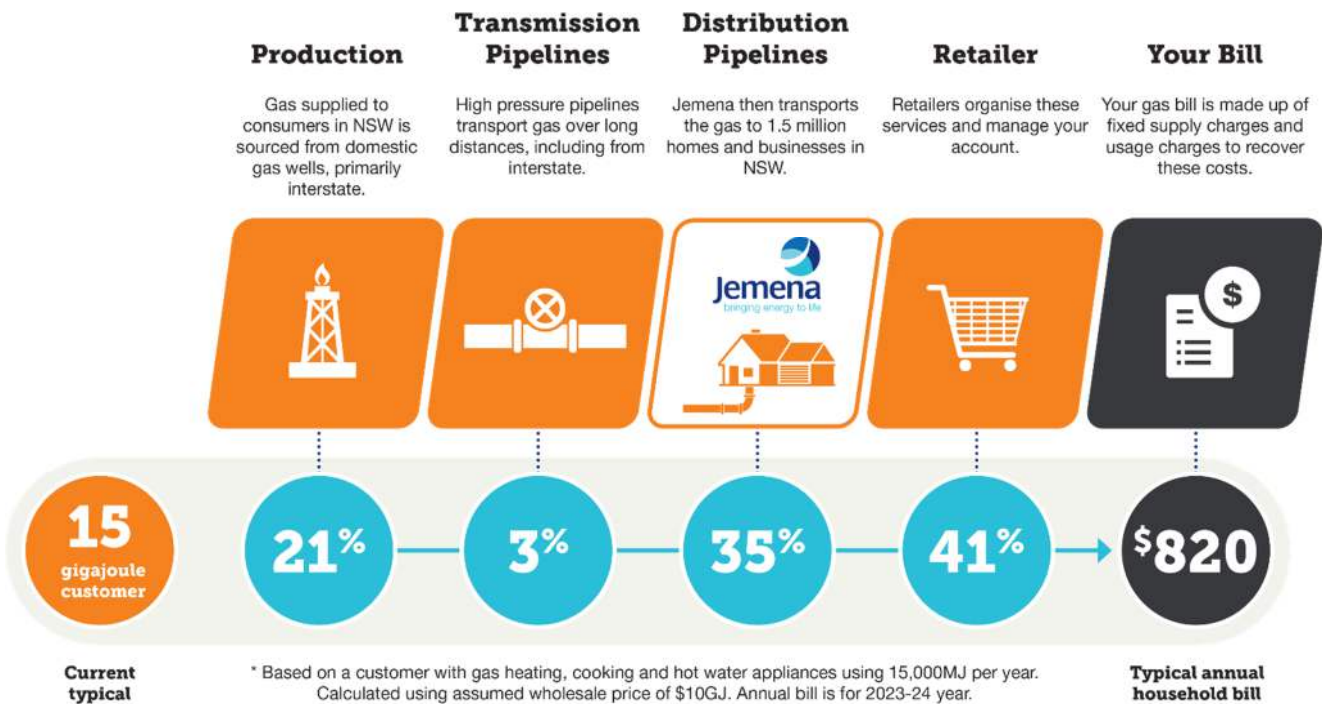
Jemena Gas Networks (JGN, or Jemena) owns and manages 26,000 kilometres of pipes that distribute gas to 1.5 million homes and businesses across NSW. Figure 1.1 shows our network footprint.

Figure 1.1: NSW Network map



We are responsible for the distribution and delivery of gas to customers which forms a crucial link in the gas supply chain. In 2023-24, our charges comprise roughly 35% of a household customer’s gas bill for a typical customer (see Figure 1.2)

Figure 1.2: The gas supply chain





In addition to our role in delivering gas to households and businesses across NSW, we also provide other services for our customers, including meter reads, operational contact centre support and connecting new customers to our network. Some of these activities are summarised in Figure 1.3.

Figure 1.3: Other activities we do for our customers



## 1.2 Our customers

We categorise our customers into three groups: residential, commercial and industrial. Additionally, we classify them into market types depending on their energy consumption. Volume market customers are those customers using less than ten terajoules (TJ) of gas annually, while Demand market customers are those consuming over 10 TJ of gas per year.

Figure 1.4: How we classify our customers

Market type		JGN Market size	Consumption
<b>Volume customers</b> under 10 terajoules per year  	 <b>Residential:</b> Homeowners or tenants that use gas for domestic purposes. This includes heating, hot water and cooking.	<b>97.7%</b> (1.48M)	<b>31%</b> (28.4 petajoules)
	 <b>Commercial:</b> Small businesses and commercial owners using gas for heating in offices or shops, hot water for medical equipment sterilisation, and for commercial cooking like restaurants and bakeries.	<b>2.3%</b> (34K)	<b>15%</b> (13.3 petajoules)
<b>Demand customers</b> Over 10 terajoules per annum  	 <b>Industrial:</b> Substantial users that need gas for very high heat including chemical production, steel, manufacturing or electricity generation.	<b>0.03%</b> (379)	<b>54%</b> (49.4 petajoules)

Figure 1.4 numbers are June 2022 actuals.

## 1.3 Regulatory framework

The Australian Energy Regulator (AER), sets our regulatory allowances and a price path for a five year period which is used to set the prices that customers pay. To help the AER in assessing and setting allowances and the price path, we must submit an Access Arrangement proposal, which outlines our plans, the amount we expect to spend in implementing them, our revenue requirement and our proposed pricing.

As part of its assessment of our Access Arrangement proposal, the AER will consider, among other factors, the extent and quality of customer engagement we have undertaken during its development. The AER also looks for linkages between the outcomes of our customer engagement program and what we are proposing, to ensure it aligns.

When assessing our Access Arrangement proposal, the AER must also ensure that it complies with the requirements set out in the National Gas Law (NGL) and National Gas Rules (NGR). This includes

reviewing our proposed revenue to ensure that it represents the efficient costs that we are likely to incur in providing our network services and promotes the long term interests of our customers.

The AER will then either approve our Access Arrangement proposal as submitted or specify the changes we must make. Once approved, we must set our prices as approved by the AER from 1 July 2025, for a five-year regulatory period.

“We want net zero at least cost, not any cost. There’s been a narrative for too long that the transition to net zero is easy and free when it’s really hard and potentially expensive.”

**Advisory Board Member**

## 1.4 What is our 2025 plan?

Our Draft 2025 Plan provides an overview of our proposed initiatives for the five year period, commencing 1 July 2025. It sets out:

- how we have collaborated with customers to understand their values and expectations in terms of what our priorities should be
- our strategic response to managing the challenges associated with the energy transition and getting to net zero by 2050
- the services we will provide in meeting customer expectations and our regulatory requirements

- the forecast costs we expect to incur in providing gas network services
- our proposed approach to pricing to recover the revenue required to recover our cost.

Our Draft 2025 Plan has been shaped by the views and expectations of our customers.

Figure 1.5 shows the timeline for the preparation of our 2025 Plan and how we have sought feedback from customers and stakeholders at different stages.

**Figure 1.5: Timeline for preparation of the 2025 Plan**



## 1.5 How to make a submission on our Draft 2025 Plan

We have gathered feedback from a diverse range of customers and stakeholders about the initiatives outlined throughout this Draft 2025 Plan. To make sure that our proposed services, costs and prices align to the National Gas Objective (NGO), and meet customers' expectations, we are publishing this Draft 2025 Plan. By publishing the plan we are providing an opportunity for the community, stakeholders and customers' to provide feedback on our plans.

We are continuing our commitment to the key objectives of our engagement strategy to:

- let our customers' and stakeholders' views shape our regulatory proposal
- build trust and collaborate with customers in our regulatory proposals
- continue to support growth of Jemena's customer focussed culture.

Over the coming months, we will continue to refine our Draft 2025 Plan through customer and stakeholder engagement, and the feedback we receive in response to this Draft 2025 Plan, before submitting our Access Arrangement Revision Proposal to the AER on 30 June 2024.

We invite customers and stakeholders to review this document and share thoughts and feedback with us:

### How to provide feedback on our Draft 2025 Plan

- Make a submission: [JGN Draft 2025 Plan Submission](#)
- Or complete the feedback survey on our website: [JGN Draft 2025 Plan Take the Survey](#)
- Or provide feedback via email: [yournetwork@jemena.com.au](mailto:yournetwork@jemena.com.au)

Submissions and feedback close on 4 March 2024



## 2. How our customers have shaped our plans



## Highlights

- We have undertaken extensive engagement with our customers and stakeholders to understand their expectations and values.
- We have held special discussion groups with small business, youth and culturally and linguistically diverse customers to understand their needs.
- Customers have told us that they value affordability, fairness, the environment, choice, safety and reliability which have played an important role in shaping our Draft 2025 Plan.
- Customers understand that we must act now to look after future generations, taking a balanced and equitable approach.
- Customers have expressed support for investments in renewable gas connections, accelerating the depreciation of our assets, changing our approach to asset management planning, and changing our connections policy.

## 2.1 Our engagement program

To understand the needs and expectations of our customers and stakeholders, and to ensure that our Draft 2025 Plan could be truly shaped by them, we have undertaken an extensive engagement program over an 18 month period, which has tackled head-on, the key challenges associated with the energy transition towards net zero, and uncertainty surrounding the future role of our gas network.

In addition to understanding customer views and preferences on the services we will provide over the Draft 2025 Plan period, we have also sought to genuinely engage on the full spectrum of possible actions (we refer to as initiatives) that can be implemented to help us manage uncertainty about the future, and the pathway to a decarbonised energy system. To enable this, our customers have considered the long term implications of each initiative under a range of plausible future scenarios. This has enabled them to better understand the risks, consequences and trade-offs that we must consider in our Draft 2025 Plan, and the implications of our decisions for customers over the long term.

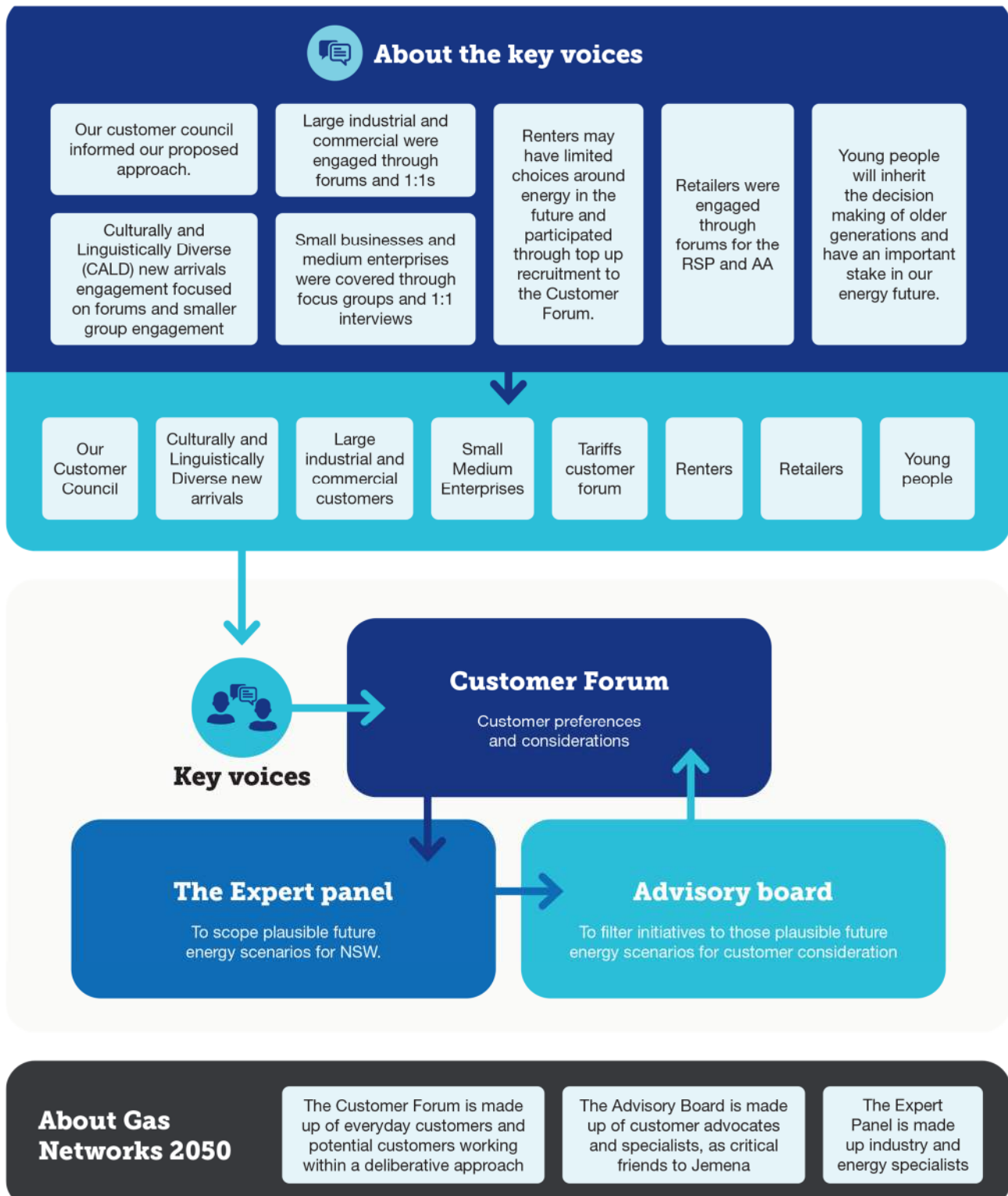
Our engagement program commenced in mid-2022 with Gas Networks 2050. It was comprised of three key elements:

- We engaged an **Expert Panel** consisting of industry and energy specialists, to develop plausible long term scenarios for the NSW energy system, including the role of our gas network.

- We established an **Advisory Board** consisting of customer advocates and industry specialists, to consider a full range of possible actions (initiatives) that we might adopt during the Draft 2025 Plan period to respond to the rapidly changing energy landscape. To better understand the possible long term implications of the possible initiatives, they were examined across the four plausible long term scenarios developed by the Expert Panel. The Advisory Board advised us on which initiatives we should take to our customers, and how we should engage on them.
- A **Customer Forum** consisting of residential customers. We undertook a deliberative process to deeply understand their needs and expectations of the services we provide, and their views on how we should best plan for, and respond to, the energy transition in the face of uncertainty. We examined trade-offs, and the long term implications of the initiatives we might adopt during the 2025 Plan period.

Gas Networks 2050 was complemented with extensive customer engagement across the broader community including key voices, a residential customer tariff forum, large users, small business customers, and retailers (see Figure 2.1).

Figure 2.1: Overview of our engagement



To supplement the feedback we received via our engagement program, we also created a website – [yournetwork.jemena.com.au](http://yournetwork.jemena.com.au), and promoted it via social media with the aim of seeking broader feedback from as many customers as possible. Through this, we have shared the opportunity to engage with a total of 3,411 customers, 221 of whom actively shared their views with us.

We will continue to engage with our customers and stakeholders over the coming months as we seek their feedback on our Draft 2025 Plan.



Figure 2.2: Our engagement at a glance

## Our engagement at a glance

The engagement we've completed to date has gleaned customer insights through in-depth consultation. So far, it includes:



## 2.2 Our engagement objectives

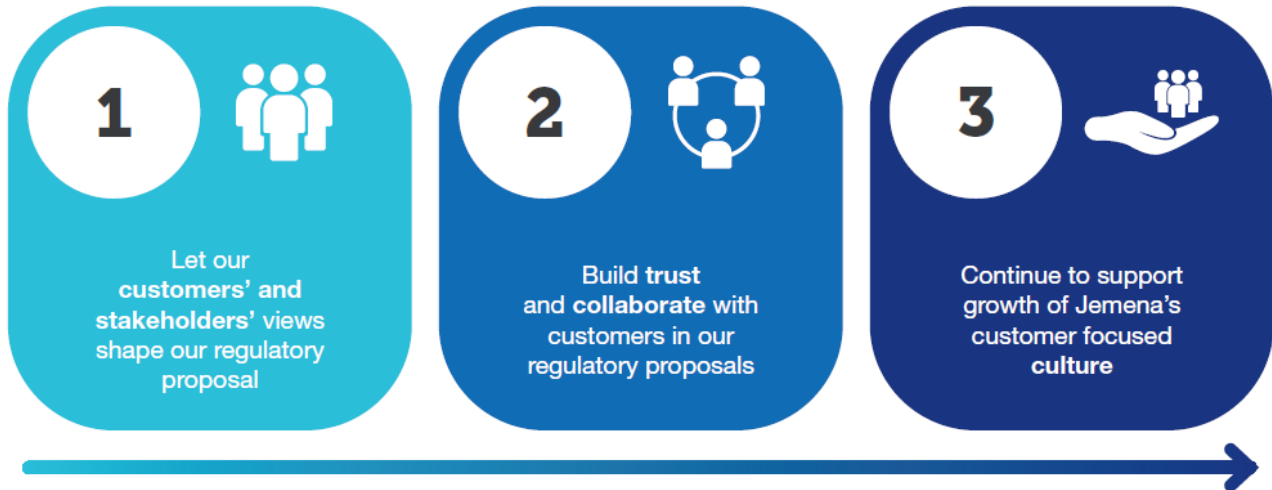
To understand the needs and expectations of our customers and stakeholders, and to ensure that our Draft 2025 Plan is truly shaped by them, we adopted three key objectives as shown in Figure 2.3. These objectives guide how we engage with our customers and stakeholders and aligns to our Jemena value, to 'Think like a customer'.

Our approach to understanding customer expectations is based on best practice in engagement, specifically in delivering the International Association for Public Participation (**IAPA2**) Core Values and meeting the 'collaborate' end of the IAPA2 spectrum. We have also been guided by the expectations of the AER as outlined in the Better Resets Handbook, in particular for the nature of engagement, breadth and depth, and evidence of impact.

Our staff have been actively involved in our customer and stakeholder engagement program. The Gas Networks 2050 program has been supported by our executive management team, with our Managing Director attending key stages of our Advisory Board and Customer Forum deliberations. This high level of involvement across all levels of our business ensured that customer questions could be answered in a timely and open manner. This also provided an opportunity for our staff to learn directly from customers and to understand their expectations.

We engaged KPMG to facilitate the Expert Panel and Advisory Board engagement process. To support the Customer Forum process, we partnered with BD Infrastructure, who are recognised as industry leaders in deliberative engagement.

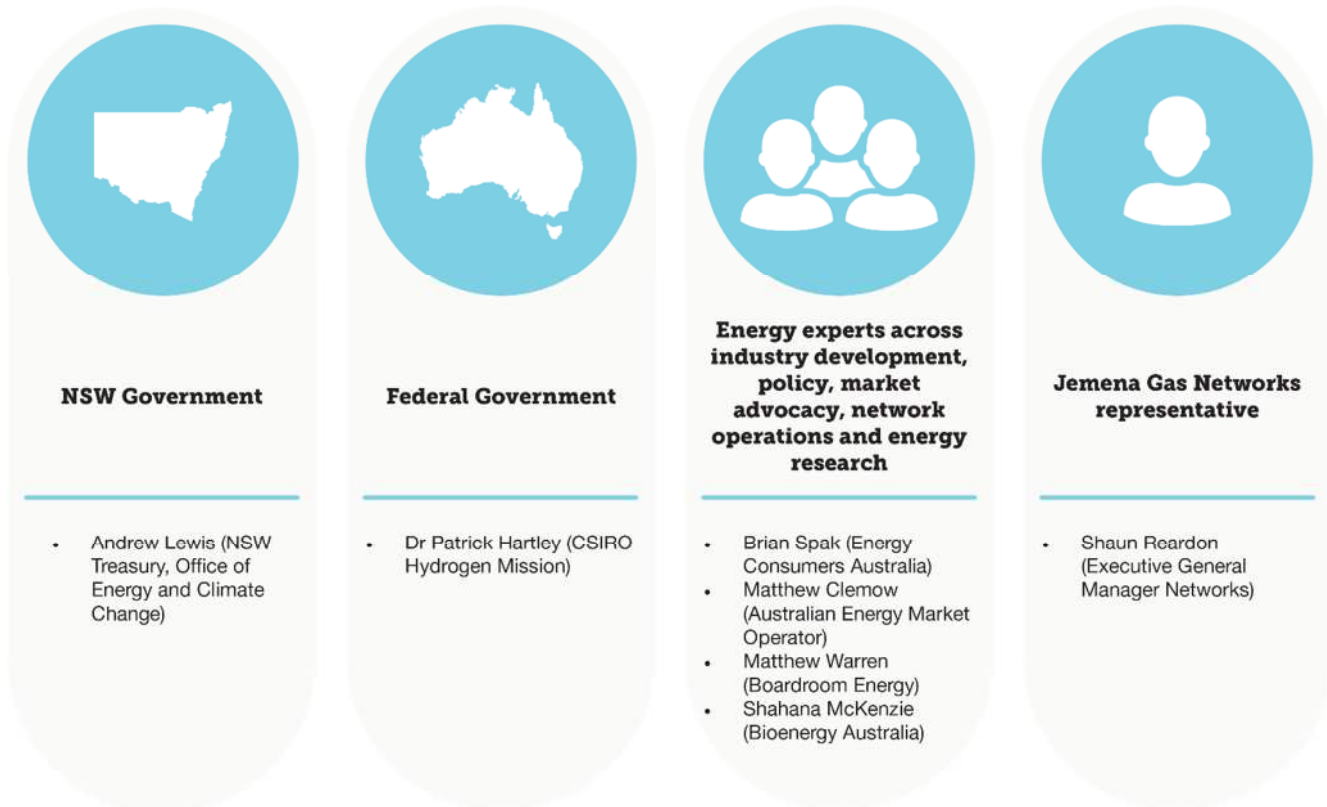
Figure 2.3: Our engagement objectives



## 2.3 Understanding the needs and expectations of our customers and stakeholders

### 2.3.1 Expert Panel

Figure 2.4: Expert Panel members



In response to the energy transition and uncertainty, we selected and engaged an Expert Panel of seven independent, energy industry leaders with technical and commercial expertise, ranging across industry development, policy, market advocacy, network operations and energy research.

We engaged KPMG to independently facilitate the Expert Panel engagement process.

The Expert Panel was tasked with co-designing four plausible scenarios outlining the future of the NSW energy system and the role that we could play within each scenario. The scenarios explored the characteristics and usage patterns of our customer base over a 2030 to 2050 time horizon. The scenarios enabled us to test a range of initiatives so that the Advisory Board and Customer Forum could understand the short-term and long term implications of their deliberations.

The Expert Panel met four times, over a three month period. Each session was designed to generate deep discussion between the Expert Panel members to iteratively create and define the four scenarios, and to highlight similarities and points of divergence of outcomes for the future of gas, and our gas distribution network. To inform the Expert Panel's deliberations, they also had the opportunity to hear from Dr Alan Finkel, and his views on the energy transition.

The scenarios developed by the Expert Panel were distinguished by axes based on the potential uptake and penetration of renewable gases, and alternatively the extent of government-directed or market-led progress to decarbonisation. These axes were selected by the Expert Panel, as they highlighted for

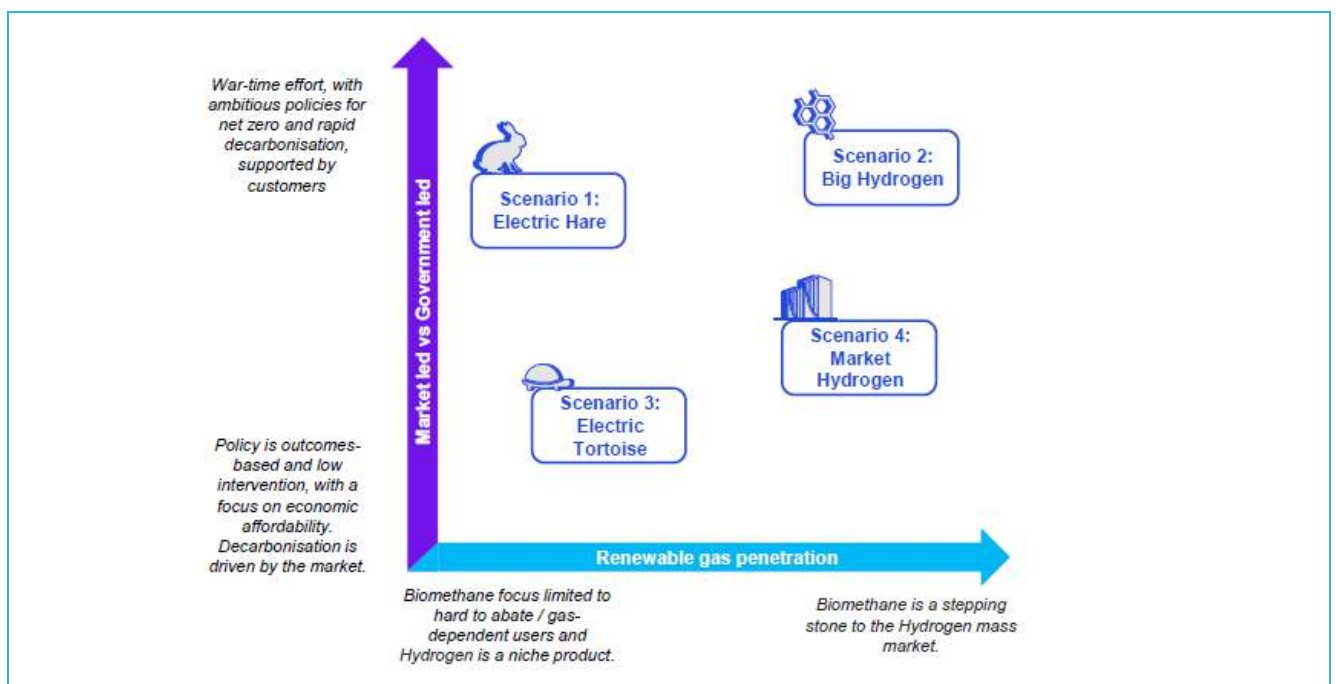
our NSW gas network key issues of great uncertainty, high impact and low levels of control.

In that context, the scenarios produced plausible futures with high and low levels of renewable gas development and uptake, and high and low levels of government policy intervention. The scenarios are listed below and depicted in Figure 2.5.

1. **Electric Hare**, where decarbonisation is supported by strong government policy driving electrification across industry and residential customers, with limited use of renewable fuels for hard to abate sectors.
2. **Big Hydrogen**, where 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.
3. **Electric Tortoise**, where residential customers slowly electrify and industrial users transition to biomethane, and in which hydrogen remains not commercially viable. Transition is driven by business and community investment.
4. **Market Hydrogen**, where a near-term technological breakthrough driven by the market results in renewable gases becoming competitive with electrification, creating a diverse but fragmented energy mix.

Each Expert Panel member was invited to provide a qualitative view on the relative likelihood of each scenario. Based on this voting, the Expert Panel thought that the scenario with the greatest likelihood was the Electric Tortoise.

Figure 2.5: Plausible future scenarios of gas



Source: [KPMG, Gas Networks 2050: Future scenarios summary report, January 2023](#), page 14.

### 2.3.2 Advisory Board

We established the Advisory Board to engage with a diverse range of stakeholders, including industry and customer representatives, to explore the challenges resulting from the uncertain future role of gas networks. The Advisory Board functioned as a source of advice to collaborate, strengthen, and shape our customer engagement approach to inform the development of our Draft 2025 Plan, while maintaining a long term view.

The Advisory Board was independently chaired by Rosemary Sinclair AM. We also engaged KPMG to support the facilitation of the Advisory Board workshops, which included advice on the provision of best practice stakeholder engagement techniques and facilitating the sessions to enable contribution from all members.

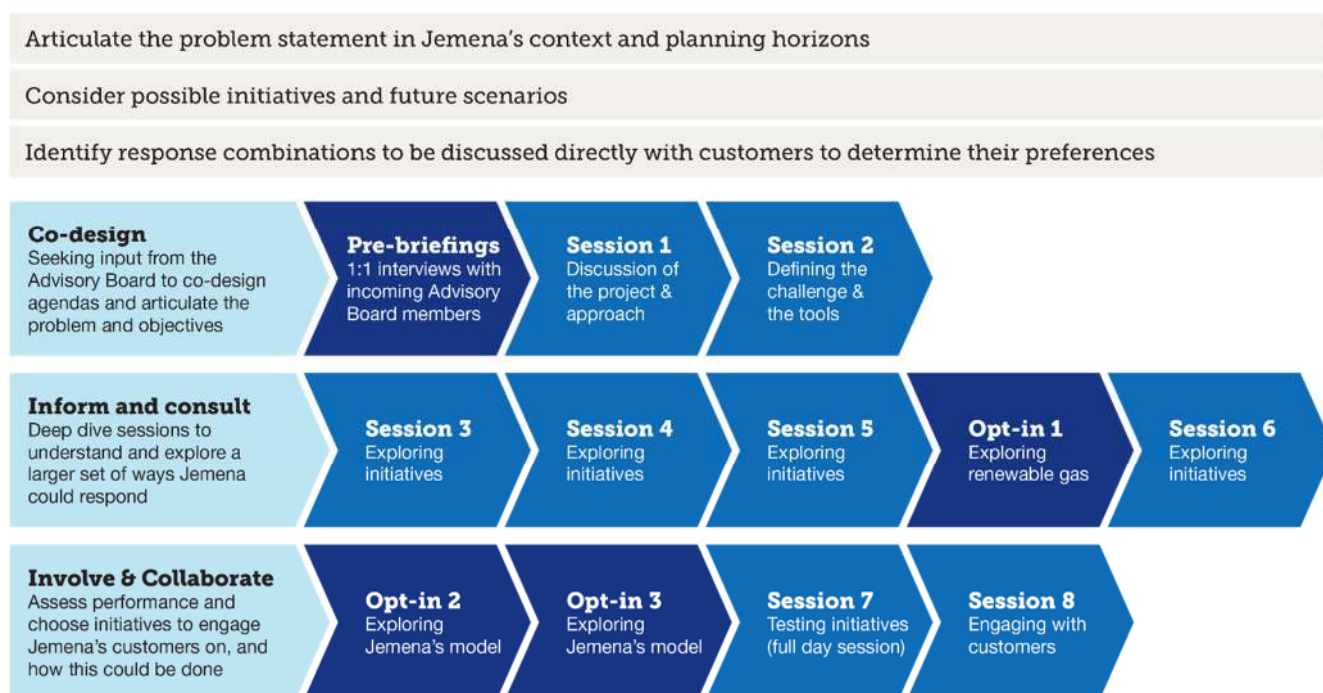
Together with the Advisory Board, we explored a range of initiatives that we could implement over the 2025 Plan period to respond to the challenges resulting from the uncertain future role of gas networks and best position JGN for the energy transition. The four plausible future scenarios designed by the Expert Panel were used by the Advisory Board to test and filter the initiatives for further engagement with our customers.

Our engagement with the Advisory Board moved through a spectrum of engagement, including co-design during the initial sessions, through to inform and consult during a number of deep dive sessions, and involve and collaborate in the later sessions including a deliberative day, as shown in Figure 2.7.

Figure 2.6: The Advisory Board





**Figure 2.7: Advisory Board objectives and series overview**

Source: Adapted from [KPMG, Advisory Board Series Outputs Report, May 2023, page 6](#)

The Advisory Board assessed the initiatives against a Statement of Objectives, which it co-designed with us. The assessment used modelling techniques to consider different initiatives over three time horizons, showing indicative impacts for each initiative over the short term (2025-30), medium term (over 2030-40) and out to 2050.

### The Advisory Board's Statement of Objectives

In the context of an accelerating energy transition driven by community expectations and government emission 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 and equity in prices
3. a decarbonised energy supply
4. fair returns and risk sharing on investments made by consumers and Jemena.

With reference to the Statement of Objectives, the Advisory Board was asked to assess the following initiatives:

1. *Changing our approach to asset management* in light of the uncertainty about the future of our network; specifically, replacing assets at a slower pace instead of continuing to maintain and replace assets at the current pace.
2. *Changing asset size expectations*, considering whether our network would stop growing at some point in the future (by stopping new customer connections, or by shutting down parts of the network), or whether we should assume that our network continues to grow.
3. *Accelerating investments in our network to accommodate 10% hydrogen* instead of continuing our current (slower) approach to transition.
4. *Advocating for and supporting renewable gas* instead of taking a passive approach.
5. *Implementing a green gas policy.*
6. *Increasing capital contributions* for those wanting to connect to our network.
7. *Stopping new gas connections* to stop the growth of our network.
8. *Shortening asset lives of new assets* instead of maintaining current lives to speed up the recovery of our investments.
9. *Front-ending some depreciation* instead of maintaining current asset live profiles.
10. *Seeking compensation for asset recovery risk.*

In exploring the initiatives with the Advisory Board we held a series of workshops, commencing October 2022 through to April 2023. Throughout the workshop series, flexibility and adaptability were key engagement principles. We committed to work with the Advisory Board to design the agendas and flex the approach and schedule depending on the level of detail required when deep diving on the initiatives.

During the workshop sessions, the Advisory Board debated and filtered the initiatives to consider which perform best across all plausible future scenarios provided by the Expert Panel. From these deliberations the Advisory Board advised us to engage with the Customer Forum on a subset of the initiatives, as summarised in Table 2.1.

**Table 2.1: Initiatives considered by the Advisory Board and recommended deliberative outputs**

No.	Initiative	Description	Recommended deliberation outputs for Customer Forum
1	Changing our approach to asset management	Specifically, replacing assets at a slower pace instead of continuing to maintain and replace assets at the current pace.	Take forward for engagement at Customer Forums.
2	Changing asset size expectations	Considering how big our asset base might be in the future—whether the network would stop growing at some point (by stopping new customer connections), or whether we should assume that our network continues to grow, with an increasing customer base. This initiative also considered whether parts of the network might be 'shut down' at some point in the future (for example, at locations where it is not cost effective to transition the network to renewable gas).	Do not take forward to engagement as the initiative would require government or policy change
3	Accelerate to 10% hydrogen capability instead of continuing new and replacement asset transition	Exploring the pace of hydrogen network preparation and readiness. This included choice of investment materials and components for new and replacement assets (for example meters, and pipe materials).	Take forward for engagement with language aligned to informing and educating.
4	Advocate for and support renewable gas instead of a passive renewable gas approach	Discussion focused on potentially doing more to improve the viability of renewable gas production and demand, focusing on biomethane in the short-term, with two options:  Market making match making between producers and customers, and publishing market information  Supporting renewable connections: building connections between renewable gas producers and the gas network and supporting customers that may be heavily reliant on gas and find it challenging to move to other fuel sources.	Take forward for engagement with specific customer groups. Focus on biomethane in the near term and consider the use of different language aligned to informing and educating on hydrogen.
5	Green gas policy	This includes policy support for a renewable gas target and <a href="#">the renewable gas certification pilot</a> .	Do not take forward to engagement as the initiative would require rule or legislative change.
6	Increase capital contributions	Changing JGN's connections policy to reduce the number of free connections offered, so that more customers will be required to make a contribution to the cost of connecting them to our network.	Take forward for engagement at Customer Forums.



No.	Initiative	Description	Recommended deliberation outputs for Customer Forum
7	Make connections contestable	Allowing builders to construct new connections to JGN's network and recover costs directly from customers. The builders would then gift assets back to JGN (a similar approach to that adopted by electricity networks).	Do not take forward to engagement as the initiative was not quantified and would have a similar impact to increasing capital contributions
8	Stop new gas connections	This involves stopping new gas connections to our network altogether.	Do not take forward to engagement as the initiative would require rule or legislative change.
9	Shorten asset lives of new assets instead of maintaining current lives	Shorten asset lives on new assets to reflect the potential use of Jemena's pipelines in the future.	Take forward for engagement at Customer Forums. Potential to package with initiative 10 for engagement.
10	Front-end some depreciation	Instead of maintaining current asset life profiles, looking at accelerated depreciation of existing assets to reduce Jemena's capital recovery risk and reduce impact on future generations. This initiative achieves the same outcomes as initiative 9, by speeding up the recovery of capital investments.	Take forward for engagement at Customer Forums. Potential to package with option 9 for engagement.
11	Compensate recovery risk	Exploring the potential of seeking changes to the regulatory framework to compensate for capital recovery risk.	Do not take forward to engagement as the initiative would require rule or legislative change.

"Trust in the process. And this is a good process."

**Advisory Board Member**

"What's happening in the energy sector right now is massive change. It's upheaval at every level (...) This is a really important discussion for Jemena (...) and preferences and choices of consumers need to be part of this decision making."

**Advisory Board Member**

### 2.3.3 Customer Forum

We established the Customer Forum in late 2022. It was designed to enable deliberative engagement to consider the initiatives recommended by the Advisory Board. Deliberative engagement puts the community affected by a decision at the heart of the decision-making process, reaching a minimum of 'collaborate' on the IAP2 spectrum.

Our deliberative approach to engagement entailed the following characteristics:

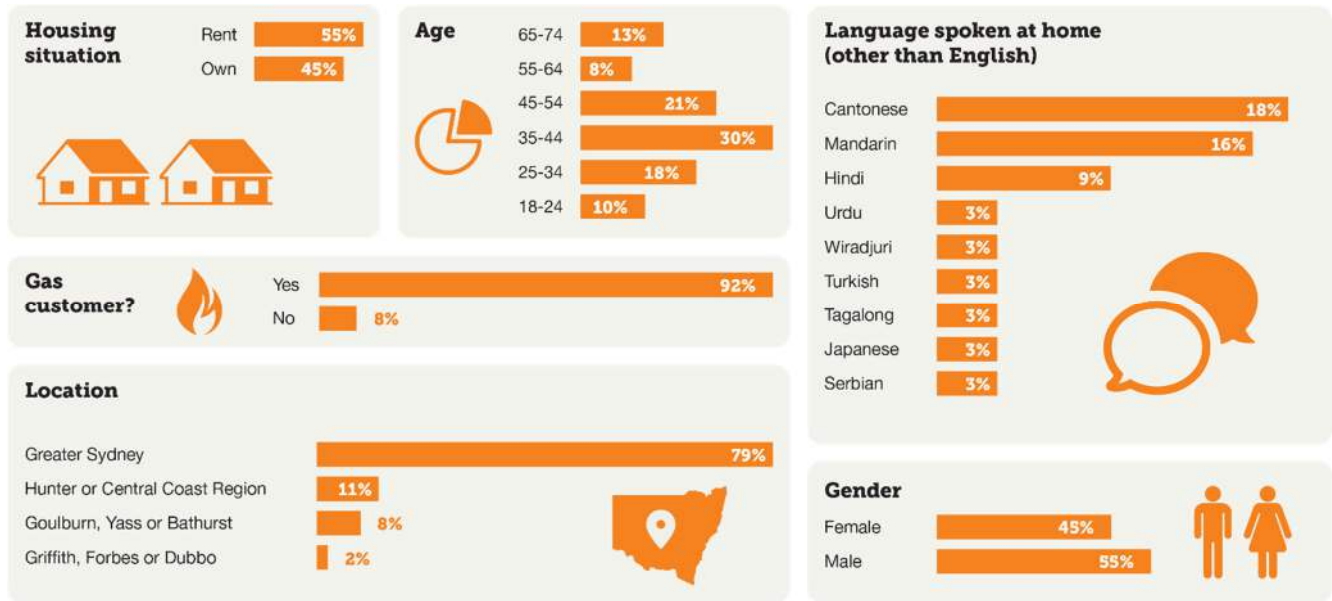
- A randomly selected and representative group of participants.
- A clear remit that speaks to the uncertainty surrounding the future role of gas networks in the Australian energy landscape.
- The provision of detailed information which included the outputs from the Expert Panel and Advisory Board in addition to access to independent industry experts to help participants understand the issues associated with the remit and develop responses.
- Time and support to deeply consider the information, share and exchange ideas, weigh up issues and options and come to a consensus on recommendations.
- A commitment from us to implement recommendations to the maximum extent possible which the Draft 2025 Plan sets out to do.

The Customer Forum consisted of over 40 participants and represented current and potential future energy customers. To encourage a range of perspectives the recruitment process considered (but was not limited to) gender, age, geography, housing situation and language spoken at home.

Approximately one quarter of Customer Forum participants also participated in the previous customer engagement process (for our 2020 Plan).

The demographic details of the Customer Forum participants are shown in Figure 2.8.

**Figure 2.8: Customer Forum Demographics**



The Customer Forum was tasked with responding to the following remit.

**Figure 2.9: Customer Forum 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 so we can create our future, 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?”

To align with our deliberative approach to engagement, we designed our Customer Forum processes to ensure participants had the time and support to deeply consider the information put forward to them, share and exchange ideas, weigh up issues and options and come to a consensus on recommendations. The process involved the Customer Forum meeting over a series of seven online and in-person sessions to understand ‘what was hard’ about transitioning the gas network to meet net zero from both our customers’ and Jemena’s

perspectives. Customers heard from external experts of their choosing, about the wider industry context and challenges, considered regulatory responses and initiatives recommended by the Advisory Board, and developed and finalised their recommendations to us.

To ensure customers did not just hear from Jemena voices, our engagement process included a range of guest experts, and people with alternative views (see Table 2.2 for details).

**Table 2.2: Our customers have heard from a variety of voices**

Forum and description	Theme	Guest, organisation and topic
<b>Forum one</b>  In forum one, participants watched a number of video recordings and video messages:	Uncertainty the transition creates	Shane Rattenbury - Attorney General of the ACT (excerpt from media interview on the banning of new gas connections in the ACT) <hr/> Gavin Dufty - Executive Manager, Policy and Research, St Vincent de Paul (on the implications for vulnerable customers)
	Exploring customer expectations	Kristen Pellew - Head of Customer and Community, Australian Gas Infrastructure Group (What other distribution businesses have heard) <hr/> Peta Ashworth OAM - Director, Curtin Institute for Energy Transition (speaking about insights gleaned through Citizen Jury processes it has held)
		Brian Spak - Director, Energy System Transition at Energy Consumers Australia (on customer insights gleaned through survey results)
<b>Forum Three:</b>  In the second Customer Forum, participants reviewed a long list of 17 external guests, and were tasked with selecting a prioritised list of speakers that they wished to hear from. Selected speakers are listed on the right.	Fairness and the energy transition	Gavin Dufty - Executive Manager, Policy and Research, St Vincent de Paul <hr/> Peta Ashworth OAM - Director, Curtin Institute for Energy Transition
	The pathway to electrification	Sophia Vincent - Director Energy Consumer Branch, NSW Treasury
	The role of hydrogen	David Norman - Chief Executive Officer, Future Fuels CRC
	The role of biomethane	Shahana McKenzie - Chief Executive Officer, Bioenergy Australia <hr/> Michael Davis - Managing Director, Optimal Renewable Gas
		The Customer Forum participants requested an additional speaker from an environmental group.
<b>Forum Six:</b>  Returning external guest experts in the sixth Customer Forum included:	Different energy futures	Gavin Dufty - Executive Manager Policy and Research, St Vincent De Paul (providing the point of view of the agnostic) <hr/> David Strang - Lighter Footprints (an electrification advocate) <hr/> Mike Davis - Managing Director, Optimal Renewable Gas (a biomethane advocate)

A final workshop is scheduled for March 2024. The purpose of this workshop is to bring the Customer Forum and key voices participants (discussed below) together to test whether our Draft 2025 Plan aligns with the Customer Forum's recommendations.

“The fact that they have pulled together so many experts for the group to hear from and engage with – even though some of the views may not necessarily align with their own. Incredibly encouraging and open-minded!”

**Customer Forum Feedback**

### 2.3.4 The key voices

We established a Youth Steering Group and a Culturally and Linguistically Diverse (CALD) Steering Group in early 2023. The role of these groups was to provide the Customer Forum with their unique values and perspectives on gas use, the future of gas, and the energy transition to net zero, and then to review and challenge the Customer Forum’s initial recommendations from those unique perspectives.

#### CALD Steering Group

We engaged the Ethnic Communities Council NSW (ECC NSW) before creating the CALD Steering Group to help us determine the best way to target the CALD community in this engagement process. The ECC NSW reached out to its networks to conduct interviews in Tamil, Arabic, Vietnamese and Nepali by using its educators as proxy community members to support the engagement process. The educators interviewed a small group of people from each of the four language groups, and then attended workshops to build profiles or ‘personas’ for the Customer Forum to be able to make recommendations to us on their behalf.

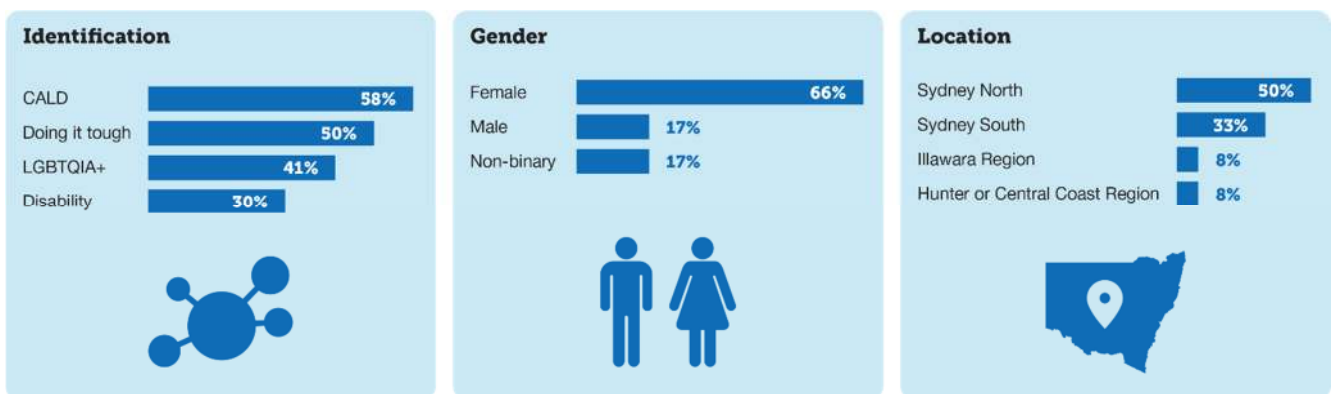
#### Youth Steering Group

The Youth Steering Group included people between the ages of 18 and 25 residing within our network. Members did not need to be gas customers as the purpose of the group was to understand their perspectives as future customers, or those that would inherit the impacts of the decisions we make today.

The group was recruited via an expression of interest process, through three channels: Youth Action, LinkedIn and a youth network called Ripple.

Five participants took part in the first Youth Steering Group workshop, 12 in the second workshop, and eight in the third workshop. This varied attendance reflected the struggle participants felt in balancing work and study with their participation. The demographic profile of the 12 people from both key voice groups who participated across the process is outlined in Figure 2.10.

**Figure 2.10: Key voices group profile**





### 2.3.5 Retailers

Commencing in October 2022, we have undertaken an extensive engagement program with retailers to understand their preferences on the services and initiatives we will provide over the 2025 Plan period, and the way we propose to charge for the provision of our services.

The first stage of the retailer engagement process was designed to inform the development on our Reference Service Proposal<sup>3</sup> (RSP,) which sets out our proposed reference services for retailers and self-contracting users for the 2025 Plan period.

Stage one of the retailer engagement program comprised of three phases:

1. An initial information gathering exercise conducted in October 2022, where we circulated a questionnaire to all self-contracting users, some large customers and retailers asking whether our current services are likely to meet their future needs and their preferences for consulting on our RSP.
2. Consultation on the Draft RSP, where we consulted with retailers, self-contracting users and some large customers over February to April 2023.

3. The publication of a consultation Draft RSP seeking customer and stakeholder feedback to ensure that our proposed reference services will meet their future needs.

See chapter 8 for more information on the RSP.

Stage two of the retailer engagement program entailed a series of Retailer Forums with representation from up to 13 gas retailers across the forum series to consider a range of topics, including:

- Some of key initiatives that act on the uncertainty surrounding the future role of our gas network including accelerated depreciation, charging for new connections and renewable gas connections
- Digital metering which was a key topic of interest raised by retailers
- Tariff reform and form of price control for the 2025-30 period
- The terms and conditions of our Reference Service Agreement.

We also hosted one-on-one sessions with retailers to allow for more in-depth discussions on our Reference Service Agreement.

### 2.3.6 Large customers

Engagement with our large customers commenced in late 2022, when we conducted a survey to understand how they wanted to engage as part of the RSP process and the broader price reset engagement process. The survey also explored what topics were of interest to them, relevant to the provision of gas network services.

The feedback we obtained from the survey informed our engagement program for large customers which

involved hosting an online forum in March 2023 followed by a Major Customer Forum in August 2023.

In addition to the Major Customer Forum, we offered opt-in one-on-one sessions with those customers wanting more information. We also engaged with our largest customers via a survey to understand their demand requirements over the 2025-30 period and to get insights into the role they could see renewable gas playing in their decarbonisation pathway.

### 2.3.7 Small businesses

To gain a broad perspective of our small business customers we spoke to a representative from Business NSW (also a JGN Customer Council member) to determine the best way to target this customer group. After discussions, we understood that affordability and pricing are the most important themes for this group, plus understanding what the energy transition looks like from a business perspective. Business NSW also provided advice on how best to engage with small business customers in terms of approach and scheduling of engagement activities.

Based on Business NSW guidance, we established two small business customer focus groups to understand their unique perspectives around gas use, the future of gas, the energy transition to net zero and to consider the initiatives we explored with the Customer Forum.

Focus group participants represented the interests of a diverse range of small business customers including restaurants, takeaway food shops, food manufacturers, information technology, accommodation, health, and other businesses considered high consumers of gas compared to

<sup>3</sup> The NGR require us to submit a RSP to the AER 12 months prior to the submission of our Access Arrangement proposal. The RSP must list all the pipeline services we can reasonably offer and specify at least one service as a reference service.

residential customers. As part of the recruitment process we ensured that participants were the main decision-makers for energy use in their businesses, with their annual bills ranging between \$5k to \$100k.

We hosted four focus group sessions in total with 13 small businesses. Two online sessions were held for each focus group with the first session designed to provide an overview of the challenges we face surrounding the uncertain future role of gas networks and the actions we can take in the form of the initiatives as explored by the Customer Forum. In the

### 2.3.8 Customer Council

Established in 2013, our Customer Council has fostered robust partnerships with industry stakeholders, influential customers, and advocates. Through this group, we maintain a continuous channel for hearing the customer perspective on our day-to-day operations. Our Customer Council members include customer advocates, large users and other stakeholders such as the Energy and Water Ombudsman. Five Advisory Board members also sit on the Customer Council allowing for fruitful cross-over between these groups.

### 2.3.9 Customer Tariff Forum

To inform our tariff structures and form of price control proposals for the Draft 2025 Plan we established a Customer Tariff Forum. To help design the tariff engagement program we consulted with the Advisory Board (via an opt-in session) to consider how we should engage on the tariff options and form of price control. The Customer Tariff Forum adopted elements of deliberative engagement by providing participants with time, information, access to independent expertise (we refer to as a 'Brains Trust'), and a high level of influence over the outcome. In testing the tariff and form of price control options, the Customer Tariff Forum was tasked with advising us on the following remit:

"Net zero 2050 is causing uncertainty and change for the energy sector. Jemena and its regulator are reviewing how gas is priced for customers. Different pricing methods will affect how much customers pay, in different ways, with some winners and some losers. Jemena wants you to answer: Which type of pricing method is in the best interest of customers?"

second session we deep dived on the initiatives, which included our approach to asset management, investing in renewable gas connections and accelerated depreciation. Participants were then asked to vote on the initiatives to understand their preferences and expectations.

Following the first stage of engagement with small businesses we merged the two focus groups into one to test the form of price control and tariff reform options that we discuss in chapter 9 of this Draft 2025 Plan.

Throughout the formulation of our Draft 2025 Plan, we maintained a consistent dialogue with the Customer Council, actively seeking their input and guidance at each stage of our engagement process, including seeking one-on-ones with members of the Customer Council to provide advice on engaging with particular groups, such as small businesses and developers.

The Customer Tariff Forum met in two phases and will meet again in phase three after this Draft 2025 Plan is published.

Phase one comprised 29 residential customers, from which 16 were then selected to take part in phases two and three. The 16 participants were selected on the basis of understanding of and interest in the subject matter, which was assessed via their completion of homework tasks by engagement partner BD infrastructure. The participants were originally selected by an external market research company to ensure a fair representation of our customers with a range of considerations made during the recruitment process including, but not limited to, gender, age, geography, housing tenure, and language spoken at home.

Because of the complex nature of tariffs and form of price control mechanism, members of the Advisory Board and Expert Panel, complemented with external guest speakers, were asked to play a role as the 'Brains Trust'. The 'Brains Trust' functioned as an independent expert to support Customer Tariff Forum participants, providing information and assisting in group deliberations by offering their views on our tariff options and form of price control we put forward to customers.

The 'Brains Trust' in Phase 1 consisted of:

- Douglas McCloskey - Public Interest Advocacy Centre (PIAC) and Advisory Board member
- Victoria Jordan - Customer and Advisory Board Member
- Zubin Meher-Homji - Economist and Founder of Dynamic Analysis
- Dr Matt Pearce - National Industry Leader, Energy, Mining & Property, KPMG

The 'Brains' Trust in Phase 2 comprised of:

- Gavin Dufty - General Manager of Policy and Research at St Vincent de Paul Society and Advisory Board member - Speaking on equity and fairness

- Zubin Meher-Homji - Founder and Director of Dynamic Analysis - speaking on gas pricing
- Matthew Warren - Principal at Boardroom Energy and also Expert Panel member - speaking on the context of the net zero energy transition
- Jordan Rigby - Regulatory Manager at Red Energy - speaking from a retailer perspective.

The outcomes from the Customer Tariff Forum are discussed in chapter 9, where we outline our tariff proposals.

## 2.4 Engagement outcomes

This section details the outcomes of our engagement from each customer and stakeholder group, and how we have responded to their feedback. We highlight instances where our customers had differing or conflicting views and how we took this into account in formulating our Draft 2025 Plan. Acknowledging that pleasing every customer group at all times is not possible, our focus remains on carefully navigating a pathway forward that serves the long term interests of both our current and future customers in a balanced manner, guided by the Customer Forum recommendations.

### 2.4.1 Customer Forum outcomes

The Customer Forum made six recommendations which we show in Figure 2.11, reproduced exactly as they wrote them. We have included references to where in the Draft 2025 Plan you can see and understand how their recommendations align to our proposals. The six recommendations from customers cover the following initiatives:

1. Renewable gas strategy for supporting customers
2. Renewable gas reliability and safety
3. Renewable gas advocacy and communication
4. Affordability
5. Vulnerability
6. Regulatory response options.



Customers reviewing options



Figure 2.11 Customer Forum recommendations

The recommendation (we want Jemena to...)	Context	Why this is important	Our response
<p>Jemena, We, Jemena Gas Network Customer Forum, have met several times over the last ten months both in person and online to discuss the future of Jemena, the gas power industry, and the appropriate regulatory response for the next five-year period. We have heard from a diverse range of speakers both within and outside of Jemena and have learned a great deal about relevant and industry topics new to many of us. Based on our understanding of the gas industry and problems of an uncertain energy transition, and the input of the youth forum and culturally and linguistically diverse communities, through an ongoing democratic and inclusive listening/discussion process we have come together in agreement of regulatory responses to present these final recommendations.</p> <p><b>Recommendation 1 - renewable gas strategy for supporting customers.</b></p> <ul style="list-style-type: none"> <li>Support the best cost-effective strategy &amp; environmentally friendly pathway moving forward.</li> <li>Consider how costs are distributed around the customer base.</li> <li>We are in favour of equitable distribution.</li> </ul> 	<p>This is in the best interest of current and future generations of customers &amp; society as a whole.</p> <ul style="list-style-type: none"> <li>This is in the best interest of current and future generations of customers &amp; society as a whole.</li> </ul>	<ul style="list-style-type: none"> <li>Customers feel valued &amp; respected in terms of their voices and opinions being heard and taken into account at all times.</li> <li>We are supporting the best interest of future generations.</li> <li>Financially viable for all customers regardless of circumstances.</li> <li>Benefits include the positive impact on the environment while still supporting sustainability at the same time.</li> <li>Hydrogen, biomethane and other emerging technologies are to be observed and considered and prepared for potential scale once the most attractive and accessible options are ready for the commercial and residential market through the Jemena infrastructure.</li> <li>This is directed at biomethane and hydrogen when it becomes more readily available.</li> </ul>	<p>See section 2.4 balancing the diverse views of customers</p> <p>See section 4.2.2 investing to connect renewable gas within our planned capital investments</p>
<p><b>Recommendation 2 - renewable gas reliability and safety</b></p> <ul style="list-style-type: none"> <li>Invest in building a reliable renewable gas network while avoiding unnecessary redundancies (i.e., effective management &amp; cost control).</li> <li>To continue to invest and research in pilot studies and trials to properly study the safety of new/renewable gas networks (all aspects - from supplying, distribution, consumers, storage, etc.).</li> <li>Benchmark and develop consensus and industry standards for reliability and safety relating to renewable gas networks.</li> <li>Develop appropriate transparent internal policies and measures for the management of operational, environmental, and safety risks; involve relevant subject matter experts in these.</li> <li>Ensure that after the energy transition, there will be no increases in fire and explosion risks.</li> </ul> 	<ul style="list-style-type: none"> <li>We know that major testing is being conducted on safety and reliability of the new renewable energy sources; results should be objectively evaluated and considered before decision making and implementation of network modifications.</li> <li>We know that the chemical and safety characteristics of some of the renewable energy sources (e.g., hydrogen) increase the risks of fires and explosions - these all need to be considered for safe use, handling, and storage of the energy sources.</li> <li>Focus on biomethane which only requires existing infrastructure.</li> <li>Business continuity.</li> </ul>	<ul style="list-style-type: none"> <li>To make sure the safety of the consumer and the network are in place, so all policies and procedures are followed.</li> <li>To see the pragmatic aspect and check practicality (new technologies always have to be tested in the field) of the system modifications and adopted measures.</li> <li>Fires and explosions and related injuries and deaths already occur with natural gas; to use a more risky energy source would require a great focus on proper risk mitigation and implementation strategies.</li> </ul>	<p>See chapter 4 our planned capital investments</p>
<p><b>Recommendation 3 - renewable gas advocacy and communication</b></p> <ul style="list-style-type: none"> <li>Jemena needs to have a more public presence and speak up in the media.</li> <li>Speak with the Federal and local government and councils about Renewable gas advocacy and planning for the future.</li> <li>Educate all stakeholders to ultimately reduce the numbers of customers leaving gas over safety concerns.</li> </ul> 	<ul style="list-style-type: none"> <li>Without doing anything, there is inconsistent policies.</li> <li>Some customers are concerned about the safety of using gas indoors, whereas it's been in use for centuries.</li> </ul>	<ul style="list-style-type: none"> <li>The total reliance on one form of energy could be disastrous.</li> <li>By following these recommendations, the public is reassured of the safety and reliability of gas.</li> <li>Present to the public that Jemena believes safety is non-negotiable.</li> </ul>	<p>See chapter 3 responding to the energy transition</p>



Figure 2.11 Customer Forum recommendations (continued)

The recommendation (we want Jemena to...)	Context	Why this is important	Our response
<p><b>Recommendation 3 – renewable gas advocacy and communication (continued)</b></p> <ul style="list-style-type: none"> <li>• Recognising everyone’s knowledge varies, so supply more information so there isn’t any misinformation when educating everyone.</li> <li>• To communicate with their customers on the future of renewable gas with a personable approach, so that customers don’t abandon the company. This could include cost comparison between electricity and gas.</li> <li>• Communicate that the option of bio-methane is an environmentally friendly solution.</li> </ul> 	<ul style="list-style-type: none"> <li>• Banning gas is not speaking for the people and allowing choice.</li> <li>• The importance of educating the public on the different options of gas.</li> </ul>	<ul style="list-style-type: none"> <li>• By utilising the bio-methane, as an option, we are protecting the environment by having another renewable gas option.</li> <li>• For Jemena this means it’s a more affordable option because they don’t have to change the infrastructure.</li> <li>• By implementing these recommendations Jemena ensures fairness for vulnerable existing and new customers and for the company itself.</li> </ul>	<p>See chapter 3 responding to the energy transition</p>
<p><b>Recommendation 4 - Affordability</b></p> <ul style="list-style-type: none"> <li>• Ensure that any investment in the gas infrastructure that is necessary for the energy transition doesn’t leave behind those customers who may be more sensitive to price rises.</li> <li>• Finding a balance between rising cost of living and retaining customer base</li> <li>• Undertake as many initiatives as possible to incentivise people to keep themselves a gas customer.</li> <li>• Subsidise connection costs for new customers to help increase new connections which in turn can help spread costs over a larger base and make it more affordable.</li> </ul> 	<ul style="list-style-type: none"> <li>• People are struggling to pay their bills. Inflation will only make this worse.</li> <li>• Jemena needs to invest by increasing cost, but too much increase will lead to customers finding other solutions and leaving the gas network.</li> <li>• There will be a short term (five year) financial hit due to accelerated asset recovery in order to reduce the rate of bill increase in the future.</li> <li>• This is understood but means special care needs to be taken for those needing help with this increase.</li> </ul>	<ul style="list-style-type: none"> <li>• Society has a moral responsibility to make sure that energy sources are affordable - it’s an essential service.</li> <li>• Certain people may have more of a cultural reliance on gas (e.g., cooking) and shouldn’t be discriminated against.</li> </ul>	<p>See chapter 9 pricing for current and future generations</p> <p>See chapter 3 responding to the energy transition</p> <p>See chapter 6.3 on depreciation</p> <p>See section 4.3.1 connecting customers to our network</p>
<p><b>Recommendation 5 – vulnerability</b></p> <ul style="list-style-type: none"> <li>• Use their profits to help vulnerable customers and invest to make it fair for customers. At the same time support customers who are willing to share the costs in supporting vulnerable customers.</li> <li>• Support vulnerable customers to have a choice with gas.</li> <li>• To have a balanced approach on investment and the need to increase costs to customers.</li> </ul> 	<ul style="list-style-type: none"> <li>• People have a basic need to keep warm and safe when using gas.</li> <li>• More choices for customers on types of energy offered whilst the costs are competitive in an open market.</li> <li>• Keep as many customers and open to new customers to keep costs down.</li> <li>• Jemena shows they care about all customers no matter what their circumstances are and offering financial assistance to vulnerable customers without passing the increased costs to mainstream customers.</li> </ul>	<ul style="list-style-type: none"> <li>• If people can’t afford household gas, they may bring unsafe and unapproved gas appliances inside their home.</li> <li>• Supporting vulnerable customers is essential as we can all become vulnerable due to an unexpected change in circumstance.</li> <li>• Maintaining or increasing customers keeps gas prices down to all customers. By Jemena showing care to their customers in good and difficult times, it brings more positive feedback to Jemena.</li> </ul>	<p>See chapter 6 our proposed vulnerable customer initiatives</p> <p>See section 3 responding to the energy transition</p>
<p><b>Recommendation 6 – regulatory response options</b></p> <ul style="list-style-type: none"> <li>• Take these 7 recommendations into the future... while considering that these are the result of collaborative work from a diverse group of people and summarise a wide range of opinions. In addition to the recommendations produced from this group, we believe Jemena should continue to incorporate the summarised opinions from the youth and CALD groups, which do not entirely align with the final preferences presented here today.</li> </ul> 	<ul style="list-style-type: none"> <li>• We believe that any decisions should be made with the future of all Australians in mind, and be measurable, tangible and proactive. Many of the preferences fall into a ‘middle ground’ which may slow change in either direction. If these decisions continue to be delayed, we only pass these issues on to the next round of participants in the Jemena public forum in 5 years.</li> </ul>	<ul style="list-style-type: none"> <li>• Jemena has curated a diverse group of people to ensure these recommendations align with the needs of the broader community. This recommendation is important because it has been the result of a long, collaborative process, and Jemena should respond to and act on these suggestions in a timely manner</li> </ul>	<p>See chapter 3 responding to the energy transition</p> <p>See section 2.4.7 balancing the views of diverse customers and stakeholders</p>

In addition to the six recommendations, the Customer Forum voted on a package of seven initiatives (referred to as regulatory response options in Figure 2.11) that support their recommendations. When considering their votes, participants were mindful of the values they had previously agreed on and added some new values. The key voices also responded to what they believed were the most important.

They are:

- **Affordability:** ensuring gas remains affordable for customers in the long term.
- **Safety:** safety needs to remain a given with no additional risk introduced.
- **Reliability:** “gas should come on whenever I want it to”.
- **Planning for the future:** one clear message came through on the topic of planning for the future, to act now, rather than delaying action and working towards a net zero future including renewable gas options.
- **Fairness:** ensuring that future customers do not carry the cost burden of current customers who have higher gas demand or leave the network earlier than others and that the impact of our decisions is considered across the wide diversity of customers in our network.

- **Access or choice:** retaining choice for individuals, and diversity in the energy supply.

When voting on the initiatives, the Customer Forum used an L-scale voting methodology (Love, Like, Live with, Lament and Loathe). If 80% of the group voted ‘Live with’ or above, the initiative was considered to be accepted by all Customer Forum participants. The final package of initiatives voted on, resulted in support of 89% which shows that the Customer Forum reached a consensus.

The customer recommendations in Figure 2.11 tell the story around the core deliberations and what was provided to us by the Customer Forum. The recommendations give direction to Jemena over the next five years considering all customer voices. The other outcome of customer deliberations was the responses to the initiatives agreed by the Advisory Board to take forward to customers. Table 2.3 provides a summary of the preferences raised by Customer Forum participants in response to the initiatives we explored with them.

**Table 2.3: Summary of Customer Forum outcomes**

Topics we engaged on	Customer Forum preferences	How we are responding
<b>Renewable gas</b>	<ul style="list-style-type: none"> <li>– Innovation and planning for the future were identified as a high customer priority.</li> <li>– The Customer Forum overwhelmingly voted to support investment in renewable gas connections with 90% of participants voting in favour of a moderate level of support for renewable gas connections, with a focus on biomethane, over the next five years.</li> <li>– Reasons given for this approach included that customers wanted Jemena to pursue renewable gas connections providing more flexibility in energy sources and that a moderate approach to connecting renewable gas is more cautious than the option of an accelerated approach.</li> <li>– They asked Jemena to keep in mind that policies can change, technology may change and that there is currently unclear government policy.</li> </ul>	<ul style="list-style-type: none"> <li>– We are proposing to invest in nine renewable gas connections that will supply biomethane into our network. All these projects deliver net benefits to our customers.</li> <li>– See chapter 4 on our planned capital investments for more information.</li> </ul>

Topics we engaged on	Customer Forum preferences	How we are responding
<b>Speeding up recovery of our assets</b>	<ul style="list-style-type: none"> <li>— In Customer Forum 5, we tested three options for accelerating the recovery of our assets - \$300M, \$500M and \$700M. Participants indicated a preference split between the \$300M accelerated capital recovery of our assets option (44% of votes) and the \$500M option (44% of votes). \$700M was least preferred with 12% of votes and was not taken forward to Customer Forum 7.</li> <li>— We revisited the tied preferences between \$300M and \$500M accelerated capital recovery in Customer Forum 7.</li> <li>— In Customer Forum 7, 68% of participants supported the accelerated capital recovery of our \$300M assets and 47% supported \$500M option.</li> <li>— Customers reasons for voting this way included that they understood there would be an increase in bills in the short term in order to reduce bill impacts in the future. However, they also wanted Jemena to keep in mind the impact on vulnerable customers.</li> <li>— The voting in Customer Forum 7 used the L scale approach, so the percentages are independent of each other and do not add up to 100%. The voting was conducted on each option individually using a five-point L-scale Love, Like, Live with, Lament and Loathe.</li> </ul>	<ul style="list-style-type: none"> <li>— We are proposing to accelerate the recovery of \$300M assets over the 2025-30 period.</li> <li>— Although the Customer Forum did not reach 80% consensus, participants did overwhelmingly support this initiative, as highlighted in recommendation 6 in Figure 2.11. When voting on a preferred option, participants were torn between finding the right balance between short term versus long term affordability, which is why 80% consensus was not realised.</li> <li>— We have been very cognisant of the price impacts on customers both now and into the future. While some of our initiatives, including accelerated capital recovery, place an upward pressure on customers' bills in the next five-year period, they will help provide greater stability for prices over the long term.</li> <li>— When voting on the final package of initiatives as a whole (including \$300M of accelerated depreciation), the Customer Forum did reach a consensus, with 89% of participants voting in support. See section 6.3.1.</li> <li>— See chapter 9 for more information on pricing and bill impacts.</li> </ul>
<b>Managing our assets into the future</b>	<ul style="list-style-type: none"> <li>— 90% of Customer Forum participants voted to support a targeted approach to asset rehabilitation using technology and that customers valued the concept of Jemena changing the way it manages assets.</li> <li>— Customers' reasons for supporting this option was that safety would be maintained.</li> </ul>	<ul style="list-style-type: none"> <li>— We are proposing to take a targeted approach to the gas mains we replace.</li> <li>— We will invest in technology to help us detect gas leaks more efficiently and prioritise which gas mains we should replace. By reducing gas leaks we can also reduce our greenhouse emissions. See chapter 4 for more information.</li> </ul>
<b>New connections</b>	<ul style="list-style-type: none"> <li>— 87% of the Customer Forum agreed that we should increase the capital contributions that we seek from customers seeking to connect to our network.</li> </ul>	<ul style="list-style-type: none"> <li>— We are proposing to update our connection policy so that fewer customers qualify for a free connection. See section 4.3.1 for more information.</li> </ul>
<b>Assisting vulnerable customers</b>	<ul style="list-style-type: none"> <li>— 92% of the Customer Forum agreed that we should do more to support vulnerable customers.</li> <li>— Customers also included recommendations for what might constitute doing more to support vulnerable customers including more communications, especially to include diverse groups by translating materials that cater for this diversity.</li> </ul>	<ul style="list-style-type: none"> <li>— We are proposing to enhance our vulnerable customer program by exploring ways to expand existing initiatives such as increasing our involvement in key community programs. See chapter 5 for more information.</li> </ul>



Topics we engaged on	Customer Forum preferences	How we are responding
<b>Digital metering</b>	<ul style="list-style-type: none"> <li>84% of the Customer Forum voted on us replacing ageing, defective and hard-to-reach meters with a digital meter.</li> </ul>	<ul style="list-style-type: none"> <li>We are proposing to replace 8,000 ageing, defective and hard-to-reach meters with a digital meter. See chapter 4 for more information.</li> </ul>
<b>Permanent disconnections (abolishments)</b>	<ul style="list-style-type: none"> <li>84% of the Customer forum voted to maintain our current approach of charging the full abolishment fee to the party requesting to abolish their gas connection, rather than recovering some of these costs from all of our customers.</li> </ul>	<ul style="list-style-type: none"> <li>In line with customer feedback, we are proposing to maintain our current approach.</li> <li>This is discussed in detail in chapter 9.</li> </ul>

## 2.4.2 The key voices

Through our engagement with the key voices steering groups, utilising an iterative process of building customer personas for young people and CALD communities, we were able to build an understanding of what they value.

The values of the Youth Steering Group are focused on:

- **Companies taking action:** there was a strong expectation for companies to make the hard decisions now, and for integrating community voices in senior leadership strategy forums.
- **Supporting marginalised groups:** this group emphasised the need to ensure that the least financially capable and disadvantaged individuals are not adversely impacted in the energy transition. They emphasised that choice of fuels and equity are critical for young people. For example, some young people are making cuts to their spending, others are living at home for longer, some have difficulty making ends meet and others feel a growing intergenerational wealth gap. For this group, they felt that supporting and building young peoples' capacity to participate in the transition and having their voices heard throughout engagement about the transition is very important to them.
- **Being environmentally minded:** the group is extremely environmentally aware and keen for action to be taken now.

- **Balancing the seemingly competing priorities of affordability and environmental concerns:** Many young people face a quandary, as they deeply value the environment, yet often lack the financial means to demonstrate their commitment. Instead, their focus is often on contributing to the overall household living expenses or supporting family members financially.

The values of the CALD community Steering Group include:

- **A strong cultural connection to cooking with gas:** there was a strong preference for using gas for cooking, and a reluctance to give it up under any circumstance.
- **Environmental awareness:** this group has a desire to improve the environment and doing what it takes to meet net zero emissions targets. Many came to Australia for better living conditions, including the environment.
- **A desire for renewable gas:** a strong desire to continue accessing gas into the future. If renewable gas is the way to do this, it is supported.
- **Vulnerability:** being new to Australia, they have limited connections, understanding of the English language and access to services, like benefits and subsidies.
- **Concern about affordability:** struggling with the cost of living and making choices based on what they can afford and what they know.

Table 2.4 provides a summary of the perspectives raised by Key Voices participants in response to the topics we engaged on and how we are responding to their expectations and values.



Table 2.4: Summary of Key Voices outcomes

Topics we engaged on	Feedback we received	How we are responding
<b>Young people</b>		
<b>Affordability</b>	<ul style="list-style-type: none"> <li>— Affordability is a concern of young people.</li> </ul>	<ul style="list-style-type: none"> <li>— Recognising affordability and cost of living pressures impacting customers today, we have sought to carefully balance the need to take action now against the short-term price impacts of our plans.</li> <li>— See chapter 3 to understand how our actions will promote greater stability for prices over the long term.</li> </ul>
<b>The environment</b>	<ul style="list-style-type: none"> <li>— Would prefer a stronger push for renewables</li> <li>— Majority said renewable gas meets the needs of young people; however, they would prefer it as a transitional fuel.</li> </ul>	<ul style="list-style-type: none"> <li>— In our Draft 2025 Plan we propose to invest in renewable gas connections - with a focus on biomethane – that can help reduce overall carbon emissions across the gas supply chain.</li> <li>— We will also invest in new technology that will enable us to better detect and repair gas leaks which will help reduce our greenhouse emissions.</li> <li>— See chapters 4 and 5 to learn more about our plans to protect the environment.</li> </ul>
<b>Planning for the future and managing uncertainty</b>	<ul style="list-style-type: none"> <li>— The slow and steady approach of the Customer Forum does not meet the needs of young people in the long run (e.g. prioritising current over future customers).</li> <li>— This group said they did not need a future with natural gas – their focus would move to other renewable energy sources.</li> <li>— Consider how customers can sign up for renewable gas.</li> <li>— Jemena should hold the government accountable for energy policy.</li> </ul>	<ul style="list-style-type: none"> <li>— We will continue to advocate to key policy makers in relation to energy policy and that renewable gas can play a pivotal role.</li> <li>— Our 2025 Plan will implement a number of initiatives that will manage uncertainty and support a smoother transition to net zero.</li> <li>— Investing in renewable gas connection projects will retain a higher number of customers which in turn lowers asset stranding risk and ensures a fairer recovery of our assets. See chapter 3 for details.</li> </ul>
<b>How should Jemena meet customer expectations</b>	<ul style="list-style-type: none"> <li>— There was a strong expectation from young people for businesses like ours to take action now and do the hard work.</li> <li>— Consider how to support and communicate with customers through the energy transition.</li> </ul>	<ul style="list-style-type: none"> <li>— The need to act now is imperative, the earlier we start to address the challenges presented as a result of the rapid energy transition, the smoother the transition to net zero will be. Chapter 3 discusses our Draft 2025 Plan initiatives that will support the transition to net zero.</li> <li>— We will enhance the way we communicate with customers through our social media and website channels about the initiatives and actions we are pursuing as outlined in this Draft 2025 Plan.</li> </ul>

Topics we engaged on	Feedback we received	How we are responding
<b>Culturally and Linguistically Diverse (CALD) communities</b>		
<b>Affordability</b>	<ul style="list-style-type: none"> <li>— Focus on keeping bills affordable for vulnerable CALD communities.</li> </ul>	<ul style="list-style-type: none"> <li>— Recognising affordability and cost of living pressures impacting customers today, we have sought to carefully balance the need to take action now against the short-term price impacts of our plans.</li> <li>— Partner with other networks and community organisations to support vulnerable customers through increased investment in community programs like Voices for Power.</li> </ul>
<b>The environment</b>	<ul style="list-style-type: none"> <li>— More detail on how renewable gas will be implemented and funded, as well as government policy.</li> </ul>	<ul style="list-style-type: none"> <li>— We are proposing to invest in 9 renewable gas connections that will support the supply of biomethane into our network. See chapter 4 on our planned capital investments for more information.</li> <li>— We will continue to advocate key policy makers in relation to energy policy and the role that renewable can play in supporting the transition to net zero.</li> </ul>
<b>Planning for the future and managing uncertainty</b>	<ul style="list-style-type: none"> <li>— Consider how CALD communities can be supported through the energy transition.</li> <li>— This group had a strong cultural attachment to gas and they want the choice to access gas in the future. If renewable gas is the way to do this, it is supported.</li> <li>— They strongly support renewable gas to enable choice and future access to gas.</li> <li>— They would accept any overarching energy policy decisions from government, but would find a way to continue cooking with gas if mains gas wasn't available. For example, they would revert to LPG bottled gas or using charcoal for cooking purposes.</li> </ul>	<ul style="list-style-type: none"> <li>— We are proposing to invest in nine renewable gas connections that will support the supply of biomethane into our network which in turn can retain a choice in the use of gas for CALD communities. See chapter 4 on our planned capital investments for more information.</li> </ul>
<b>How should Jemena be meeting customer expectations</b>	<ul style="list-style-type: none"> <li>— This group sees government playing a role in providing subsidies for the energy transition, in addition to community organisations and businesses playing a supporting role.</li> <li>— They are ready to adopt more sustainable lifestyles, however, they would like to find a way to continue cooking with gas for cultural reasons.</li> </ul>	<ul style="list-style-type: none"> <li>— As highlighted above, we will continue to advocate key policy makers in relation to energy policy matters including the role that renewable gas can play in supporting the transition to net zero. In addition, we exploring ways to expand accessible language communications, the provision of visual information via social media, and support programs for customers experiencing vulnerability.</li> </ul>

### 2.4.3 Retailers

Table 2.5 provides a summary of the issues raised by retailers in response to the topics we engaged on and how we are responding to their expectations.

**Table 2.5: Summary of retailer feedback**

Topics we engaged on	Feedback we received	How we are responding
<b>How retailers would like to be engaged</b>	<ul style="list-style-type: none"> <li>– Value open and positive communication, and transparency which includes the provision of information in a timely manner.</li> <li>– Happy to engage in an online environment using online tools to gather feedback.</li> <li>– Frequency and timing of engagement is important.</li> </ul>	<ul style="list-style-type: none"> <li>– To understand the needs and expectations of retailers, we have undertaken an extensive engagement program that aligns to their preferences, as outlined in section 2.3.5.</li> </ul>
<b>Planning for the future</b>	<ul style="list-style-type: none"> <li>– Interest in renewable gas and when it becomes available.</li> <li>– Industrial customers will need gas for a more extended period, and use a lot of gas, so renewable gas can offer a solution.</li> </ul>	<ul style="list-style-type: none"> <li>– We propose to invest in renewable gas connections to biomethane suppliers. This means that customers – including industrial customers – can access renewable gas sooner, which provides greater energy security from fuel diversification. See chapter 4 on our planned capital investments for more information.</li> </ul>
<b>Digital metering</b>	<ul style="list-style-type: none"> <li>– Overall retailers are supportive of digital meters, and think that they would help improve the customer experience.</li> <li>– One retailer did not support digital metering in the context of the uncertain role gas will play in the future.</li> </ul>	<ul style="list-style-type: none"> <li>– We are proposing to replace 8,000 ageing, defective and hard-to-reach meters with a digital meter. See chapter 4 for more information.</li> </ul>
<b>A new approach to connections</b>	<ul style="list-style-type: none"> <li>– Most retailers agreed with our proposed changes to our connections policy so that more customers are required to make an up-front contribution if they wish to connect to our network.</li> </ul>	<ul style="list-style-type: none"> <li>– We are proposing to update our connection policy (via changes to our Model Standing Offer) . See chapter 4 for more information.</li> </ul>
<b>Assisting vulnerable customers</b>	<ul style="list-style-type: none"> <li>– A majority of retailers told us they are supportive of assisting customers in need, with a number reporting that customers are asking for gas bill assistance for the first time.</li> <li>– One retailer was not in favour of us assisting vulnerable customers.</li> </ul>	<ul style="list-style-type: none"> <li>– We are proposing to enhance our vulnerable customer program by exploring ways to expand existing initiatives such as our involvement in key community support programs. See chapter 5 for more information.</li> </ul>

Retailer's feedback on the form of price control and proposed tariff structures is discussed in chapter 9.

### 2.4.4 Large customers

Table 2.6 provides a summary of the issues raised by large customers in response to the topics we engaged on and how we are responding to their expectations.

**Table 2.6: Feedback from large customers**

Topics we engaged on	Feedback we received	How we are responding
<b>How large customers would like to be engaged</b>	<ul style="list-style-type: none"> <li>— They would like two-way conversations</li> <li>— Want engagement to be meaningful, focused, transparent and open.</li> </ul>	See section 2.3.6 for details of our engagement with large customers.
<b>Planning for the future</b>	<ul style="list-style-type: none"> <li>— Large customers were predominately interested in understanding how we are ensuring reliability and managing the energy transition.</li> <li>— They see renewable gas playing an important role in the energy transition which can support large customer obligations of meeting the Federal Government’s safeguard mechanism requirements.</li> <li>— Renewable gas could take the pressure off the electricity network and reduce investment by major gas customers needing to transition their equipment to electric.</li> <li>— They also see renewable gas as having a role to support ongoing processes that involve high heat.</li> </ul>	To avoid the risk of adverse customer outcomes resulting from the energy transition, it is prudent to act now, and implement a suite of initiatives – including investing in renewable gas connections - that can minimise bill impacts over the longer term, and address intergenerational equity issues. See chapters 3, 4, 5, 6 and 9 to understand how we are planning for the future.
<b>Speeding up recovery of assets</b>	<ul style="list-style-type: none"> <li>— The majority of large customers were silent in terms of their preferences for accelerated depreciation</li> </ul>	See section 6.3 for details on our proposed accelerated depreciation allowance which is far less than what would be required if we were planning for a future in which our network had no role to play in a decarbonised energy sector.
<b>Reliability</b>	<ul style="list-style-type: none"> <li>— Large customers wanted to understand how we are maintaining network reliability into the future.</li> </ul>	Our capital expenditure program is focussed on ensuring that we continue providing efficient, reliable and safe services to customers through our asset management programs. See chapters 4 and 5 for more details.
<b>Affordability</b>	<ul style="list-style-type: none"> <li>— Large customers wanted more information to understand how we are ensuring affordability for the provision of our services.</li> </ul>	Recognising affordability and cost of living pressures impacting customers today, we have balanced the need to take action now against the short-term price impacts of our plans. In doing so will help provide greater stability for prices over the long term, and support the efficient future utilisation of our gas network by large customers. Chapters 3 and 9 discuss how we are balancing our plans to provide long term price stability and how we propose to charge for the provision of our services moving forward.

## 2.4.5 Small businesses

Table 2.7 provides a summary of the issues raised by small business customers in response to the topics we engaged on and how we are responding to their expectations.



Table 2.7: Feedback from small businesses

Topics we engaged on	Feedback we received	How we are responding
<b>Affordability</b>	<ul style="list-style-type: none"> <li>— Small business customers are concerned with current rising energy costs in electricity and gas and the expense of the energy transition down the track. They like to have the choice of fuel to support the flexibility of business needs and appreciate the reliability of gas.</li> <li>— Some participants were considering switching to alternative renewable energy sources potentially based on future gas price movements.</li> </ul>	<ul style="list-style-type: none"> <li>— We recognise affordability is a crucial challenge for small businesses. We have sought to carefully balance the need to take action now against the short-term price impacts of our plans to ensure longer term stability in the price for gas network services. We discuss this in chapter 3.</li> </ul>
<b>Accelerating capital recovery</b>	<ul style="list-style-type: none"> <li>— Small business customers are concerned about not leaving an unnecessary financial burden on future generations.</li> <li>— With this in mind, 58% of small businesses voted to accelerate capital recovery by \$300M, and 42% voted to accelerate by \$500M.</li> <li>— No participants were opposed to this initiative.</li> </ul>	<ul style="list-style-type: none"> <li>— We are proposing to accelerate the recovery of \$300M assets over the 2025-30 period whilst being cognisant of the price impacts on customers both now and into the future. Refer to section 6.3 for more information about our approach to accelerating capital recovery.</li> </ul>
<b>Planning for the future and managing for uncertainty</b>	<ul style="list-style-type: none"> <li>— Small business customers are extremely interested in renewable gas as many are reliant on gas as a fuel source and will find it difficult to switch energy sources.</li> <li>— 50% of small businesses voted to expedite renewable gas and the remaining 50% voted for a more moderate approach to investing in renewable gas.</li> </ul>	<ul style="list-style-type: none"> <li>— We are proposing to invest in nine renewable gas connections that will supply biomethane into our network. All these projects deliver net benefits to our customers.</li> <li>— See chapter 4 on our planned capital investments for more information.</li> </ul>
<b>A new approach to connections</b>	<ul style="list-style-type: none"> <li>— Most small business customers agreed with our proposed changes to our connections policy so that more customers are required to make an up-front contribution if they wish to connect to our network.</li> <li>— Although they were supportive of our proposed changes there were differing views in terms of how much of the connection costs should be paid by the customer directly versus the broader customer base.</li> </ul>	<ul style="list-style-type: none"> <li>— We are proposing to update our connection policy (via changes to our Model Standing Offer). See chapter 4 for more information.</li> </ul>
<b>How Jemena manages its assets</b>	<ul style="list-style-type: none"> <li>— Small business customers had similar sentiment to residential customers and prefer that we take a targeted approach to our gas main replacement program.</li> </ul>	<ul style="list-style-type: none"> <li>— We are proposing to take a targeted approach to the gas mains we replace.</li> <li>— We will invest in technology to help us detect gas leaks more efficiently and prioritise which gas mains we should replace. See chapters 4 and 5 for more information.</li> </ul>

Refer to chapter 9 for small business customers feedback on the form of price control and proposed tariff structures.

## 2.4.6 Customer Council

Please see Table 2.8 below for an overview of the feedback from our Customer Council.

**Table 2.8: Customer Council feedback**

Topics we engaged on	Feedback we received	How we are responding
<b>Engagement design</b>	<ul style="list-style-type: none"> <li>— Asked how Jemena planned to incorporate diverse groups in the engagement</li> <li>— Consider observers and hybrid engagement (mix of online and in-person)</li> <li>— Consider the Advisory Board and Expert Panel and how the individuals in these groups potentially cross over or interact with each other.</li> </ul>	<ul style="list-style-type: none"> <li>— We incorporated diverse groups into the Key Voices part of our engagement program, focusing on young people and the CALD community because of their integral role in the energy transition.</li> <li>— The Key Voices groups provided the Customer Forum with their unique values and perspectives on gas use, the future of gas, and the energy transition to net zero, and then to review and challenge the Customer Forum’s initial recommendations from those unique perspectives.</li> <li>— We used both online and in-person sessions for the engagement process.</li> <li>— We considered Advisory Board and Expert Panel separately because of their distinct role, however we looked for opportunities to promote interactions with each other. For example, we arranged for the Chair of the Advisory Board, Rosemary Sinclair AM to attend Expert Panel Session 4 (18 November 2022.)</li> </ul>
<b>Reflections on the process</b>	<ul style="list-style-type: none"> <li>— Asked how the program has been evaluated and what the evaluators feedback is.</li> <li>— Whether the deliberative engagement process used is still fit for purpose.</li> </ul>	<ul style="list-style-type: none"> <li>— We have listened to the Customer Challenge Panel (CCP) and taken on feedback when preparing the Draft 2025 Plan. For example, the CCP noted Jemena should incorporate conflicting consumer views in the development of the Draft 2025 Plan. In response, we aimed to ensure the Draft 2025 Plan clearly articulates and acknowledges the differing customer views. This is described in section 2.4.7.</li> <li>— We made efforts to ensure broad and deep engagement through the diversity of groups we engaged with and the number of repeated in-depth sessions. See section 2.3 for details.</li> </ul>

## 2.4.7 Balancing the diverse views of customers

Central to our customer engagement program was our commitment to consult with a wide array of customers to ensure that we understand the diverse perspectives of needs and expectations of our services and on the initiatives that can help us manage uncertainty surrounding the future role of our gas network.

The Youth Steering Group advised us that young people are strongly orientated towards environmental outcomes but are struggling with the cost of living, and that they weighed up those factors heavily in their considerations. The Youth Steering Group also provided feedback on the Customer Forum's initial recommendations, that they might be overly cautious given the long term challenges of transitioning to net zero carbon emissions. The CALD Group advised the Customer Forum that new and emerging communities have a strong cultural connection to gas, but also struggle with affordability and lack of access to government subsidies for energy, and are isolated due a lack of connection to mainstream Australian society. The CALD group supported the Customer Forums preferences for the pursuit of renewable gas and supporting vulnerable customers.

In formulating our Draft 2025 Plan, we have sought to ensure that we transparently represent the wide range of views put forward by our customers. Our commitment to deliberative engagement puts the community affected by a decision at the heart of the decision-making process by ensuring the Customer Forum participants, representing their community, come to a consensus view on the initiatives that they considered. This does not mean that 100% of the Customer Forum participants had to come to an agreed position for each initiative considered. This is highly unlikely and is arguably not desirable in a deliberative process that centres on diversity. A common rule of thumb in deliberative processes is that around 80% of participants must agree that they would be comfortable with a set of recommendations.

In finding consensus the Customer Forum used an L-scale voting methodology (Love, Like, Live with, Lament and Loathe). If 80% of the group voted 'Live

with' or above, the initiative was considered to be accepted by the Customer Forum.

When casting their votes, the Customer Forum members were asked to consider the diverse views of the participants, and the feedback they received from the Youth Steering Group and CALD Group.

The Customer Forum reached a consensus view (of at least 80%) on six of the seven individual initiatives that it considered. The only exception was accelerating the capital recovery of our assets, which was supported by 68% of participants. Although just short of 80%, the Customer Forum expressed support for this initiative when it considered it as part of the full package of initiatives (Recommendation 6), and as evidenced by its voting on the final package of initiatives (with 89% in support, which represents a consensus).

Tasking the Customer Forum to vote on the package of initiatives and reach consensus has ensured that the proposals put forward in the Draft 2025 Plan represent the diverse perspectives of our customers in a balanced and fair manner. We have also taken on board the feedback and views from large customers, small businesses, and retailers received throughout the consultation period. Given the importance of the views of our community representatives, we have given primacy to the Customer Forum recommendations, while also considering the views of these other groups in our Draft 2025 Plan.

As part of the final Customer Forum workshop which will include key voices participants scheduled for 2 March 2024, we will test that our Draft 2025 Plan proposals align to their recommendations in a way that accounts for the diverse perspectives of our customers while also responding to their view that we need to act now and balance the cost impact with affordability. We will also test our proposals with the Advisory Board, Expert Panel and our Customer Council when we walk them through our Draft 2025 Plan at the joint workshop scheduled for 2 February 2024.

### A question for your consideration

Do you feel the engagement adequately captured key priorities and considerations in developing the Draft 2025 Plan? Should any areas be added or expanded upon?

### **3. Responding to the energy transition**





## Highlights

- Australia has committed to achieving net zero emissions by 2050, which is driving a major transformation of the energy system towards renewables. This transition creates uncertainty for gas networks, but also provides opportunities to support decarbonisation through renewable gases and evolving to a more distributed energy system.
- To evaluate different initiatives under uncertain future scenarios, we developed an economic model with four plausible future scenarios to 2050. The modelling found that without transitioning to renewable gases like biomethane and hydrogen, gas is likely to lose competitiveness to electrification in most scenarios between 2030-2040, risking increased prices for remaining customers, asset stranding and intergenerational equity issues.
- To address these risks, we have developed a balanced set of initiatives including accelerated depreciation, investments in renewable gas connections, a more targeted asset replacement program, changes to connections policies and updates to tariff structures.
- While these initiatives may increase prices in the near-term, our modelling shows they can help mitigate price spikes, asset stranding risks and intergenerational equity issues in the long term as the energy system transitions.

## 3.1 An uncertain future for gas

The energy system both in Australia and globally is undergoing a once-in-a-generation transformation. We are operating in a period of significant uncertainty surrounding the future role of gas networks in the Australian energy landscape. This presents a complex challenge for JGN and our customers as we seek to develop a 2025 Draft Plan which is in the long term interests of consumers. Whilst we believe that gas has an important role to play in ensuring an orderly and least cost transition to net zero, there is still much uncertainty about both the exact pathway and pace of the energy transition.

Following the United Nations Paris Agreement, struck in December 2015 with 195 countries, Australia has made a number of commitments to reduce carbon emissions. In September 2022, the Federal Government formalised the pledge for Australia to achieve net zero carbon emissions by 2050. This will be enforced by the Safeguard Mechanism, which introduces a new requirement

for high-emissions facilities, including JGN, to reduce their baseline emissions.<sup>4</sup>

State governments, including the NSW Government, have set net zero emissions targets by 2050. Other states, such as Victoria and the ACT, have introduced bans on new gas connections. To date, the NSW Government has ruled out a similar ban. However, a number of local councils located within our JGN network have either proposed or implemented bans on new gas connections.<sup>5</sup>

Australia's commitment to decarbonisation has created the need for a rapid transformation of how energy is produced, distributed and used. To meet Australia's commitment to net zero carbon emissions by 2050, and interim targets of 43% reductions in emissions by 2030, the energy system needs to transition from a centralised, fossil-fuel based system to a decentralised, renewables-based system.

<sup>4</sup> [The Safeguard Mechanism](#)

<sup>5</sup> Waverly Council, City of Sydney, Parramatta, Canterbury-Bankstown have all proposed or implemented bans on new gas connections.

Government decarbonisation policies, improvements in energy efficiency, constrained supply, volatile wholesale gas prices, and growing competition from renewable electricity are all placing pressure on the role of natural gas in the energy mix. The Australian Energy Market Operator forecasts residential and small commercial consumption to gradually decline in the short term, with electrification to reduce natural gas usage more significantly in the medium to longer term as the economy transitions to meet net zero emissions by 2050. Future demand for gas networks is expected to decline due to changing consumer behaviours, and as a direct result of government policy which is focussed on electrification of households and small businesses. This may lead to our network becoming stranded, with potential implications for customers who remain dependent on gas.

We know from our engagement that some customers already find the energy transition difficult, expensive and challenging. Customers are concerned about the prospect of the implications for our most vulnerable, and the risk that they are left behind. They are also concerned about the implications for future generations.

The increasing speed with which this transformation is occurring has a direct impact on our gas network and our planning processes. We cannot continue to operate in the same way that we have in the past. Our network has the potential to support the

transition of the energy system to a distributed, renewables system, particularly through the provision of safe, affordable, reliable, and cost-effective services to residential, commercial and industrial customers. Notably, renewable gas has the potential to provide a pathway to reducing the carbon footprint of our gas network which can support broader decarbonisation objectives.

The need to act now is imperative, the earlier we start to address the challenges presented as a result of the rapid energy transition, the smoother the pathway to net zero will be. Our Draft 2025 Plan will implement a number of strategic initiatives based on the best information currently available, and provides flexibility to adjust these initiatives in the future as new information becomes available.

Regardless of how we respond to the energy transition, we must also continue to meet our regulatory obligations in regards to safety, reliability, security, and the environment, which are the key drivers of our expenditure forecasts. This includes meeting obligations under the National Gas Rules, including the mandatory connection of customers seeking the supply of gas from our network. Our Draft 2025 Plan has accounted for these regulatory obligations through our planned capital and operating expenditure forecast that we discuss in Chapters 4 and 5.

---

## 3.2 Plausible future scenarios

In response to the uncertainty surrounding the future role of our gas network, we embarked on the Gas Networks 2050 engagement process (discussed in chapter 2). This included the establishment of an Expert Panel to develop plausible future scenarios for the future NSW energy system. These scenarios are tailored to the role of our gas network in the NSW energy system and are based on our understanding of

the characteristics and usage patterns of our NSW customer base. The scenarios highlight plausible scenarios for the gas network in the 2050 time horizon, and also more immediately in 2030.

The Expert Panel produced four plausible scenarios, as detailed in Table 3.1.

**Table 3.1: Key attributes of each scenario**

	Government	Social	Technology	Economics	Customers	Decarbonisation
Electric Hare	Strong electrification policies	Community committed to decarbonisation	Slow technology development for H <sub>2</sub> and biomethane	High energy price leads to intervention	Rapid adoption of electrification	Rapid decarbonisation
Big Hydrogen	Strong renewable fuel policies	Community committed to decarbonisation	Rapid technology development for H <sub>2</sub> and biomethane	High costs initially, but rapidly fall	Some pay premium for renewable gas amenity	Rapid decarbonisation
Electric Tortoise	Policies reactive to price shocks	Community focus on affordability	Slow technology development for H <sub>2</sub> and biomethane	High energy price leads to intervention	Slow to convert	Slow decarbonisation
Market Hydrogen	Policies based on incentives and price signals	Community focus on affordability	Rapid technology development for H <sub>2</sub> and biomethane	Commercially competitive H <sub>2</sub> market	Some pay premium for renewable gas amenity	Slow decarbonisation

Source: KPMG, Gas Networks 2050: Future scenarios summary report. Final report; January 2023.

## 3.3 Our modelling tool – Future of Gas 2050 Model

### 3.3.1 Modelling framework

The implications of the decisions that we make during the 2025 Plan period will be different depending on how the future unfolds. If customers transition away from our network at a slower rate than we assume in our planning, this may result in us investing too little over the 2025 Plan period, which may detrimentally impact the service levels we are able to provide our customers, or the availability of renewable gas. If we delay certain decisions until later planning periods, this may have a disproportionate effect on those that are unable to transition away from gas.

To better understand the long term implications of the decisions that we must make during the 2025 Plan period, we developed a Future of Gas economic model. The model is based on the scenarios developed by the Expert Panel. It includes a 25 year outlook, from 2026 to 2050, and compares how each initiative performs under each scenario. By assessing how each initiative performs

under different scenarios, we are able to make more informed decisions taking into account the long term impacts on our customers and the asset stranding risk of our network.

The model uses the AER's standard building block cost framework and compares the end-customer gas prices (measured as the total retail bill) with the cost of electrification (electricity price and the additional cost to electrify) over the 25 year outlook. Overall, when the cost of electrification falls below the cost of gas, customers are more likely to switch to electric appliances. This would result in fewer customers over which to recover our costs, which would drive an increase in gas prices. The increase in gas prices would in turn drive further customers away from our network, and result in the rapid decline of our customer base. In our analysis, we use this price comparison between electricity and gas to understand the risk of asset stranding we

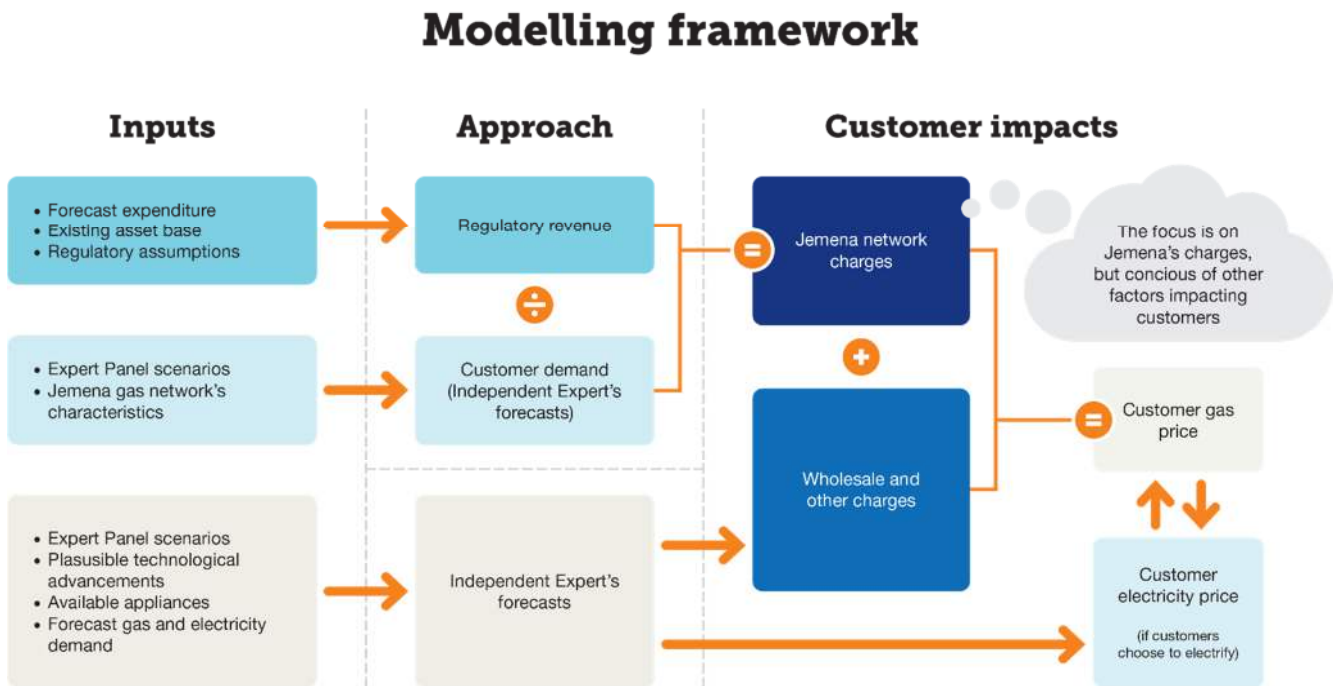
face in the context of the energy transition to net zero.

Our network charges make up around 35% of a residential customer’s total bill. To assess customer impacts, we engaged Blunomy to estimate the non-network components of customers’ gas prices (i.e. wholesale, transmission and retail prices)<sup>6</sup> and the equivalent price of electrification for customers opting to switch to electricity<sup>7</sup>. Blunomy forecasted customer demand for each plausible scenario and

accounted for the specific characteristics of our gas network, as well as the composition of possible renewable gas blends in our network.

We developed asset investment plans and costs based on Blunomy’s demand forecast for each scenario. These, along with the demand forecasts, were incorporated into the Future of Gas model to derive the regulatory revenue forecasts and price impacts from 2026 to 2050.

Figure 3.1: The Future of Gas modelling framework



### 3.3.2 Long term demand outlook

Blunomy projected the gas demand in our network from 2026 to 2050 for the four plausible future scenarios. The projections include customer numbers in each segment (i.e. residential, commercial and

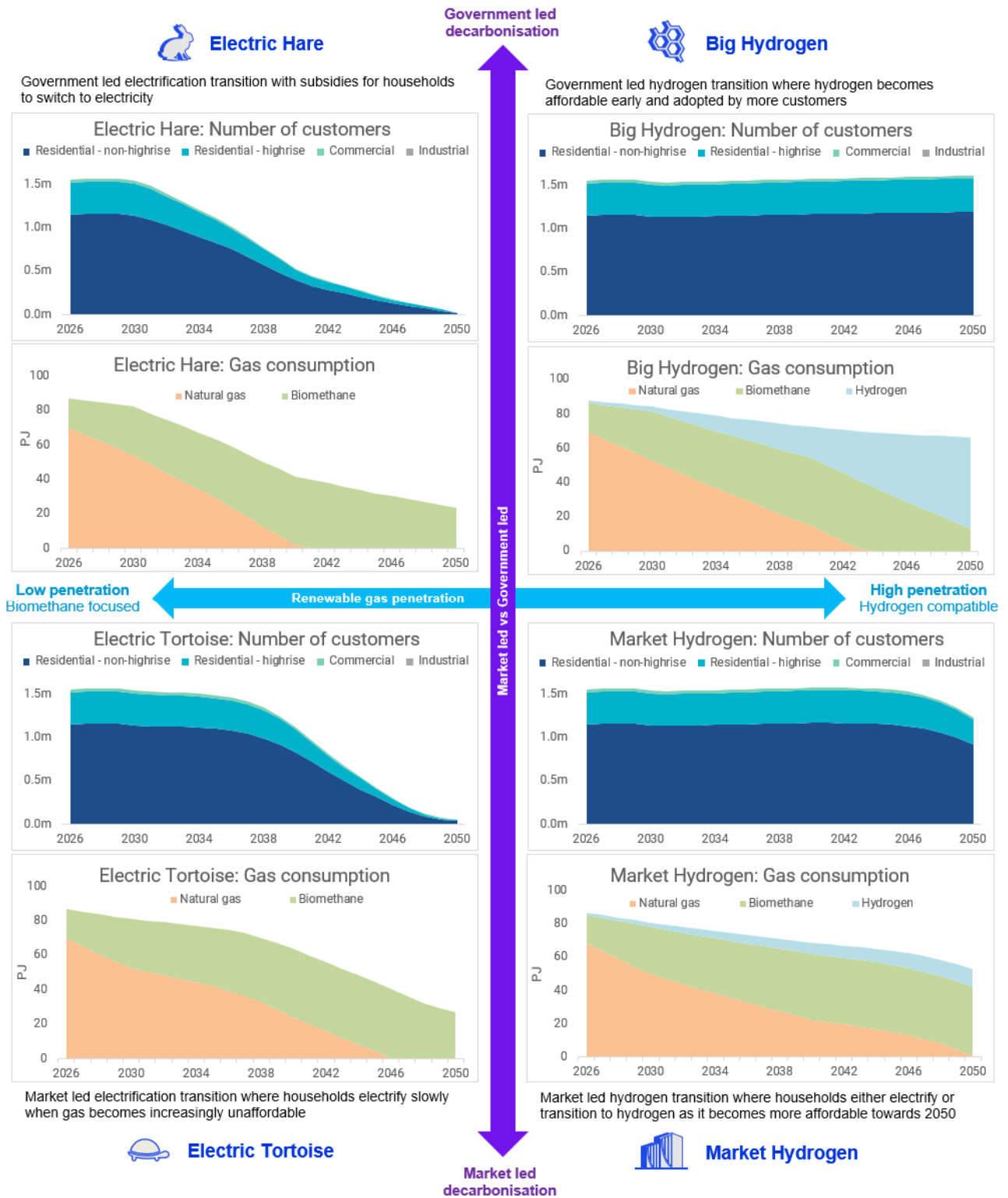
industrial) and the gas consumption by the type of gas (i.e. natural gas, biomethane, and hydrogen) expected to be available at the time. The results are depicted in Figure 3.2.

<sup>6</sup> The wholesale gas price considers AEMO’s forecasts, the Australian Hydrogen Market Study report, and Blunomy’s biogas studies.

<sup>7</sup> The price of electrification considers the annualised cost of electric appliances versus gas and the ongoing electricity costs.



Figure 3.2: Projected customer numbers and gas consumption under the Expert Panel scenarios



Blunomy's projections highlighted varying paths of future gas consumption for the four scenarios, aligning to the drivers outlined by the Expert Panel, being the

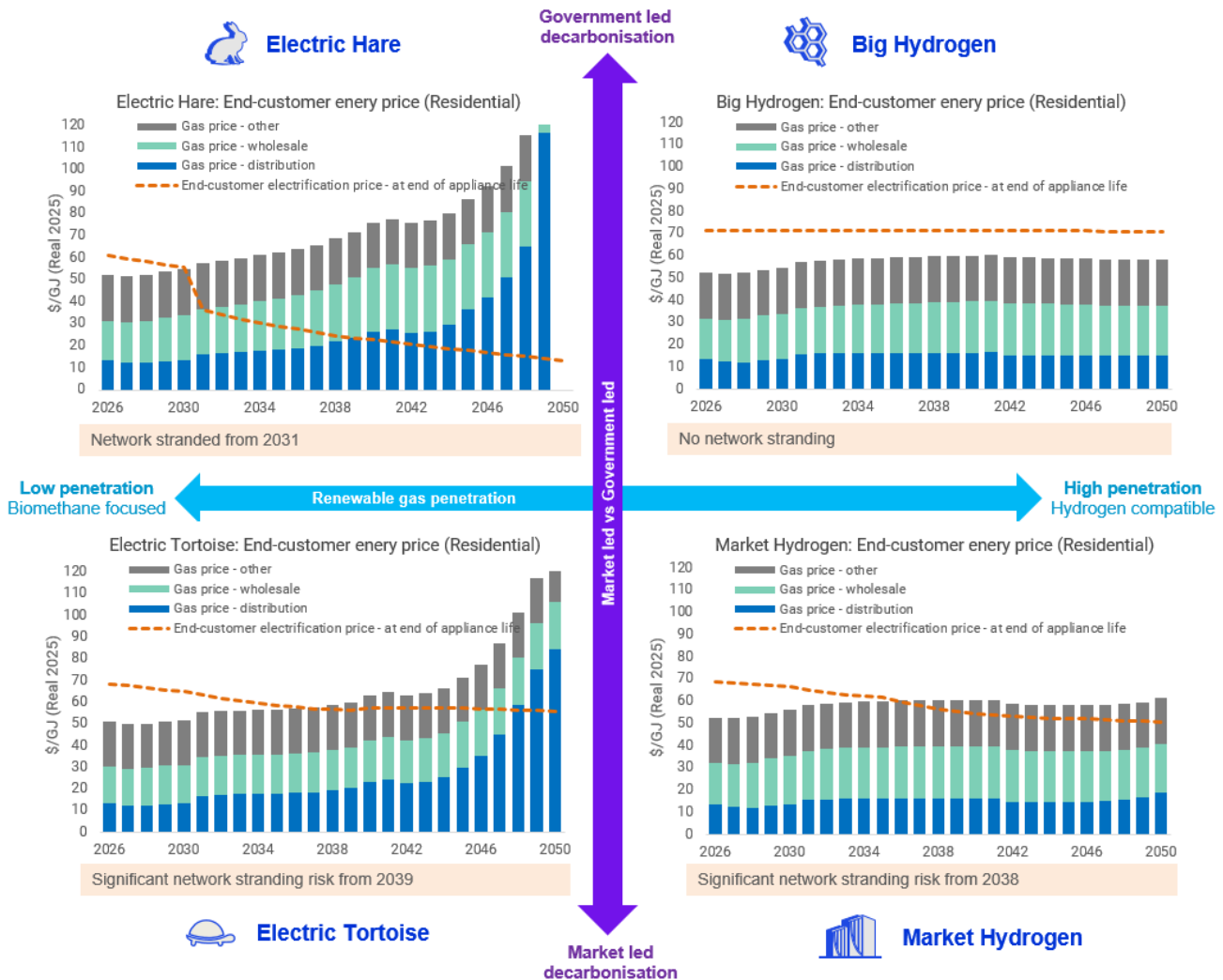
potential uptake and penetration of renewable gases versus the extent of government-directed or market-led progress to decarbonisation.

### 3.3.3 Impact on customers

The Future of Gas model derives the average network bill customers would pay over the 2026-50 forecast period by combining the projected demand outlook with the building block revenue required to maintain and operate our network. The model then converts the network bill into a \$/GJ charge and adds other key

gas price components (i.e. wholesale, transmission, and retail) to derive the end-customer gas price. This price is then compared to the equivalent price of electrification for customers opting to switch to electricity, as shown in Figure 3.3.

Figure 3.3: End-customer energy prices for residential customers under the Expert Panel scenarios



The Future of Gas model has enabled us to assess the scenarios to observe how price stability, affordability and equity outcomes can transition over the forecast period. Key observations for each scenario include:

- Under the Electric Hare and Electric Tortoise scenarios there is a significant increase in the network gas bill as more customers disconnect from the network. With a diminishing customer base, the costs of maintaining the gas network are shared among fewer customers, leading to a substantial rise in customer bills towards the end of the forecasting period. Customers remaining on the gas network may be constrained with affordability challenges associated with costs

required to retrofit their property and purchase new electric appliances. Other customers might be restricted in their ability to electrify, for example renters, or residential apartment blocks that share centralised gas hot water heating.

- In the Electric Hare scenario, gas remains competitive until 2030. Beyond that, the cost to electrify homes significantly reduces due to assumed government subsidies that contribute to the purchase of electric appliances. The customer base starts to decrease significantly driving up gas prices for customers remaining on the gas network. This can lead to asset stranding and intergenerational equity issues.

- In the Electric Tortoise scenario, gas loses competitiveness from 2039 as electrification costs continue to decline gradually. This means more customers switch to electricity when replacing household appliances leaving customers who find it harder to transition to electrification experiencing an increase in gas prices. Like the Electric Hare scenario this can result in asset stranding and intergenerational equity issues.
- Under the two hydrogen scenarios - Market Hydrogen and Big Hydrogen - gas network bills remain relatively stable over time due to the retention of a larger customer base. The gas network bill for Market Hydrogen shows a slight upward trend from 2046 onward, with some customers reverting to electricity when an increase in the hydrogen blend requires upgrades to household gas appliances.
- Under the Big Hydrogen scenario, the viability of renewable gas keeps gas prices lower compared to electricity which in turn retains a higher number of customers. The gas network remains viable with lower asset stranding risks and overcomes intergenerational equity concerns by ensuring a more equitable recovery of our assets.

Overall, in three out of the four scenarios, the price of electrification becomes lower than the gas price at some point before 2040, implying that customers are more likely to electrify in the longer term. This introduces substantial asset stranding risk for our network, which if not properly mitigated, will discourage further investments necessary for the network's safe and reliable operation, limit choice of fuel and flexibility for customers who remain on the gas network, and create intergenerational equity issues associated with the inequitable recovery of our asset base.

## 3.4 Our Strategic Response

Using the Future of Gas model we have been able to examine each of the initiatives discussed in section 2.3.3 to inform Customer Forum deliberations. While some of these initiatives place an upward pressure on customer's bills in the next five-year period, they will help provide greater stability to prices over the longer term. Most customers and stakeholders we spoke to recognise the need for action now to meet the challenges ahead, and to support the transition to net zero emissions by 2050.

The Future of Gas model has shown that the earlier we start to address the risks presented by the energy transition, the smoother the pathway to net zero will be. The AER has made similar observations, noting that the longer the time we have to make adjustments (for example, by accelerating depreciation) the smoother the price impacts will be.<sup>8</sup>

Throughout our Gas Networks 2050 engagement program, customers and stakeholders have empathised the need for fairness across generations when considering the long term impact of our decisions in meeting the challenges associated with the energy transition. To avoid the risk of adverse customer outcomes resulting from declining demand, it is prudent to act now, and

implement a suite of initiatives that can minimise bill impacts over the longer term, and address intergenerational equity issues.

In formulating the strategic initiatives included in our Draft 2025 Plan, we assessed how they performed across the four scenarios and how they interact together. These initiatives are not mutually exclusive and in some cases are complementary, which has been an important consideration to ensure we have taken a balanced approach when developing our Draft 2025 Plan.

The first of these initiatives is accelerated depreciation. The amount of accelerated depreciation we propose in section 6.3 is far less than what would be required if we were planning for a future in which our network had no role to play in a decarbonised energy sector. Indeed, under all of the four plausible future scenarios developed by the Expert Panel, our network will continue to play a role beyond 2050. We consider that our accelerated depreciation proposal is measured, and will provide options and flexibility to us and our customers, while also reducing the risks that will arise if there is a decline in demand (for example, if the Electric Tortoise scenario is representative of the future).

Importantly, accelerated depreciation, avoids the potential for any inequitable capital recovery of our assets and ensures more stable prices in the future

<sup>8</sup> AER, 2022, Regulating Gas Pipelines under Uncertainty, page 44.

by starting to reduce the amount of our asset base that must be recovered in future periods.

The second initiative we propose is to invest in renewable gas connections. Supporting renewable gas connections from biomethane suppliers means that customers can access renewable gas sooner, which also provides greater energy security from fuel diversification. As the supply of renewable gas grows, this will help to lower the risk of asset stranding. In addition, we will be able to retain a larger customer base, in turn placing a downward pressure on prices for those remaining connected to our network. Renewable gas can also reduce overall carbon emissions across the gas supply chain, which is consistent with the National Gas Objective. Chapter 4 provides an overview of our proposed renewable gas investments.

The third initiative we propose is to change our asset management approach, by taking a more targeted approach to our mains replacement program. Where possible, we have sought to reduce our capital investments, to minimise the growth in our asset base. In developing our capital

program, we have explored opportunities to defer investment and make trade-offs that slow the growth in our asset base. By using digital tools to better understand the condition of our assets we can prioritise which assets need replacement and which assets we can work harder through more maintenance. Through this approach we can reduce main replacements expenditure over the 2025 Plan period without compromising on safety and network reliability. Replacing assets in a targeted manner reduces our capital expenditure and growth of our regulatory asset base. This in turn can reduce our stranding asset risk for new investments.

The fourth initiative involves making changes to our connections policy so that more customers are required to make an up-front contribution if they wish to connect to our network. This change will help to reduce the growth in our asset base, and lower asset stranding risk with minimal impact on customer prices. To support this initiative, we will update our Model Standing Offer as highlighted in chapter 4 of the Draft 2025 Plan.

**Figure 3.4: Draft 2025 Plan initiatives**

Focus area	Initiative		Customer values	For further information see
<b>Inter-generational equity</b> 	How we manage our assets	<ul style="list-style-type: none"> <li>Our expenditure forecasts include investment in new technologies that will help us to reduce emissions and allow us to invest in our assets in a more targeted manner.</li> </ul>	Reliability and safety	Chapter 4
	A new approach to connections	<ul style="list-style-type: none"> <li>We will make changes to our connections policy so that more customers to make an upfront contribution to connect to our network.</li> </ul>	Fairness	Chapter 4
<b>The transition to net zero</b> 	Accelerated depreciation	<ul style="list-style-type: none"> <li>To ensure fair recovery of costs from our customers across generations, we propose to speed up recovery by \$300 million.</li> </ul>	Fairness Affordability	Chapter 6
	Supporting renewable gas connections	<ul style="list-style-type: none"> <li>We propose to support connections to nine biomethane projects.</li> </ul>	Fairness Affordability Access to the gas network (choice) Environment	Chapter 4
<b>Pricing for the future</b> 	Simplicity, cost reflectivity, and risk sharing	<ul style="list-style-type: none"> <li>We are proposing to remove the distinction between country and coastal customers; differentiate between large and small customers; and reduce the number of tariff blocks from six to four.</li> <li>We are proposing to move away from a price cap tariff variation mechanism to a hybrid mechanism. This enables more stable pricing and sharing of volume risks between us and customers.</li> <li>We are providing large customers on Chargeable Demand (CD) the opportunity to reset CD at the start of the 2025 Plan period.</li> </ul>	Fairness	Chapter 9



We are also making changes to our tariff structures so they can be more adaptable and ensure fairness in the way we charge for the provision of our gas network services. These changes, discussed in chapter 9, will simplify our tariff structures by removing the differentiation between country and coastal customers and reduce the number of tariff blocks in our volume market, whilst improving cost reflectivity. We are also proposing to move away from a price cap tariff variation mechanism which sets the way we adjust prices annually over the 2025 Plan period, to a hybrid mechanism. This proposal is supported by our customers, and will share volume risks between us and customers. It also addresses the AER's concerns around gas networks earning higher than forecast revenues by limiting revenue earned through volume outperformance.

In developing our Draft 2025 Plan, we have been very cognisant of the price impacts on customers both now and into the future. While some of these initiatives

place an upward pressure on customers' bills in the next five-year period, they will help provide greater stability for prices over the long term, and support the efficient future utilisation of our gas network.

Recognising affordability and cost of living pressures impacting customers today, we have also sought to carefully balance the need to take action now against the short-term price impacts of our plans. We believe that our Draft 2025 Plan, which has been shaped by the feedback of our customers, reflects a balanced approach. Our customers recognise that there is a need to act now, and were not supportive of us delaying taking action.

As we learn more about the exact pathway and pace to net zero, we will revisit these initiatives and adjust our strategies accordingly in future planning periods to ensure that we continue to meet the long term interests' of our customers, and support the energy transition.

### How to provide feedback on our Draft 2025 Plan

- Make a submission: [JGN Draft 2025 Plan Submission](#)
- Or complete the feedback survey on our website: [JGN Draft 2025 Plan Take the Survey](#)
- Or provide feedback via email: [yournetwork@jemena.com.au](mailto:yournetwork@jemena.com.au)

Submissions and feedback close on 4 March 2024

## 4. Our planned capital investments





## Highlights

- Our proposed capital expenditure for the 2025 Plan period is \$930M, representing a 4.2% reduction from our expenditure over the current 2020-25 period.
- We are investing in utilising technology to implement a more targeted approach toward asset replacements, helping to optimise our expenditure.
- We expect connections capital expenditure will fall by 38% over the 2025 Plan period, which aligns with our new connections forecast.
- Our capital expenditure forecast includes investments in renewable connections which will enable customers to access renewable gas sooner, and help to lower the risk of asset stranding.
- We will continue to augment our network to manage gas demand and maintain network pressure to ensure the long term reliability and safety of our network.
- Many of our meters will become 25 to 35 years old during the 2025 Plan period and will require replacing.

## 4.1 Our investment approach

Our capital expenditure program is focussed on avoiding unacceptable safety risks and ensuring that we can continue providing efficient, reliable and safe services to our customers.

Historically, our network has always been growing, as more households and businesses have connected to our network. Catering for this growth has accounted for a significant proportion of our capital investments. From 2015-16 to 2024-25 our investments to construct new mains, services and meters to connect new customers to our network was 59% of our total capital expenditure. While we are still expecting our network to grow over the 2025-30 period, we are forecasting a decline in the rate of growth and the investment in connections will be about 37% of our total capital expenditure or 29% if we exclude investment needed to connect customers that are renewable gas suppliers. Beyond 2030, we expect little growth in our network. We also anticipate that some customers will stop using gas altogether and disconnect from our network. Over the long term, we expect that there will be fewer customers on our network.

While natural gas use is expected to decline in the period to 2050, we expect that more renewable gas will become available on our network over the coming years. The availability of renewable gas will mitigate the decline of customers and gas consumption in some areas. Although there is still uncertainty around the amount of renewable gas that will be available, we

expect to continue delivering renewable gas to customers beyond 2050. However, it is likely that our network may be smaller in footprint than it is today. This means we need to carefully consider the investments we make in our assets.

Some of our investments have very long asset lives and we want to avoid building infrastructure that might not be required beyond 2050, if customers transition away from our network. However, as discussed in chapter 3, there is still significant uncertainty about the rate at which customers will transition away from our network, and it is imperative that we continue to provide safe and reliable services to our customers for as long as they require them. We must also ensure that we continue to meet our regulatory obligations.

To continue the provision of safe and reliable gas services, whilst meeting our regulatory obligations, we must continue to make investments in our network which includes an increase in certain expenditure categories for the Draft 2025 Plan period.

Where possible, we have sought to constrain our capital investments, to minimise the growth in our asset base. We have explored opportunities to defer investment and make trade-offs that slow the growth in our asset base. In particular, we explored the benefit of undertaking more routine maintenance instead of replacing parts of the network that are starting to show signs of poor performance. The total life cycle cost of this approach may be slightly higher under this approach but the impact to customer bills

over 50 years is small, as informed through our Future of Gas modelling.

In developing the capital expenditure program for the 2025 Plan period, we consulted with our customers on a number of key initiatives. Key elements of our capital investment program that have been shaped by our customers, discussed in chapter 2, include:

- Proposed changes to our connection policy which will reduce the number of connections that we provide free of charge to those wishing to connect to our network.
- The connection of renewable gas production facilities to our network to enable end-users to access renewable gas.
- Using technology to take a more targeted approach to our asset replacements to help optimise our expenditure.
- The roll-out of digital metering to those properties where it is difficult to access and read meters.

Our planned capital expenditure program also includes:

- Investments to connect new customers to our gas distribution network. Whilst we are forecasting a significant reduction in the growth in our network, we still expect to connect around 70,000 new customers over the 2025-30 period.
- Replacing meters that are inaccurate or will reach the end of their useful life.
- Augmenting our network to manage demand for gas. Although we are forecasting a reduction in the growth of gas connections we still need to augment parts of our network to manage other drivers of gas demand which includes managing pressure and gas leakages.
- Refurbishing facilities to ensure unacceptable safety risks are mitigated, by bringing fencing and other physical security measures up to standard and also by replacing aged electrical equipment and instrumentation.
- Investments in digital platforms and Information, Communication and Technology (ICT) which are necessary to support our network operations.

Table 4.1 shows our proposed capital expenditure over the 2025-20 period by each investment category.

**Table 4.1: Capital expenditure over time by category**

Real \$2025 (\$million)	2016-20		2021-25		2026-30
	Allowance	Actual	Allowance	Actual and Forecast	Draft 2025 Plan
New connections: gas users	483	697	530	534	269
New connections: Renewable gas suppliers	0	0	3	18	74
Mains augmentation	134	54	78	13	30
Mains replacement	92	33	50	37	66
Meter replacement	235	125	153	113	184
ICT	180	136	123	88	109
Telemetry	13	2	3	2	1
Other: Network	159	110	109	131	128
Other: Non-network	35	14	25	34	67
<b>Total</b>	<b>1331</b>	<b>1171</b>	<b>1074</b>	<b>970</b>	<b>930</b>

Notes:

- The 2020-25 Allowance includes \$3M of connection capital expenditure allocated to the Water factory project that was classified under Mains augmentation. The Mains augmentation has excluded this project accordingly.
- All numbers include overheads. 2021-22 and 2022-23 capex has been adjusted to include software as a service costs as capex.



## 4.2 How we plan and manage capital expenditure

For each five year plan, we forecast how much capital expenditure we require to efficiently and prudently manage our network to continue providing safe and reliable services. The forecast spans seven years as we prepare the forecast two years ahead of each plan. We generally forecast our capital expenditure using a 'bottom up' method, where we add up all of the expected projects and programs. We then review this forecast on a category and asset network level to identify possible efficiencies, savings and other changes we can make to account for customer feedback and the emerging challenges presented by the energy transition. We are also guided by asset management systems and processes, which have been developed in accordance with industry best practice and Australian Standards.

We take into account a variety of information including what will happen in the wider gas market and the broader economy, as these factors influence wages and connections numbers. We also need to forecast the condition and performance of our network assets, most of which are underground and difficult to inspect.

As we anticipate natural gas use to decline in the period to 2050 we have modelled the scenarios developed by the Expert Panel to understand the changes we have made to our approach to asset management and the long term implications to customers which has informed our capital expenditure forecast for the replacement of gas mains.

We forecast our ICT program using the AER's preferred approach, as set out in its guidance note.<sup>9</sup> This approach has elements of top-down and bottom-up approaches. A top-down approach is used for the 'recurrent' ICT capital expenditure, which is forecast based on historical actual costs. The bottom-up approach is used to estimate the costs of each project for the 'non-recurrent' ICT capex

The AER assess whether our forecast as a whole complies with the requirements set out in the National Gas Rules. As part of these requirements, we must demonstrate that our capital program is prudent and efficient.

Once a level of capital expenditure is set, we seek to manage our network within this allowance using best practice management systems and processes, including the ISO 55001 (asset management) and ISO 27001 (information security management) standards. We continually assess our network investments to ensure we are appropriately balancing costs and risks to deliver the greatest value for our customers.

We take into account changing circumstances and new information including (but not limited to):

1. Price/cost movements which can change which investments represent the most value for money.
2. Gas market dynamics which change how gas is supplied to our network and the infrastructure we need to receipt gas into our network, whether that be from transmission pipes or decentralised, renewable gas production facilities.
3. Greater understanding of our assets; as we continue to operate, inspect and test our assets and improve our understanding of the networks condition and performance.
4. Customers gas usage which affects whether and where we need to upgrade the capacity of our network.
5. Trends in the housing market which drives the number, type and location of each connection.
6. Changes in technology and innovation which can enable us to improve the way we manage our assets more efficiently and inform our asset investment decisions.

Each of these factors are balanced. Prices can go up or down. Our assets can be in better or worse condition than expected. Connections and peak usage can be higher or lower than forecast. While these factors are generally beyond our control, our response is not. Our performance is dependent on our ability to take advantage of the opportunities and manage the risks that emerge. As a result, we are constantly reviewing and changing our investment plans. We prioritise the investments required to keep our network safe and those that deliver the greatest customer value.

At times this means that we need to defer our investments, due to budgetary, market or resourcing constraints. Similarly, we also take the opportunity - where reasonable - to move our investments out in anticipation of better asset performance information that can be incorporated in the scope of works to ensure prudent and efficient outcomes.

An example of this is the renewal of the Newcastle low pressure mains project outlined in our 2020 Plan. It was expected to start in 2022 and cost around \$36M to complete. Prior to final investment approval we implemented our Enterprise Asset Management (EAM) tool allowing us to better understand asset performance which enabled us to change the project scope and reduce the project cost to around \$20M.

<sup>9</sup> [AER, Non-network ICT capex assessment approach, November 2019](#)

### 4.2.1 Our 2020-25 capital expenditure performance

We forecast that we will underspend our capital expenditure allowance for the 2020-25 plan period by \$104M, or 9.7% as shown by Figure 4.1.

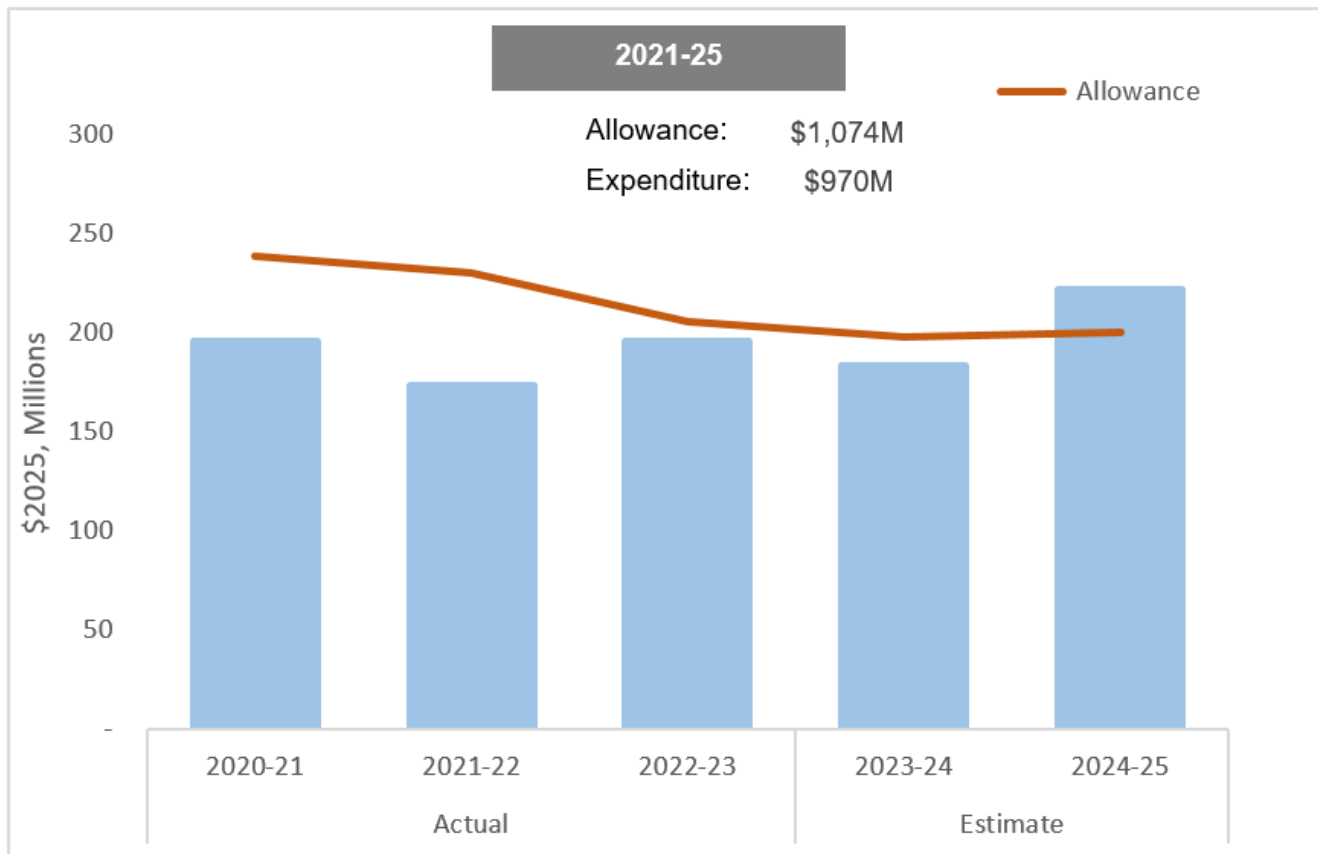
Over the 2020-25 period, capital expenditure of new connections to our network is closely aligned to our regulatory allowance. The number of household connections was 14% lower than forecast. This was partially offset by medium-density and high-rise dwelling connections, which are 34% higher than forecast.

Like most businesses, we experienced the impact of the slow-down in economic activity due to legislated restrictions imposed as the result of COVID. The impacts of COVID, which were most pronounced over 2020-22, included:

- Slower than anticipated growth in our network
- Deferral of routine tasks that required a physical presence at sites with other employees and/or customers which were not possible, such as meter replacements
- Delayed corporate investment due to the deferral of planned information system replacements and reprioritisation of remote working capabilities
- Staff isolating when testing positive to COVID
- Challenges in sourcing some materials as a consequence of our suppliers being restricted in their ability to deliver goods.

These variations have had flow on effects to our capital expenditure forecast for the 2025 Plan period, including meter replacements and ICT, which we discuss later on this Chapter.

Figure 4.1: 2020-25 capital expenditure performance



## 4.3 Forecast capital expenditure

### 4.3.1 Connecting customers to our network

Capital expenditure on new connections typically includes investment in new gas mains along streets, services to homes and businesses, and meters to establish the physical connection of new gas users to the network.

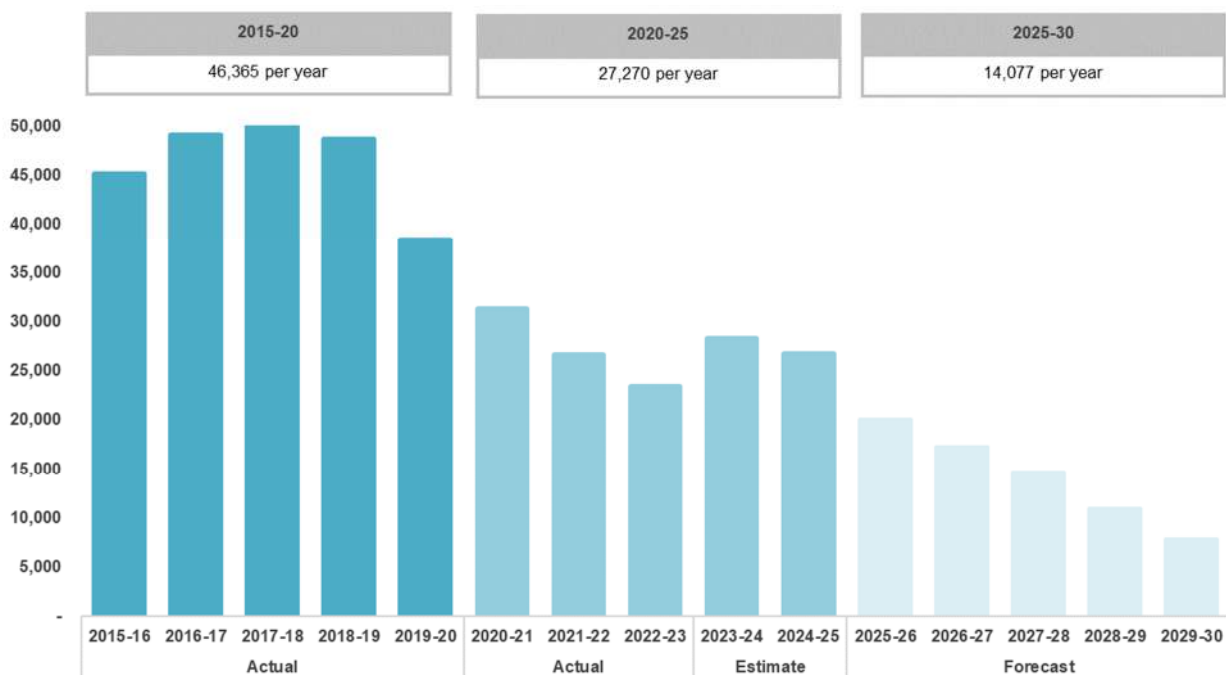
Over the past decade, our network has undergone unprecedented growth, and connections capital expenditure has made up the largest part of our capital program. We connected an average of over 46,000 new customers per year over the 2015-20 period, and over 27,000 new customers per year over the current period. The growth in our network has benefitted all of our customers, as an increasing customer base has meant we have been able to spread our largely fixed costs over more customers, resulting in lower network bills. It has also meant that people living in new homes can enjoy the benefits of gas.

Our connections capital program is a customer-initiated program. As long as the regulatory framework imposes obligations on us to connect new customers to our network, we will continue to incur expenditure on new connections.

For our 2025 Plan, we engaged Core Energy & Resources (Core) to develop an independent forecast of the number of new connections. Based on its econometric model, Core has forecast fewer connections to our network over the 2025 Plan period compared to the current plan period. Core forecasts that we will connect approximately 70,000 new connections, which is lower than the 136,000 we expect to connect over the current period as shown in Figure 4.2. This reduction is driven by:

- Recent changes to building standards which encourage new households to use electric appliances, rather than gas appliances - this represents a reversal of previous standards which created incentives for new households to connect to gas.
- Bans to new gas connections that have been imposed by a number of NSW councils.
- Proposed changes to our connections policy (and our Model Standing Offer), which will require more customers to make an upfront contribution in order to connect to our network.

Figure 4.2: Historical and forecast new connection volumes



Source: 2010-11 to 2022-23: JGN RIN table 5.1.2, 2023-24 to 2029-30 CORE forecast.

Aligned with our new connections forecast, we expect connections capital expenditure will fall by 38% over the 2025 Plan period when compared to our actual and forecast investments over 2020-25. When investments to connecting renewable gas supplies are excluded the reduction is 49% over the same period. We have forecast the cost per connection using a historical, four-year average unit cost per connection (over 1 July 2019 to 30 June 2023). This is the same method we used to forecast the unit cost of connections in our 2020 Plan. Our forecast expenditure also includes connecting industrial and commercial customers that are large users of gas. We have forecast the cost of very large connection projects on a case-by-case basis, similar to how we approach a mains augmentation project. For the

remainder of the connections expenditure attributable to large industrial and commercial customers, we have used the average annual capital expenditure we incurred to connect the same type of users between 1 July 2019 to 30 June 2023.

“Subsidise connection costs for new customers to help increase new connections which in turn can help spread costs over a larger base and make it more affordable.”

**Customer Forum**

### Proposed changes to our Model Standing Offer (MSO)

The regulatory framework within which we operate is an open access regime. That means that we have obligations to connect customers wanting to access our network (provided that it is safe to do so). We are required to publish an Model Standing Offer (MSO), which sets out the terms and conditions for the establishment of basic residential connections to our gas distribution network.

If a customer decides that they wish to connect to our network, our obligations within the National Gas Rules specify that we are only able to charge an upfront contribution if the cost to connect the customer exceeds the revenue that we will earn from them over the life of the connection.

At present, our MSO provides basic connections free of charge. Basic connections are those that satisfy specific requirements, and do not require significant augmentation of our network. Approximately 70% of new connections to our network are basic connections.

As part of our drive to reduce our capital expenditure and minimise the growth of our asset base, we engaged with our customers to understand whether they support us making changes to our MSO to require more customers to make an upfront contribution to connect to our network. Asking new customers to make an upfront payment is likely to mean that some customers choose not to connect to our network.

Our Advisory Board was supportive of us testing this initiative with our customers, noting that it would help to minimise the growth in our asset base.

We engaged a number of stakeholders as well as our Customer Forum. We heard a mixture of views—while most were in support, there was also some circumspection.

Customers from our Customer Forum supported us charging customers more to connect to our network, however they were concerned that if the charge was too high, some customers might not be able to afford to connect to our network. They understood that more customers connecting to our network means a greater customer base over which to spread the recovery of our largely fixed costs.

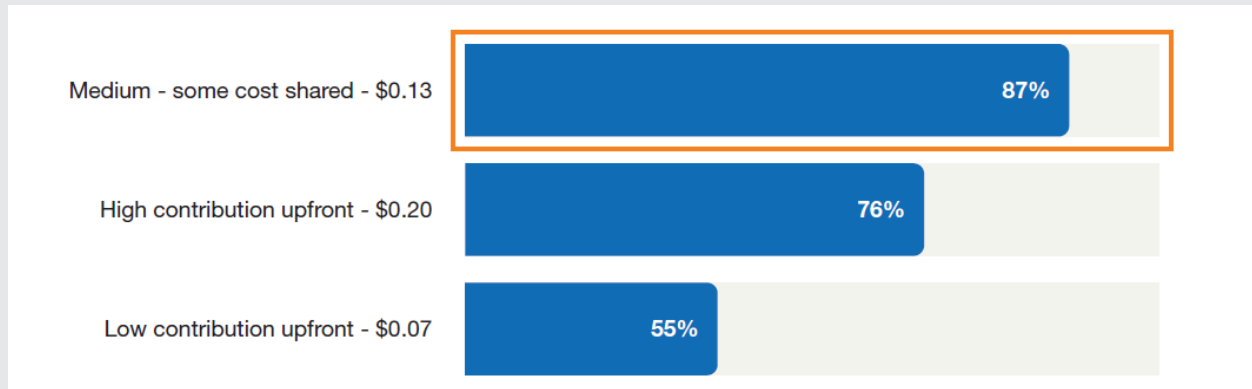
We tested three options with customers.

- Low contribution – a large portion of costs of each new connection is shared by the broader customer base
- Medium contribution – some costs are shared across customers
- High contribution – a small portion of costs of each new connection is shared by the customer base.

In the final voting (at Customer Forum 7), customers expressed a preference for the ‘medium’ option (see Figure 4.3 below).



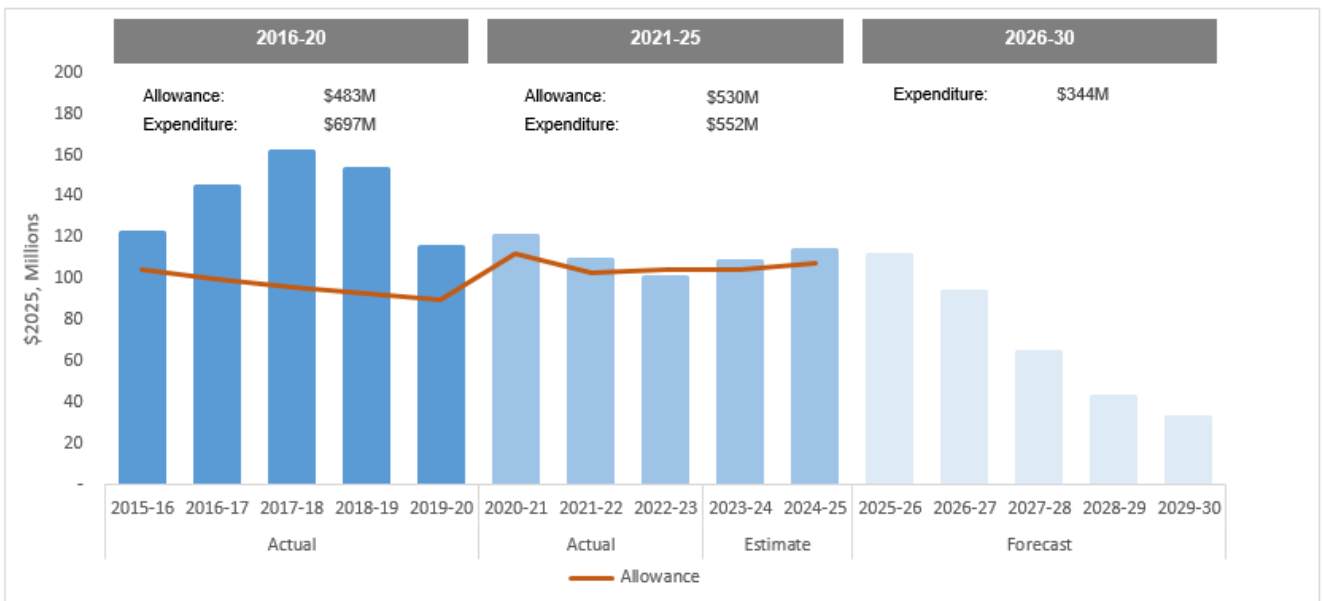
**Figure 4.3: September 2023 Customer Forum Voting: a new approach to residential connections**



In line with the feedback we have received from customers, we intend to proceed with proposing changes to our MSO. We will adopt a ‘moderate’ approach which means in some cases a proportion of the costs to connect a new customer may still be shared by the broader customer base.

The changes to our MSO have been factored into our forecast of new customer numbers. Even with the changes to our MSO, it is likely that some customers will still qualify for a free connection (in accordance with our obligations in the NGR).

**Figure 4.4: Connections capital expenditure**



**Investing to connect renewable gas suppliers to our network**

The connection capital expenditure shown in Figure 4.4 also includes \$74M for investments to connect renewable gas suppliers to our network.

Renewable gases are carbon neutral, meaning that they do not produce any additional emissions when they are burnt. In the context of gas networks, renewable gases typically refer to:

- **Biomethane** – gas that is derived from plant and animal by-products, agriculture, farming, forestry and human waste. Methane is captured, optimised and re-used, instead of being naturally released into the atmosphere from its original waste source, so there are no additional emissions in the production process. Biomethane is interchangeable with natural gas, and does not require significant changes to gas infrastructure or replacement of customer appliances.

- **Renewable hydrogen** – gas produced by separating hydrogen from water which is powered by electricity from renewable sources. When burnt, hydrogen produces no carbon emissions.

Renewable gases can displace natural gas when injected into the gas network, resulting in a reduction in overall carbon emissions across the supply chain. An alternative source of gas into the system can also enhance the gas network’s resilience against potential gas supply shortages, ensuring a reliable supply. The Australian Energy Market Operator (AEMO) forecasts a risk of supply shortfalls in the near term—adding biomethane to our network could help alleviate this concern. While renewable gases are still in their infancy in Australia, other countries are already making significant investments in renewable gases for use within gas networks. For example, biomethane is used widely in many countries, particularly in Europe. In Denmark, biomethane supplied more than 22% of gas demand in 2021, and is projected to increase to more than 70% by 2030.<sup>10</sup>

Recognising the potential of renewable gases to help contribute to lowering Australia’s greenhouse emissions, policymakers have made a number of important changes to the regulatory framework in recent months to accommodate the introduction of renewable gas into gas networks. These include:

- The introduction of a new **emissions reduction objective within the National Gas Objective** to recognise that the long term interest of consumers now extends to the achievement of Commonwealth, State and Territory targets for reducing Australian’s greenhouse gas emissions, or that are likely to contribute to reducing Australia’s greenhouse gas emissions.
- Changes to the regulatory framework to **recognise biomethane and hydrogen blends**. By early-mid 2024, these new measures will take effect.

Jemena has also made investments to support the development of the renewable gas industry, and renewable gas is already being distributed to customers across our NSW gas distribution network.

### Interconnection of the Malabar Biomethane Injection Plant into JGN’s network

The Malabar Biomethane Injection Plant is the first of its kind in Australia. In partnership with Sydney Water, the Malabar Biomethane Facility upgrades biogas produced from organic waste at the Malabar Water Resource Recovery Facility so that it is suitable for injection into JGN’s gas network. The Malabar Biomethane Facility project is jointly funded by Jemena Malabar Pipeline Pty Ltd (JMP) and the Australian Renewable Energy Agency (ARENA) which is contributing up to \$5.9M in grant funding. The facility has an initial capacity of 95 terajoules (TJ) of renewable gas per annum. This is about equivalent to the average annual gas usage of 6,300 NSW homes.

During the current plan period, JGN entered into an interconnection agreement with JMP to enable this renewable gas to be injected into the network.

### Western Sydney Green Hydrogen Hub

The Western Sydney Green Hydrogen Hub is a \$15M project and renewable gas trial, co-funded by JGN and ARENA. The Western Sydney Green Hydrogen Hub demonstrates the effectiveness of hydrogen in helping to achieve emissions reduction targets in NSW.

Hydrogen is produced by a 500kW on-site electrolyser, which is powered by the electricity network. Once injected into the existing gas network, and blended with natural gas, the hydrogen can be used by homes and businesses in the surrounding areas of Western Sydney.

This trial will provide important information on the safety and reliability of Hydrogen blends in gas networks, which was identified by the Customer Forum (recommendation 2) as an important priority. In addition, Jemena participates in several industry working groups that are focussed on developing industry standards for the use of Hydrogen within gas networks. This includes industry led research forums reviewing the safety and integrity of existing and new gas pipeline infrastructure for the transport of renewable gases.

<sup>10</sup> [CE Delft, Biomethane: bridging for cooperation between Denmark and the Netherlands, March 2022](#)

While we expect many household customers to electrify their energy loads over time, some customers will be unable to substitute gas for electricity. This includes large industrial and commercial customers that use gas as a feedstock to their processes, or who require a very high heating load which electricity cannot provide. It also includes some residential customers where the higher upfront cost of electrification may pose particular challenges, for example customers experiencing vulnerability or living in rented homes. There may also be physical constraints that make it hard to transition away from gas, including in high rise buildings that do not have sufficient space to accommodate electric heat pumps. As our energy system decarbonises, these customers will need to find alternative sources of energy. In addition, some customers that enjoy the amenity of gas may choose to remain connected to our network.

Renewable gases can play an important role in these situations by providing residential and commercial customers with a cost-effective decarbonisation solution, in addition to electrification, while maintaining energy choice.

Biomethane is a cost-effective way to reduce carbon emissions, ready for use now and is capable of helping NSW reach its net zero emissions goal. As biomethane is a renewable form of methane, there is no need to modify our network, customer homes or industrial processes.

Whilst hydrogen is not yet commercially competitive, significant investments are currently being made in export scale projects, hydrogen technology, green manufacturing, and transport solutions that have the potential to increase its competitiveness, and enable it to become a viable renewable gas option in the future.

A 2021 report from ARENA<sup>11</sup> notes that NSW could potentially generate 553 PJ of biomethane annually, mostly from organic wastes. This amount is far greater than the energy needs of our customers and could replace natural gas. Ultimately though, the feasibility of using this resource depends on factors like overall cost and other potential uses for biomethane, such as energy production.

Recognising the potential for biomethane to displace natural gas in our network, we have been approached by numerous parties that are currently planning to develop and construct biomethane production facilities at various locations across our NSW distribution network. The recent changes to the regulatory framework that will take effect from early 2024 means that we must allow these facilities to connect into our

network provided that it is technically feasible and safe to do so.

In some instances, we will need to make investments in our network to accommodate the interconnection of these new facilities. This investment is required to extend our network in some areas, so that it is economically feasible for these facilities to connect into our network. If we don't make these investments, these parties are unlikely to connect to our network, and will find alternative uses for the biomethane that they produce. This would be a missed opportunity, as this renewable gas would not be made available to our customers.

To understand the economic feasibility of our investments, we engaged Frontier Economics to assist in conducting a cost benefit analysis (CBA) on the proposed renewable gas connection projects. The CBA analysis for each project was primarily guided by the National Gas Rules which includes the requirement that such investments have a positive overall economic value. The analysis also considered the economic, social and environmental values that contribute to the environmental benefits of avoiding greenhouse gas emissions costs for the broader Australian community, as required through the final National Gas Amendment Rule change.<sup>12</sup>

The CBA modelling calculated the benefits by determining the incremental changes in economic, social, and environmental costs for each option compared to the base case. Following best practice CBA guidelines, quantifiable benefits that could be reasonably measured were included in the Net Present Value (NPV), while impacts that couldn't be quantified were assessed qualitatively. We also addressed the risk and uncertainty for key CBA assumptions by conducting sensitivity analysis, ensuring a robust economic assessment.

The CBA assessments identified several benefits in enabling renewable gas connections. They offer direct advantage for gas customers by helping them achieve emission reduction targets without needing to switch appliances. This not only supports environmental goals but also facilitates choice for customers. Also, renewable gas connections can make the gas supply system more resilient, addressing potential shortfalls and ensuring a reliable energy source. There are also benefits in terms of avoidable costs on the electricity infrastructure network when customers remain on gas.

<sup>11</sup> <https://arena.gov.au/assets/2021/11/australia-bioenergy-roadmap-report.pdf>

<sup>12</sup> On 1 February 2024, the Australian Energy Market Commission finalised new gas, electricity and retail rules to bring them in line with updated national energy objectives. The updated rules now reflect considerations for reducing Australia's greenhouse gas emissions.

Overall, the CBA for each project demonstrates a positive NPV and highlights the economic viability and broader advantages of our renewable gas projects.

### Considering customer views on the energy transition and the future of gas

Our Customer Forum and Key Voices were very supportive of us investing in renewable gas connections. The Customer Forum highlighted biomethane as a priority and advocated for a renewable gas strategy. Biomethane, with its immediate availability and compatibility with existing infrastructure, was seen as a fair solution for current and future customers, ensuring the sustainability of the gas network. Notably, 90% of customers expressed support for adopting renewable gases, particularly biomethane.

Small businesses, heavily reliant on gas as a fuel source, showed significant interest in renewable gases, with 50% of participants voting to expedite its adoption. Retailers were generally supportive, seeing

renewable gas as a choice for customers and recognising the need for alternative gas sources for large industrial customers with high-heat processes.

Overall, our customers were overwhelmingly supportive of the inclusion of renewable gases into the network. They see renewable gases as offering choice for customers who do not have the flexibility to electrify due to practical, technical or affordability reasons.

In line with customer expectations that we take a moderate approach to connecting renewable gas – with a focus on biomethane, which will allow flexibility in energy sources and avoid unnecessary network redundancies – we have included nine renewable projects in our Draft 2025 Plan. These projects are located in regional and metropolitan areas and involve the conversion of biogas to biomethane from multiple biowaste sources including agricultural and wastewater waste and landfill sites. We are in active discussions with the owners of these facilities, as we work towards connecting them to our network within the 2025-30 period. Three of the renewable connection projects are detailed below.

#### **Biomethane injection plant, Regional New South Wales**

We are working collaboratively to connect a biomethane plant to our network in an area of NSW known for its established crops, including oranges, prunes, rice, wheat, cotton and walnuts, grapes, and wine. This dynamic range of food production provides vast quantities of biowaste which makes it ideal for supporting the supply of biomethane from crop residues back into our network for local industry and community use.

#### **Biomethane injection plant, Metropolitan Sydney**

With this landfill site along one of Sydney’s key growth corridors, the area produces biomethane and is close to our NSW distribution network. Biomethane will be injected back into the network from this location to service the surrounding area, which, in the future, will include hotels and other businesses and will supply a new major transport hub currently in development in addition to the greater Sydney area.

#### **Biomethane injection plant, Metropolitan Sydney**

An established landfill site located on the edge of Metropolitan Sydney already produces biomethane to power on-site generators. It is located in close proximity to our network. Biomethane will be injected back into the network to service surrounding homes and businesses.



### 4.3.2 Ensuring our meters are accurate

An essential part of the service we provide is metering each customers' gas consumption to enable retailers to charge customers accurately for their gas usage. As meters age, the internal components of meters wear out and become inaccurate, or simply stop working. Our metering program aims to maintain the performance of our fleet of gas meters to ensure we:

- Replace meters when they are defective.
- Replace meters when they do not measure gas usage accurately.
- Replace meters that pose a safety risk.
- Provide actual meter reads more frequently.
- Accurately bill customers to ensure network and gas usage charges are fair.

We have continued to see remarkable performance of our residential gas meters. Although only designed to last 15 years, we have been able to extend the life of several meter families to 20 years, and then again to 25 years. In some cases, we have been able to extend the life of our meters to 30 years. This has allowed us to lower our spend below what we have forecast over the last 15 years.

Our Draft 2025 Plan takes into account the best information we have on the current performance of our gas and hot water meters. We use this information to forecast the likelihood that a meter will fail, become inaccurate or can continue to be used. While we have been able to extend the life of many of our gas meters they eventually wear out and need to be replaced. In the 2025-30 period we are expecting the total cost to increase as we replace more meters as a consequence of our meter fleet ageing and more meters becoming inaccurate.

For the 2025 Plan period, we have updated the meter replacement forecasting methodology we adopted for

the 2020-25 Plan period. This methodology predicts the replacement of meters based on their capability to measure gas accurately as per Australian Standards, or when approaching the end of their expected lifespan. Our forecasting for replacement costs uses an average of actual unit meter costs from the past four years<sup>13</sup>. We have calculated the average over four years to account for the years where the average cost of replacing meters is lower (or higher) than the annual trend. It is important that the average unit rate incorporates actual low and high costs to provide a more accurate unit rate assumption.

During the current period, we had expected to replace our 20-25 year old meters as testing results at the time showed that these meters did not measure gas consumption accurately. Updated testing results since then showed that working accuracy of these meters was within the required standards meaning we could work these assets harder. It would not be prudent to replace functioning meters.

As a result of not replacing meters that have passed metering tests, many of our meters will become 25 to 35 years old during the 2025 Plan period. We do not expect that these meters will accurately measure gas usage for much longer and current meter testing regimes are limited for meters at this age.

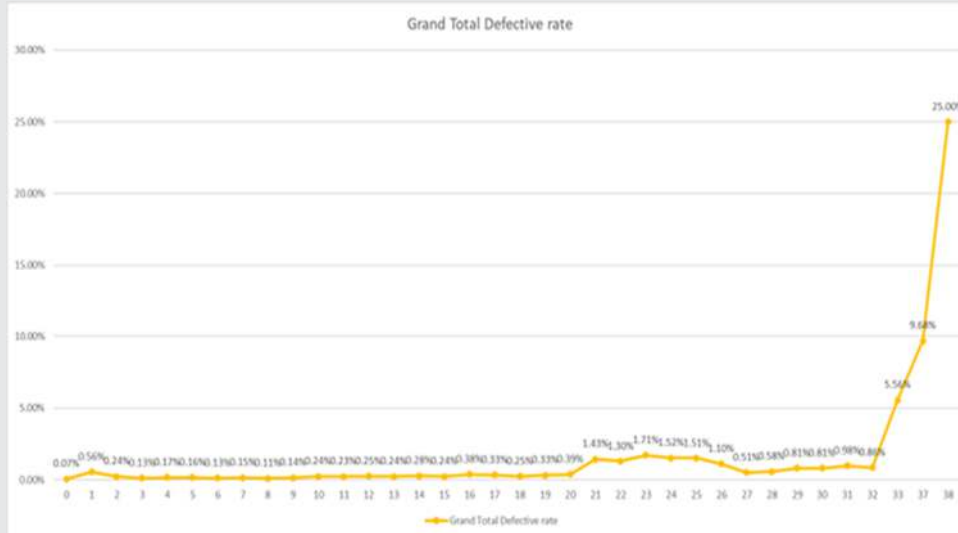
Even if these meters continued to measure accurately while they remain in service at 25-35 years old, there is a high probability that meters in this age group will fail and need to be replaced. We have adjusted our meter replacement forecast methodology accordingly to include the proactive replacement of meters that are forecast to be defective, experience poor measurement accuracy or pose a safety risk as a consequence of their age.

<sup>13</sup> The average has been applied for the regulatory years 2019-20 to 2022-23. Changes to our delivery model were implemented in 2019-20 so our financial data prior to this is not comparable and should not be included in the average without normalisation to the data.

Figure 4.5: Accuracy of our meter fleet

### Accuracy of our meter fleet

Our latest meter test results show that the majority of our meters remain accurate up to 25-30 years of age. Post the age of 31 our meters start to rapidly decline in terms of accuracy, highlighting the importance to replace meters at the 35-year mark.

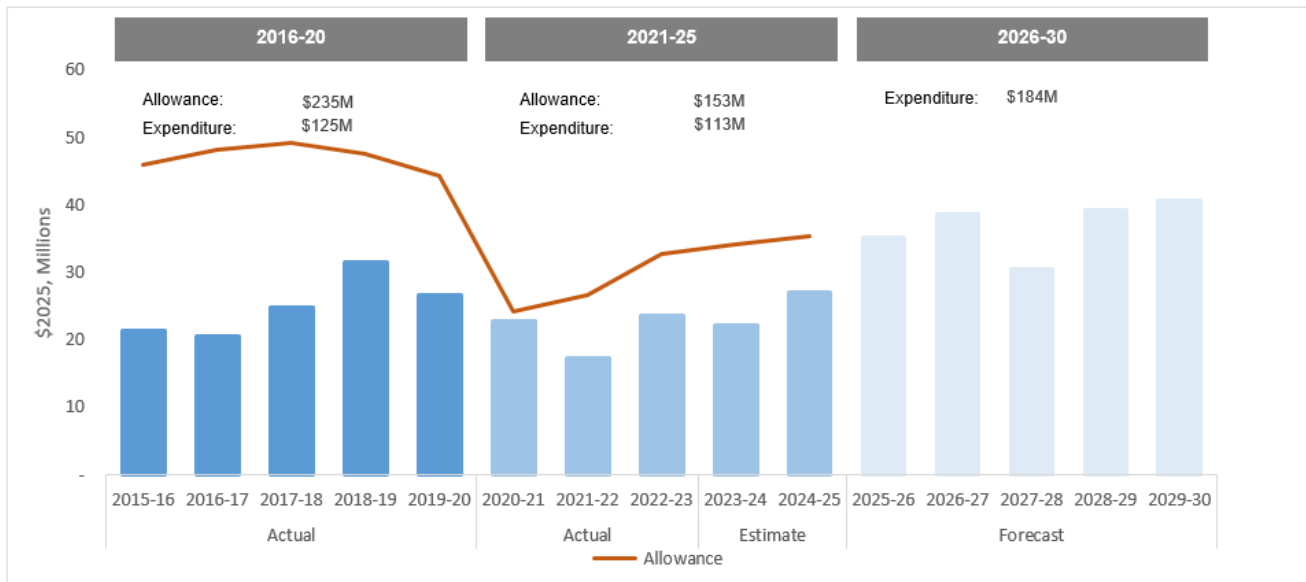


Test data for meters aged 25 and above is limited, as we are encountering meters of this age for the first time. Although it is possible that these meters might continue to perform accurately, the likelihood of meter failure within this age group is high as demonstrated by the test results. To manage meter defects and inaccuracies - and to mitigate safety risks - we have revised our meter replacement forecast methodology. This revised approach includes the proactive replacement of meters, a shift from our usual practice of only replacing meters when they become defective. A proactive approach to meter replacements for the Draft 2025 Plan period enables an optimised outcome supported through coordinated planning which in turn ensures efficient replacement costs and avoids prolonged safety risks.

Figure 4.6 shows the proposed capital expenditure on meters which is forecast to increase over the 2025 Draft Plan period to account for the adjustment to our

meter replacement forecast methodology which requires an increase in the number of meters we must replace.

Figure 4.6: Meter replacement Capital Expenditure



## Moving towards digital meters

Our meter replacement program also includes replacing some mechanical meters with digital meters. Digital meters address some common challenges faced by our customers, such as missed meter readings which can result in ‘bill shock’. On numerous occasions throughout our engagement with customers and retailers, we heard that estimated meter reads are an ongoing source of frustration, particularly when customers receive repeated estimated meter reads.

While digital meters are more expensive than traditional ones, replacing the most inaccessible meters with digital meters will allow us to provide actual meter reads in properties where we have had to frequently estimate them in the past. These meters have been determined to be inaccessible when we have actually attempted to access the customers’ meter on several occasions but we have been unable to gain access for many reasons, such as a locked gate, the meter being located under a kitchen sink, or our technician has made an assessment of an unsafe working condition.

There are benefits to retailers as well, such as the reduced need for the retailer to request special meter reads, and the avoidance of wasted meter readings (such as when a gas meter is inside the residence of a customer, and the meter reader is unable to access the customer’s premises).

Recognising that digital meters are more expensive than traditional meters, we engaged with our customers and retailers to test their support for digital meters. We presented a number of investment options, all of which could address metering challenges faced by us and our customers. These options work on a cumulative basis as follows:

- Option 1: Do nothing (i.e. do not install digital meters)
- Option 2: Replace 8,000 aged and defective meters in our network that are considered chronic to access and urgently require replacement.

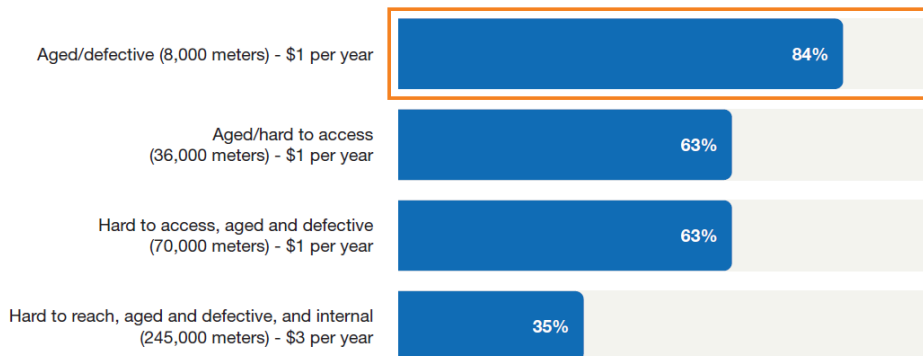
- Option 3: Replace 36,000 meters – which includes the 8,000 above – that are considered hard-to-access meters located in internal and external sites like secure high-rise apartment buildings or behind a properties locked gate
- Option 4: Replace 70,000 meters to address hard to access, aged and defective meters but expand the number of sites from 36,000 to include external properties with hard-to-access meters (including properties with dangerous dogs or overgrown vegetation)
- Option 5: Replacing all hard-to-reach, aged and defective meters but include all meter replacements over the Draft 2025 Plan period which is forecast to be 245,000 digital meters.

When the Customer Forum was asked to provide preliminary preferences on the above options, 90% of participants were supportive of the rollout of digital meters although there were differing views on the number of digital meters we should install.

Following a second round of Customer Forum deliberations - when all of the initiatives were considered as a total package - 84% of participants voted for 8,000 meters to be replaced over the draft plan period. Deliberating on the initiatives as a total package, Customer Forum participants considered a range of trade-off decisions which revealed their preferences in terms of how we should balance our investments for the 2025 Plan period. For example, customers suggested we redirect funds saved from a lower digital metering investment option towards renewable gas. Figure 4.7 provides more information showing Customer Forum participants preferences for digital metering.

Based on customer feedback, we are proposing to replace around 8,000 meters with a digital meter over the 2025 Plan period at a total cost of \$12.6M. The total cost includes digital transformation elements required to ensure that data from digital meters provides us with customer usage information to assist retailers in their billing processes.

**Figure 4.7: September 2023 Customer Forum voting on digital metering<sup>14</sup>**



<sup>14</sup> The ‘Do Nothing’ option was not considered in the second round of Customer Forum deliberations as 90% of participants supported digital metering from the first round of deliberations.

### 4.3.3 Replacing deteriorated mains

Much of our network was upgraded over the 1990s and is mostly made up of modern piping materials, nylon and polyethylene, which has enabled us to avoid larger step ups in mains replacement programs over recent planning periods. However, some pockets of our gas network that were built in the 1950s and 1960s have cast iron, unprotected steel or older plastic mains that continue to deteriorate.

As our network is underground it is not possible to perfectly monitor the condition of our assets. We make assessments based on the information from publicly reported leaks, condition assessments and, where it is possible, leak surveys. These assessments inform the development of our mains replacement program which is based on a risk-based approach which involves balancing the cost of each asset replacement against a number of factors including customer benefits, location and size of assets, and so forth to prioritise and then rank which mains we replace and when.

Replacing deteriorating mains provides a number of benefits including:

- Avoiding cost increases from rising repair costs.
- Lowering safety risks to the general public (from leaks) and to employees/contractors who work on these mains.
- Improving supply reliability.
- Improving the capacity of the network. Some customers cannot use appliances such as instantaneous hot water. Replacing gas mains in these areas can increase capacity for these appliances to be used.

During the Customer Forum deliberations, we asked participants for their views on how we should approach asset management in an uncertain future, with a focus on our mains replacement program. We provided three options and highlighted the bill impact for both the short term (2025-2030) and long term (2031 and beyond) for each option. The options were also overlaid with the Expert Panel plausible future scenarios to give customers an indication of the trade-off decisions we can consider in terms of managing the challenges presented by the energy transition.

The options considered by the Customer Forum were:

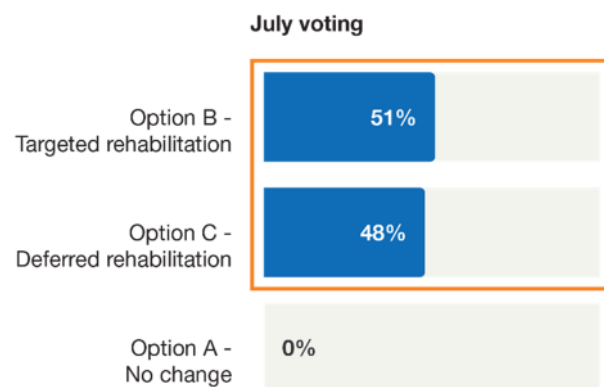
- Option A: Maintain our current asset rehabilitation program.

- Option B: Use digital technologies to identify gas leaks, which would enable us to take a more targeted approach to the mains rehabilitation program, reducing capital expenditure over the next five years, and over the long term, which would mean working our assets harder with additional maintenance.
- Option C: Defer mains rehabilitation by \$50M over the 2025 Plan period, allowing for expected additional maintenance cost, then reinstating the rehabilitation program for the following planning period.

It was emphasised to customers that all options would involve repairing assets when required to ensure that safety was not compromised.

When asked to cast their first round of votes on their preferred option, Customer Forum participants were split between options B and C as depicted in Figure 4.8 with no participants voting for Option A. Participants appreciated the challenges we faced in the context of an uncertain future and that doing nothing was not an option they were willing to trade-off. Although customers were split between Option B and C, participants felt that either option was fair for customers as safety and reliability would be maintained with minimal impact to the long term interest of customers.

**Figure 4.8: Voting from July 2023 on how JGN manages assets**



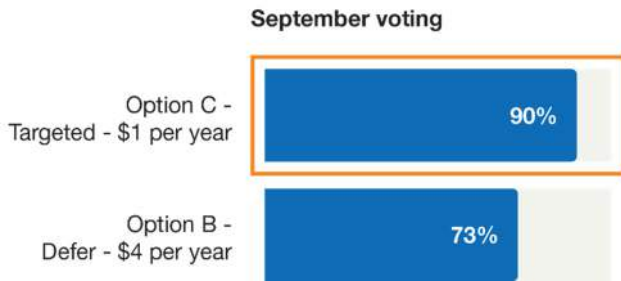
Following a second round of Customer Forum deliberations, when customers reconsidered the asset rehabilitation options against the full suite of initiatives, 90% of customers voted in favour of a targeted approach to asset rehabilitation<sup>15</sup> (see Figure 4.9). The majority of Customer Forum participants supported option C as it falls into the ‘middle ground’

<sup>15</sup> Voting percentages do not equal 100%, as customers voted on each option individually using the L-Scale (Love, like, live with, lament and loathe).



that supports the ongoing investment to ensure a reliable gas network while avoiding excessive works into the future.

**Figure 4.9: Voting from Customer Forum in September 2023 on asset management**



In line with customer feedback, we propose to take a more targeted approach to our gas mains replacement program. By using digital tools to better understand the condition of our assets we can prioritise which assets need replacement and which assets we can work harder through more maintenance. This approach reduces the increase in main replacements expenditure for the 2025 Plan period, shown in Figure 4.10, without compromising on safety and network reliability.

For the 2025 Plan period we are planning to replace 132 km of gas mains <sup>16</sup> which is higher than the current period where we are expecting to replace 59km of mains which includes one major project that involves replacing 45 km of gas mains at Matraville. The increase in capital expenditure is focussed on replacing gas mains that were built in the 1950s and 1960s and their performance has deteriorated to a

level where the costs and risks from continuing to use the asset exceeds the replacement costs.

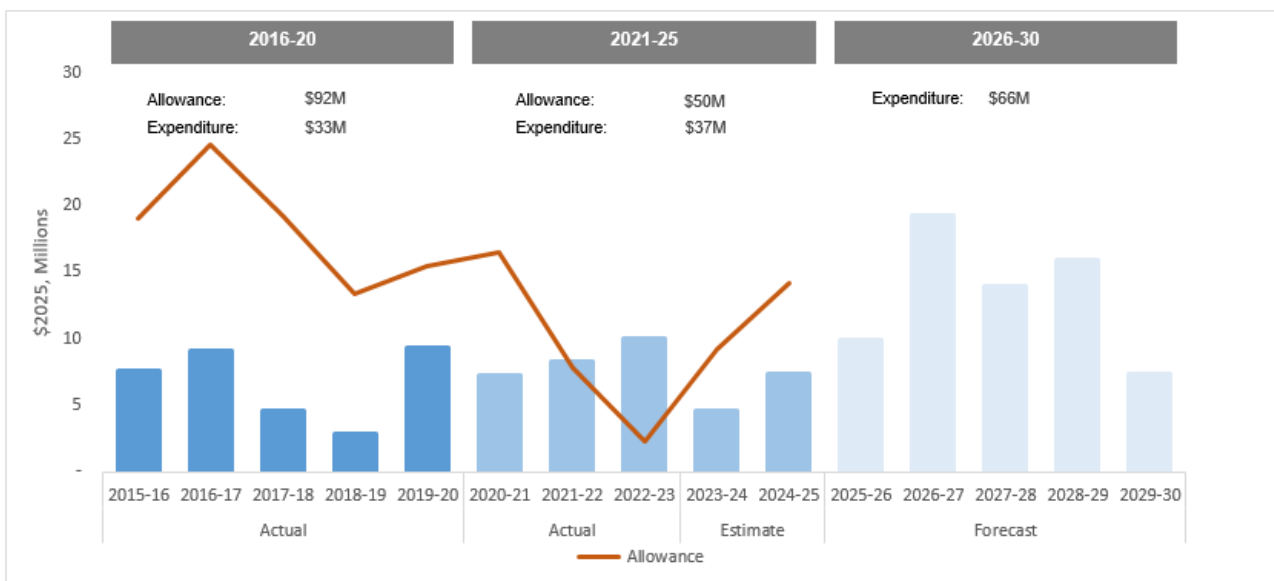
The mains rehabilitation program for the 2025 Plan period will focus on four locations - compared to one location in the current period, and will account for 116 km of the 132 km mains to be replaced. Through our assessments we identified the following areas requiring significant mains replacement projects:

1. Newcastle (37 km)
2. Bankstown/Chullora/Greenacre (23 km)
3. Haberfield/Strathfield/Campsie (32 km)
4. Kurri Kurri (24 km).

Aligning to customer expectations that we take a targeted approach to our gas mains rehabilitation program, each of the above projects have been re-scoped to ensure we will only renew parts of the network where it is critical to do so. We have been able to re-scope the renewals program in a more targeted manner by collecting better leakage location data that was not available when developing the 2020 Plan.

By adopting a targeted approach to asset rehabilitation we have reduced the proposed increase in capital expenditure by around \$300M over the regulatory period. For example, by implementing a targeted approach for the Newcastle gas main rehabilitation project, we reduced the scope of works from 136km to 37km of mains replacement. Similarly, we reduced the scope of works for the Strathfield area which enabled us to decrease the mains replacement project from 22km to 8km.

**Figure 4.10: Mains replacement capital expenditure**



<sup>16</sup> Some of these renewals projects will commence before the start of the 2025-30 AA period.

### 4.3.4 Strengthening our network

Our high pressure pipelines form the backbone of our gas network. They transport gas from transmission pipelines to pressure reducing facilities which allows the gas to be transported through lower pressure mains.

It is important that we continue to augment our network with higher-capacity pipes to manage gas demand and maintain network pressure to ensure the long term reliability and safety of our network even though we are forecasting a reduction in new customer connections in the longer term. Other drivers to our augmentation capital expenditure include:

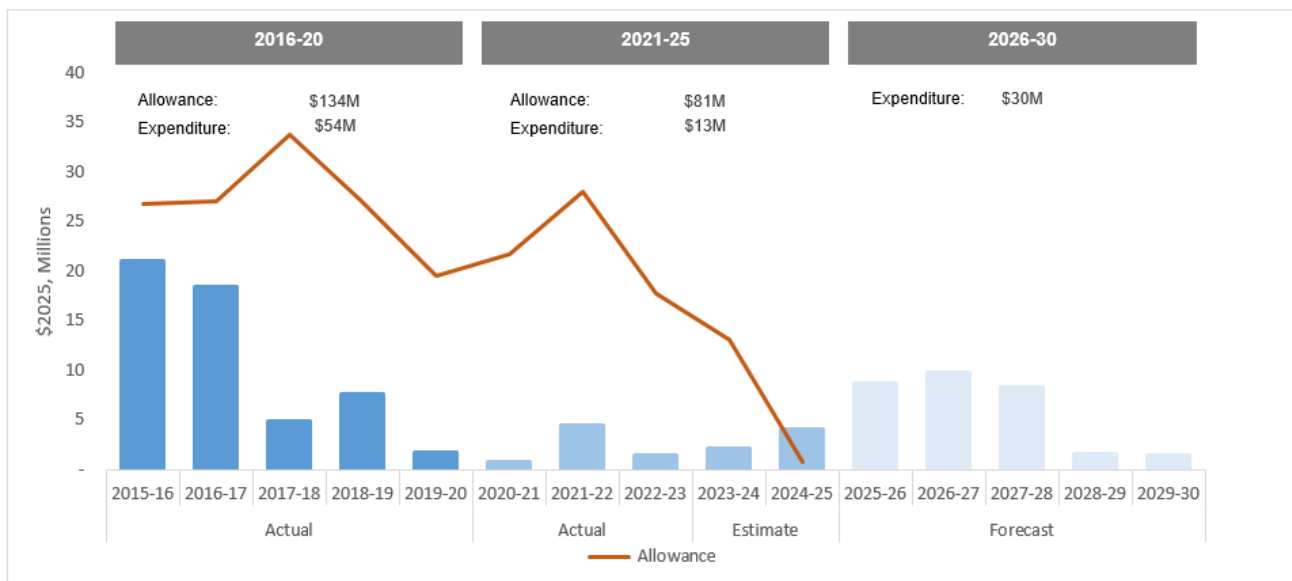
- Improving capacity in the network for existing customers to prevent poor or loss of supply.
- Ensuring compliance with our licencing obligations to facilitate the continuity of supply of gas to consumers that includes satisfying all reasonable demands.

- Minimising reputational damage and customer complaints that can arise from poor gas pressure or loss of supply.

Over the current planning period we have made relatively small investments in our facilities and pipes to upgrade capacity where needed and to improve safety and reliability. This is shown in Figure 4.11 where our current expenditure is significantly lower when compared to the 2015-20 period. For the 2025 Plan period we are proposing to increase augmentation capital expenditure but remain significantly below the longer term expenditure trend.

Our focus for the 2025 Plan period is to maintain the safety and reliability of our ageing network largely through a number of programs including the Kotara CDP project. This project is required to address reductions in network pressure during winter periods. The project will be delivered over three years and entails the installation of a 3km secondary steel main and a gas regulator to improve the capacity in the Newcastle network.

Figure 4.11: Mains augmentation Capital Expenditure



### 4.3.5 Maintaining our information technology

ICT underpins the delivery of safe, reliable and cost-effective gas services to customers and provides the essential platform which supports almost all of our operations. For example, our systems correct billing errors before they reach the customer and help us quickly respond to network incidents, allowing us to keep the supply of gas safe and reliable.

We are investing further to improve the customer experience by implementing simple, easy and flexible digital tools that enable efficient operations and improved interactions for customers.

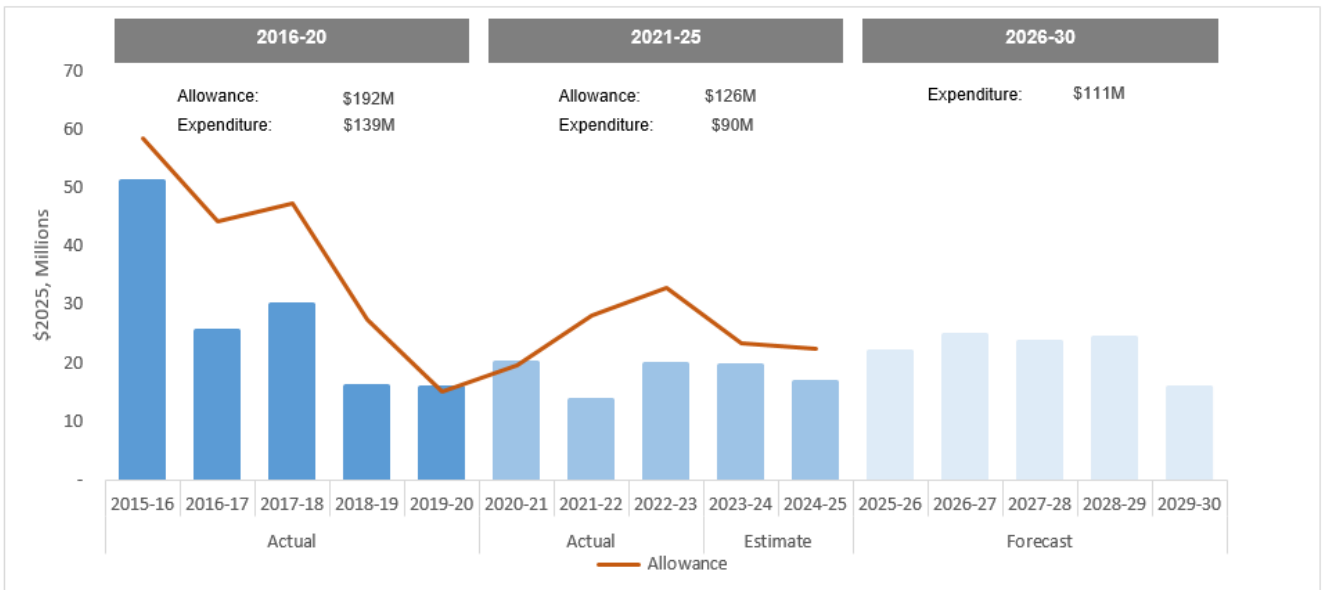
There are other major drivers that did not exist in the same magnitude five years ago. Cybersecurity requirements continue to be an emerging cost driver as we need to protect customer information and the operations of our network. Utilities are constantly targeted by cyber-criminals and we need to ensure our ICT remains ahead of the attackers. Similarly, the

Security of Critical Infrastructure (SOCI) Act<sup>17</sup> requires us to put in place certain data protection tools into our digital systems.

Additional drivers of our proposed ICT investments include enhancing analytical platforms to enable us to further optimise asset performance and investment based on evolving customer needs and demand. Another major focus area is lifecycle management of critical platforms: this aims to achieve long term operational efficiencies, minimise disruption for customers and reduce emissions.

Other drivers of our ICT capital expenditure include areas where more digital support will be required such as the digital meters as discussed in section 4.3.2 and gas leakage detection, and the need to accommodate increased analytics to support investment planning and regulatory reporting.

**Figure 4.12: ICT and telemetry capital expenditure**



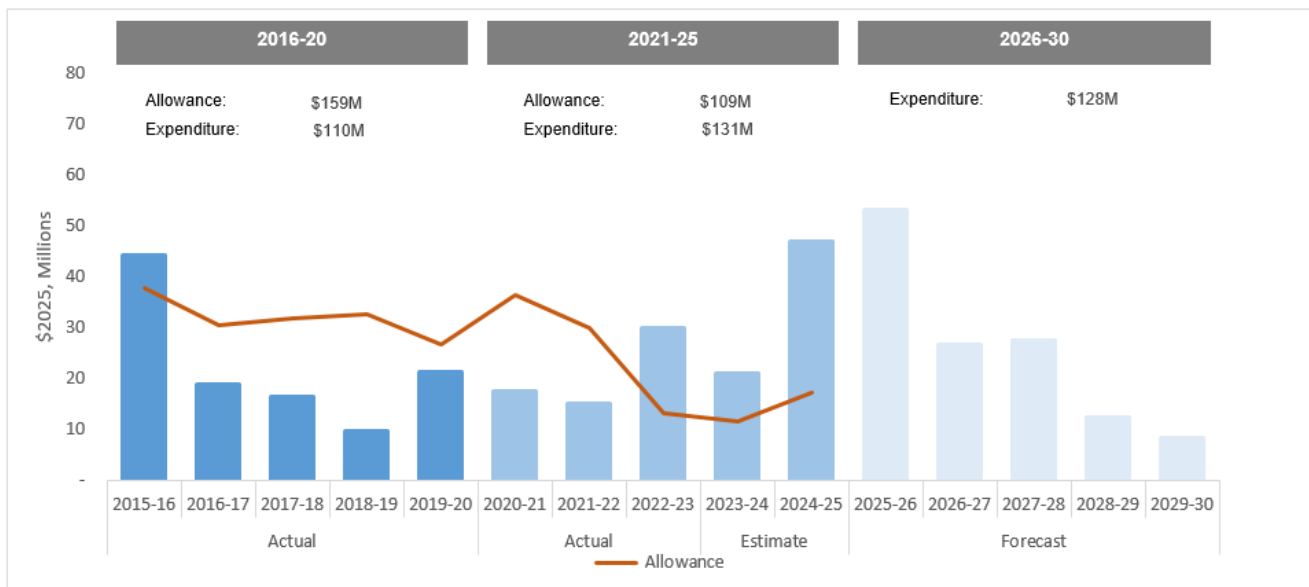
<sup>17</sup> Security of Critical Infrastructure Act 2018

### 4.3.6 Other capital expenditure – Keeping our high-pressure facilities and pipelines safe

For the 2025 Plan period, we are proposing several risk-based facility safety and compliance upgrade projects which will increase our capital expenditure in the first year followed by a return to historical trends for the remaining four years as shown in 4.13. The increase in capital expenditure is driven by:

- Ensuring compliance of electrical equipment within hazardous areas and enhancing the effectiveness of electrical earthing systems. This includes upgrading electrical equipment and instrumentation for some of our key facilities.
- Enhancing safety measures by investing in projects that aim to improve safety for both our personnel and the community by pro-actively addressing identified risks associated with earthing and electric shocks within hazardous areas.
- New projects that are designed to simplify and standardise high-pressure (HP) facilities, which in turn improves network reliability and operational efficiency.
- The modification of our pipelines to enable periodic inspections in line with industry technical standards. Intelligent pipeline inspection tools, known as ‘pigs,’ play a crucial role in assessing the condition of our pipelines from the inside which includes the construction of pigging facilities on select primary and secondary mains.
- Security upgrades in accordance with the SOCI Act requirements, which involves upgrading security measures at our facilities which includes the upgrade and/or installation of a number of physical security features including fencing and cameras to enable 24 hour monitoring of our critical sites.
- The relocation of our assets that can arise due to government directives or private landowners requesting an asset relocation to support road realignments or property development.

Figure 4.13: Other Capital Expenditure – Network





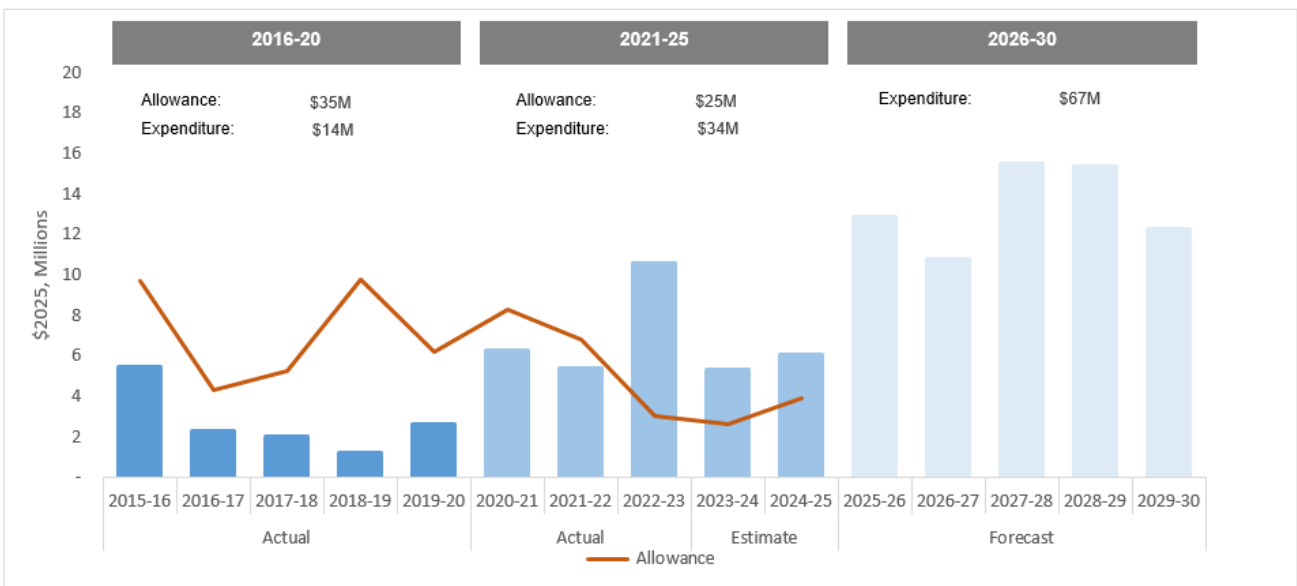
### 4.3.7 The remainder of our other capital expenditure

Our other category of capital expenditure covers the remaining parts of our investment program which are not directly attributable to the network itself but are still required to support the delivery of our daily network operations. These investments include property, fleet and mobile plant and equipment.

Property capital expenditure includes the costs of reconfiguring our corporate office to adjust for the new way we work post COVID, and depot locations, which are required to support office-based employees and field staff to carry out their day-to-day duties. Our fleet capital expenditure is for the renewal of existing vehicles that supports our employees and in-house maintenance and construction service model to carry out their duties, including the capability to respond to network incidents in a timely manner.

We are continually seeking opportunities to improve our cost and service performance to deliver better outcomes for our customers. For example, we are evolving our current delivery model to help us mitigate inflationary market conditions, improve our productivity and the way we approach project delivery. To support the delivery model, we are increasing the non-network expenditure to purchase additional vehicles – including trucks fitted with specialised equipment – and the replacement and upgrade of mobile plant and equipment, which is necessary to operate the gas network and deliver on new projects associated to mains replacement and new connections.

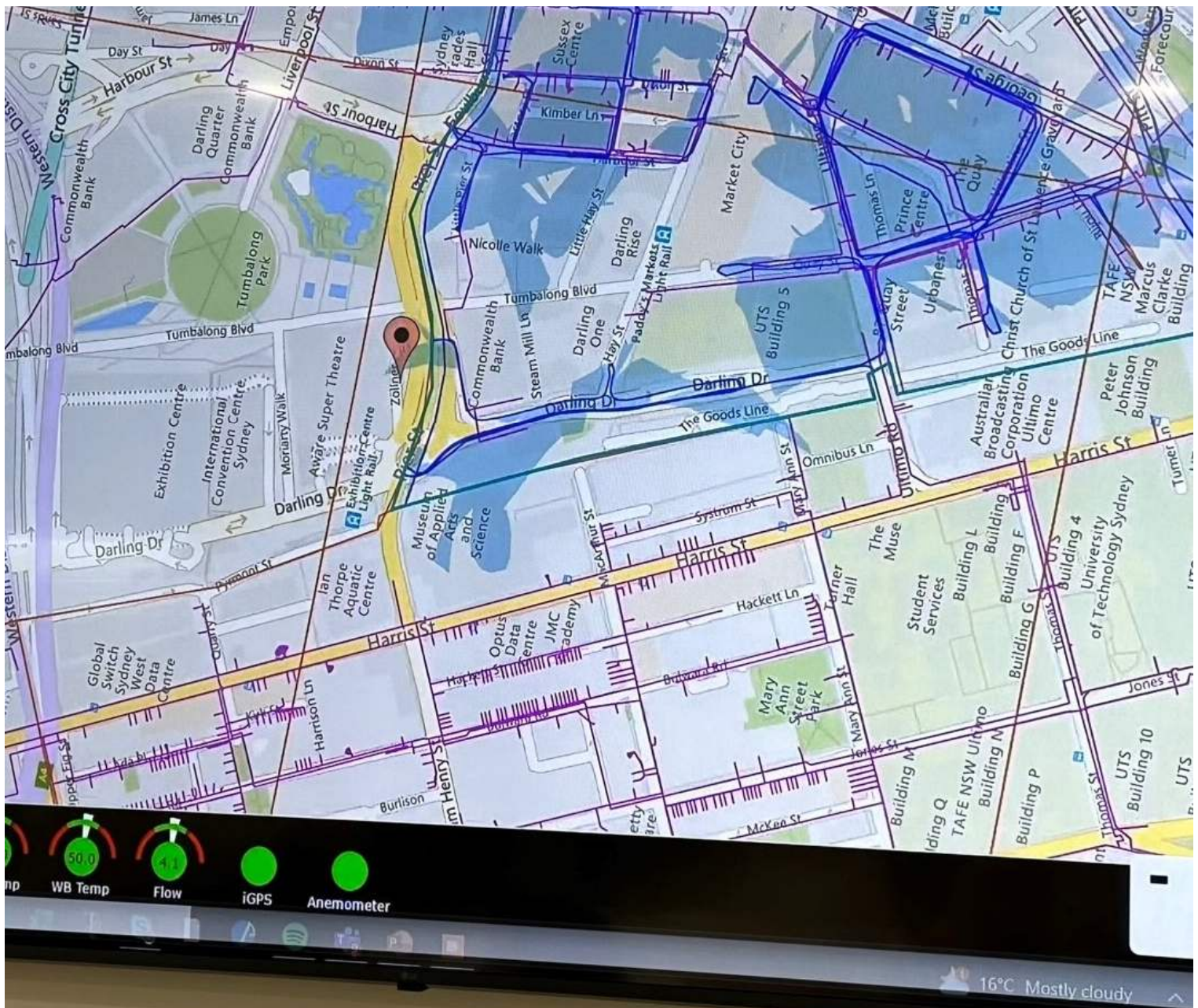
Figure 4.14: Other Capital Expenditure - Non-network excluding ICT



#### Questions for your consideration

- Overall, do you think our capex plan focuses on the right priority areas amid the energy transition challenges we face? What's missing or needs more emphasis?
- Do you think our capital investment program balances short-term and longer-term risks?
- Does our capital investment program adequately consider risks to affordability, safe & reliable service provision, and the environment?

# 5. Our operating expenditure requirement



## Highlights

- Our forecast operating expenditure for the 2025 Plan period is \$1,293M. This is 5% lower than the current operating expenditure allowance, but 12% higher than our expected actual operating expenditure for the current period.
- Primary drivers of this increase are: a rise in labour costs above inflation, costs to replenish Unaccounted for Gas, transitioning to cloud and other ICT services, investment in gas leakage detection technology, and legislative requirements concerning emissions reporting and reductions.
- Despite this increase, operating expenditure per customer is constant over the 2025 Plan period.
- Benchmarking shows our network still compares favourably to other Australian gas utilities regarding service costs and efficiency.
- We are also proposing to enhance customer support to help customers understand bills and increase involvement in third-party community support programs like Uniting Energy Assist.
- We have successfully trialled gas leakage detection technology that will enable us to shift to a more targeted approach to replacing and maintaining our mains, and support decarbonisation objectives.

## 5.1 Our operating expenditure

We incur operating expenditure by undertaking a range of activities to maintain and support our network. These activities include ongoing network maintenance, such as inspections, repairs, and emergency response for unplanned outages or incidents. We also incur operating expenditure in network planning and design, customer service, field operations, and corporate support, such as ICT.

Our operating expenditure is generally recurrent in nature, funding the regular operations required to deliver reliable network services. Table 5.1 illustrates the high level categories of our operating expenditure.

**Table 5.1: Categories of operating expenditure**

Operating expenditure categories
Repairs and maintenance
Marketing and retail incentives
Debt raising
Equity raising
Unaccounted for gas
Jurisdictional charges
Other operating expenditure



## 5.2 Overview of current period operating expenditure

Over the 2020-25 period, we expect to incur \$1,151M of operating expenditure, which is \$195M below the allowance approved by the AER. The underspend is largely driven by the following factors:

- Prior to 2021-22, JGN implemented a transformation program to simplify business processes and lower operating costs. This resulted in a sustained reduction in our operating expenditure cost base and partially offset the impact of a change in our capitalisation policy to expense all corporate overheads.
- Over the 2020-22 period, many operational activities were temporarily halted by the impact of repeated COVID lockdowns. This included meter reading and a range of inspection and maintenance activities. These activities have since returned to normal levels from 2022-23.
- During 2021 and 2022, prolonged wet weather caused by the La Nina weather event resulted in significant flooding across NSW impacting operational activities.<sup>18</sup> However, following these flooding events, spending in emergency repairs and maintenance, as a result of water entering pipelines, resulted in increased costs to undertake repairs.<sup>19</sup>

- Partially offsetting the reductions to operating expenditure, was a material increase in unaccounted for gas (UAG) replenishment costs. The increase in UAG costs was due to significant spikes in wholesale gas prices in 2021-22. Despite the significant increase in the UAG costs, we were able to operate below the operating expenditure allowance approved by the AER.

### What is unaccounted for gas (UAG)?

UAG is the difference between the measured gas entering our network and the gas delivered to customers.

Estimating UAG across a network such as JGN's is complex as it is caused by many factors, such as measurement inaccuracies, third party damage to our network, leaks and venting of gas for safety reasons.

We are responsible for purchasing the additional gas required to replace UAG. This cost forms part of our operating expenditure.

## 5.3 Our forecast operating costs

### 5.3.1 Developing our operating expenditure forecast

In developing our Draft 2025 Plan, we have forecast our operating expenditure (as shown in Table 5.2) using the AER's preferred forecast method, 'base, step, trend'. The method forecasts future operating expenditure using a 'base' year – where the operating costs are representative of the efficient costs necessary to operate and maintain the network, and regulatory obligations.

We have also used specific forecasts for items that the base year operating expenditure does not provide a reasonable basis with which to forecast future expenditure requirements. We undertook a thorough assessment to determine that our forecast operating

expenditure represents the amount that is required to meet our obligations and customers' expectations efficiently, and to promote the long term interests of our customers.

Our total forecast operating expenditure for the 2025 Plan period is \$1,293M, inclusive of debt raising costs. This is around 5% lower than the operating expenditure allowance in the current regulatory period and 12% higher compared to what we expect to incur in the current regulatory period.

<sup>18</sup> In March 2021, following months of prolonged wet weather, a series of floods affected large parts of the east coast of NSW, including Sydney. It was the most significant flood event in 60 years in parts of the state, and the Australian Government declared many parts of the east coast a natural disaster zone. This was followed by further flooding in February 2022.

<sup>19</sup> Costs to relight households were also incurred following the significant gas outage in Bathurst, when an APA pipeline delivering gas to our Bathurst network suffered damage during flooding, resulting in a loss of gas supply to the area.



**Table 5.2: Forecast operating expenditure for the 2025 Plan period**

Category	Description	Total forecast opex (\$2025 millions)
Establish efficient base year	Our proposed base year is 2023-24. We adjusted the base year by subtracting costs relating to non-recurrent events and specific forecasts.	969
Adjust base year for change in accounting treatment	We have adjusted the efficient base year costs to include Software as a Service (SaaS) implementation costs, which were treated as capital expenditure in the current period. In the next period, due to a change in the International Financial Reporting Stands (IFRS), these costs are required to be treated as operating expenditure.	11
Trend	<p>We have trended the efficient base year costs forward by applying a rate of change in operating expenditure. This includes:</p> <ul style="list-style-type: none"> <li>— Network growth (customer number and line length)</li> <li>— Real change in input costs (labour).</li> </ul> <p>We have also committed to achieving ongoing productivity improvements of 0.25% per annum, which equates to \$8M in total.</p>	29
Develop specific forecasts	<p>We have developed specific forecasts for items where base year costs are not representative of the costs we expect to incur over the 2025 Plan period. We have developed specific forecasts for:</p> <ul style="list-style-type: none"> <li>— UAG: \$206M</li> <li>— Licence fees and government levies: \$21M</li> <li>— Safeguard mechanisms costs \$5M</li> <li>— Debt raising costs \$8M.</li> </ul>	241
Forecast step changes	<p>We have proposed the following step changes:</p> <ul style="list-style-type: none"> <li>— Support for vulnerable customers \$3M</li> <li>— Leak detection technology \$18M</li> <li>— Emission reporting \$2M</li> <li>— ICT services \$20M.</li> </ul>	43
<b>Total</b>		<b>1,293</b>

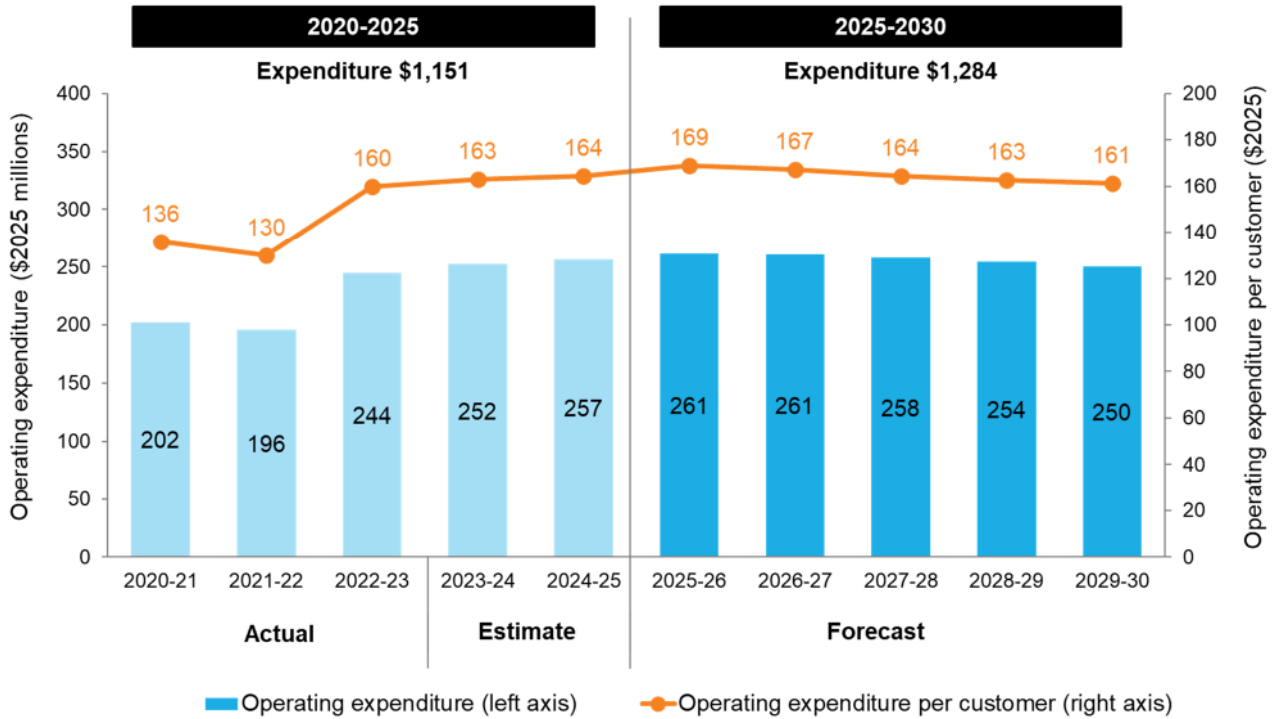
Figure 5.1 shows our historical and forecast total operating expenditure over the 2020-21 to 2029-30 period. Despite the increase in total operating expenditure over the 2025 Plan period, operating expenditure per customer is constant over the same period.

period. This is despite transferring some ICT costs from capital to operating expenditure, investments required to comply with new emissions reporting requirements, the purchase of safeguard mechanism credit units, and investing in new initiatives to improve the customer experience and support vulnerable customers.

### Operating expenditure per customer

We are committing to keeping operating expenditure per customer constant over the forthcoming 2025 Plan.

Figure 5.1: Total operating expenditure (\$2025), current period (2020-25) and forecast period (2025-30)



Note: the figures in this chart exclude debt raising costs. The relatively lower operating expenditure per customer in 2020-21 and 2021-22 is due to the halting of operational activities, such as meter inspections and some meter readings, due to COVID lockdowns.

### 5.3.2 Benchmarking shows that we are operating efficiently

When compared to other gas utilities in Australia, we have consistently benchmarked well in terms of the costs and efficiency of the services we provide. According to recent analysis by Competition Economists Group (CEG), who we engaged to benchmark our performance against our peers, we continue to benchmark well in relation to operating expenditure, capital expenditure and our total costs. Economic Insights in its report for us in 2019 also made similar conclusions.<sup>20</sup>

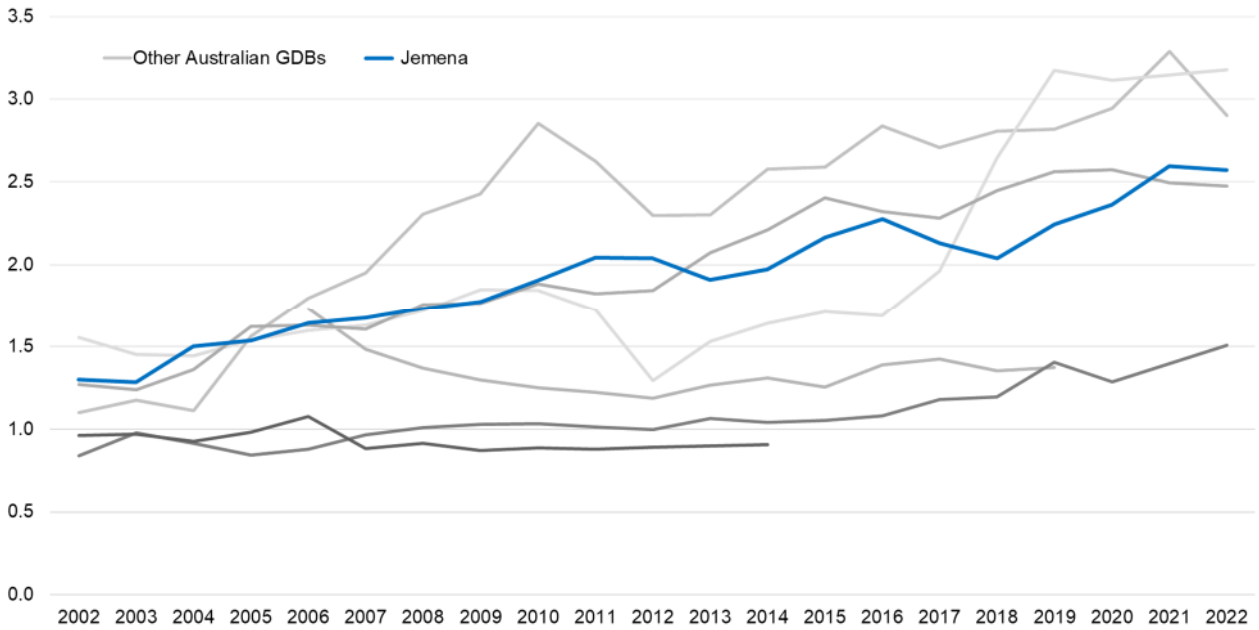
CEG has used the following two broad approaches to benchmarking operating expenditure:

- Index based method: this compares annual productivity levels of businesses’ operating and capital expenditure. This includes the use of factor productivity analysis.
- Ratio method: this measures businesses’ average operating and capital cost performance over a five year period on individual cost drivers. This includes the use of partial productivity indicators.

CEG’s analysis on partial factor productivity and partial productivity indicator shows that JGN is consistently among the top most efficient firms.

<sup>20</sup> Economic Insights, Relative efficiency and forecast productivity growth of JGN, April 2019

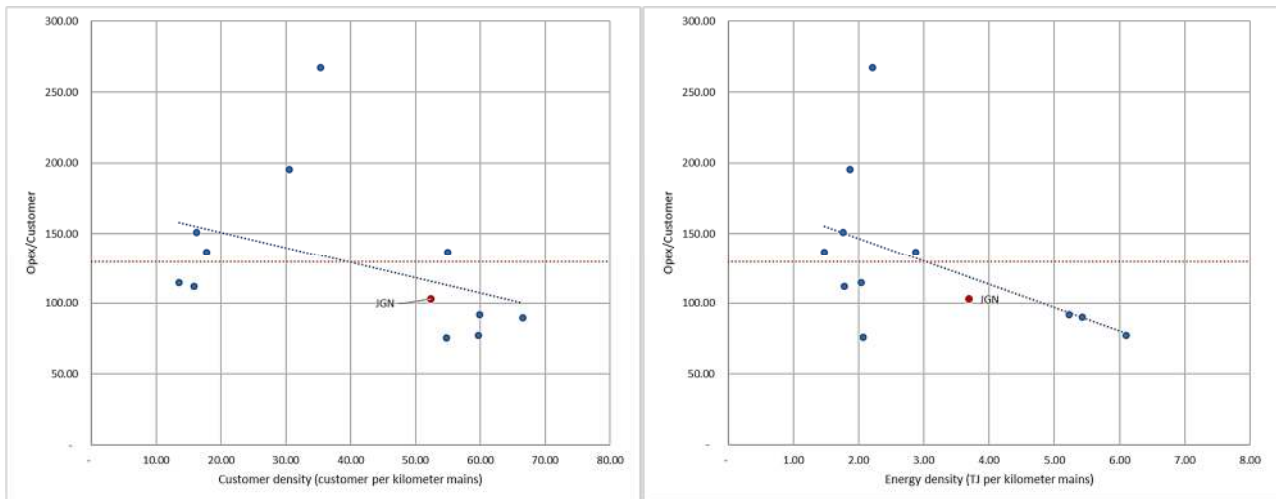
**Figure 5.2: Multilateral operating expenditure Partial Factor Productivity**



On the operating expenditure per customer metrics, JGN performs well. In Figure 5.3 the red line shows the industry average operating expenditure per customer, and the blue line shows the industry average trend in operating expenditure per customer

as density changes. The result indicates JGN's operating expenditure per customer is below the industry average conditional on customer and energy density.

**Figure 5.3: Partial Productivity Indicators – Operating expenditure per customer metrics**



### 5.3.3 Base year operating expenditure

CEG's analysis provides us with assurance that our proposed base year (2023-24) operating expenditure provides an efficient basis for setting our future operating expenditure allowance.

We are proposing to use the penultimate year in the current regulatory period, 2023-24, as the base year. We consider that the operating costs in 2023-24 best

represent the efficient costs necessary to operate and maintain the network, and meet our regulatory and legal obligations in regards to safety, reliability, security, and the environment. We consider this an efficient basis to use for setting operating expenditure allowance for the 2025 Draft Plan period based on benchmarking results and performance against our regulatory allowance.

### 5.3.4 Operating expenditure trend

Once the base year operating expenditure has been set, we trend the efficient base year costs forward by applying a rate of change in operating expenditure. This rate of change is currently based on placeholder estimates including:

- A placeholder average forecast increase in wages costs of approximately 0.6% per annum above inflation.
- A placeholder forecast increase in operating expenditure due to output changes including customer numbers and network length.

In addition, we have also incorporated an ongoing placeholder productivity target into our forecasts of 0.25% per annum. This reflects our ongoing commitment to target efficiency savings in the delivery of our services, which benefits customers through

lower bills. Accounting for these savings lowers our operating expenditure by \$7.6M over five years. We will update these placeholder forecasts with new estimates using the latest information available as part of our initial proposal in June 2024.

Base year costs are also adjusted to account for any changes in the treatment of costs. We have included a base year adjustment for accounting standard changes which require us to treat cloud computing arrangements (also known as Software as a Service (SaaS)), including associated implementation and customisation costs as operating expenditure.<sup>21</sup> These costs are treated as capital expenditure in the current period for regulatory purposes, but as a result of the change in accounting standards, they will be treated as operating expenditure from the next period.

### 5.3.5 Category specific forecasts

We have used specific forecasts for items where the base year operating expenditure does not provide a reasonable basis on which to forecast expenditure requirements over the 2025 Draft Plan period. These specific forecasts include the following:

- **Unaccounted for Gas (UAG), \$206M:** We are responsible for purchasing UAG. To incentivise us to maintain our network in a way that minimises gas losses, the AER sets an efficient benchmark for the UAG rate.
- **Purchase of Safeguard Mechanism credit units to meet Safeguard mechanism requirements, \$4.9M:** The Safeguard Mechanism is the Australian Government's policy that aims to reduce emissions for facilities by establishing a greenhouse gas emission threshold which includes JGN. To meet our threshold emission requirements, our projected cost for acquiring Safeguard Mechanism Credits, is estimated to be between \$1-2M annually. This is based on a price

per tonne for carbon offsets which we forecast to vary between \$10 to \$75 per tonne. Our tariffs will be adjusted over the 2025-30 Plan period using the tariff variation mechanism to ensure that we only recover the costs that we incur and pass on any benefits we receive through the Safeguard Mechanism Credits.

- **Licence fees and government levies, \$21.5M:** The Gas Supply Act 1996 (NSW) allows the Energy Minister to set licence fees for companies that distribute gas. These fees depend on how much the NSW government spends on overseeing each company. The Independent Pricing and Regulatory Tribunal (IPART) calculates these costs and suggests the appropriate fees to the NSW Treasurer.
- **Debt raising costs, \$8.2M:** The transaction costs required to raise debt to fund our capital investments.

<sup>21</sup> Cloud computing arrangements are ones in which a business does not have possession of the underlying software. Rather, the business accesses and uses the software on an as-needed basis – for example, over the internet.



### 5.3.6 Step change forecasts

Lastly, we account for step changes in our operating costs. Step changes are costs we incur in undertaking new activities or meeting new obligations that are not accounted for within our ‘base year’ costs.

The proposed step changes reflect the outcome of an extensive review of our operating expenditure

requirements for the next regulatory period, informed by customer priorities and our regulatory obligations associated with emissions reporting and the requirements of the Safeguard Mechanism. These step changes are further discussed below.

#### Step change: Enhancing our vulnerable customer support program

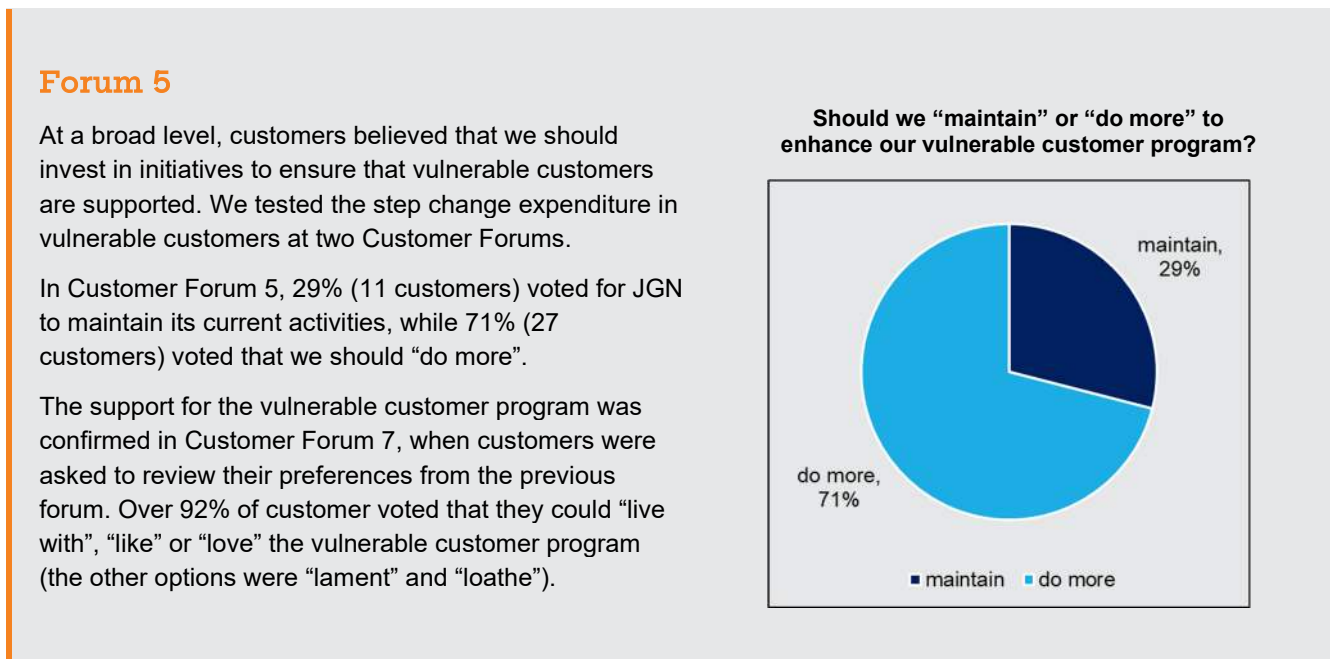
We propose a total of \$2.7M to enhance customer support to help customers understand their bills and increase involvement in third-party community support programs like Uniting Energy Assist.

We have long been supportive of assisting vulnerable customers. We currently undertake several initiatives including Voices for Power which trains cultural community leaders to provide tailored energy literacy programs, the Uniting Energy Assist Program which helps customers navigate the energy sector and access support, an Aboriginal Workforce Mentoring

program to advance reconciliation, and an annual Community Grants Program that has provided over \$650,000 to support local groups addressing social issues.

For the 2025 Plan period, we aim to collaboratively design initiatives with customers, representatives, and community groups to identify additional ideas that can support vulnerable customers, while avoiding duplication with retailer efforts. The box below shows how we tested the enhancement of our vulnerable customer support program with customers.

Figure 5.4: Customer preferences for our vulnerable customer support program



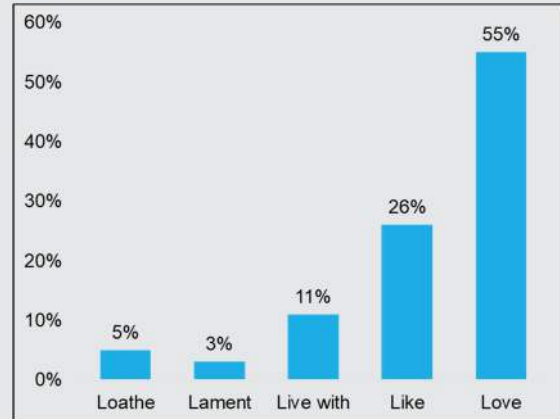
### Forum 7

In Customer Forum 7, customers recommended that JGN provides education and awareness programs for high priority vulnerable customers by understanding all levels of vulnerability, which includes clearly communicating and/or translating by letters and emails important information regarding environmental issues and financial costs (statistics/factsheets).

Customers emphasised that JGN needs to take a broad approach to communicate to all customers including CALD, elderly, and not tech savvy, noting that we must cater communications and engagement to match the diversity of our customer base.

Based on customer recommendations, we propose to increase customer support to assist with bill readings and increase participation in third-party community programs like the Uniting Energy Assist Program. We also seek to collaboratively design new initiatives with customers and community groups to identify impactful ways to better support vulnerable customers.

**Support for vulnerable customer program: “Do more” (L scale rating on preferences)**



### Step change: ICT services

The step change in relation to ICT services is a combination of: a transition to cloud-based subscription services (\$25M) and proposed projects to optimise asset management decisions in response to the net zero transition, as well as to improve customer experience (\$9M). For the 2025 Plan period, we have also deducted \$16M of operating expenditure from the ICT step change as these costs are included in the base year. The total step change associated with ICT services is \$20M.

#### Transition to cloud (Capacity growth)

In the current 2020-25 period, we commenced the transition to cloud services. For the 2025 Plan period, we will continue the transition to cloud services,

including shifting to cloud-based subscription services away from the "on premise" technology that we historically relied on.

- **Transition costs, \$20.4M:** Upgrading to a newer version of SAP S/4HANA, including the required testing and data migration, as well as hardware, platform and database migration.
- **Ongoing subscription costs, \$4.3M:** Required for subscription-based cloud services.

The nature of these subscription services means that based on the most recent accounting standards, they should be captured as operating expenditure.

## Optimise investment and customer experience

The step up in ICT services is also due to proposed digital projects:

- **Customer interface extension, \$3.2M** – We are proposing to enhance integration between field services, customer support, retailer relationships and scheduling. For instance, integrating field and office services to create a seamless customer experience, providing real-time work updates to improve responsiveness; and enabling seamless interfaces to streamline processes and data sharing between internal systems and external systems used by large commercial customers.
- **Advanced analytics platform \$6.2M** – It is becoming increasingly complex to make informed decisions to invest in and optimise our assets, due to reforms around the transport of renewable gases, changes in emissions reporting, as well as balancing investment (such as maintenance, and mains replacement) in line with our changing asset management approach (as explained in chapter 4). We are proposing an investment of \$6.2M for an enterprise-level platform that can source, integrate, analyse, and match data to enable complex engineering analysis.

## Step change: Leak detection services

To survey our network, our maintenance teams walk along gas main routes (some 26,000km in total) with a gas detector to detect and record the leaks on paper maps before transferring the data to a spreadsheet. This process is labour intensive, and it takes us five years to survey our entire network.

Effective from July 2024, as part of the Safeguard Mechanism, JGN is mandated to report annual carbon emissions and achieve a reduction in carbon emissions by 4.9% per annum. A significant portion of JGN's emissions is attributed to network leakage, emphasising the need for more robust surveying measures. Further, the Australian Government has joined the Global Methane Pledge, which commits Australia to take action on reducing methane emissions in the energy, resources, agriculture and waste sectors.<sup>22</sup> This provides an impetus for us to facilitate ways to minimise our emissions.

In August 2023, we commenced trialling a new leakage detection and survey technology subscription service (offered by Picarro) which will help improve our capability in detecting gas leaks in our network. Picarro is a global leader in emissions measurement and advanced leakage detection surveys and its technology is used worldwide to assist network operators to reduce emissions and improve infrastructure safety. The Picarro technology is more accurate than our traditional survey methods which can understate leaks on the network.

As part of the trial, we acquired two gas leakage survey vehicles and associated support from Picarro. These vehicles were successfully tested in our Dubbo network.

The step change of \$18M will fund the support and subscription of eight Picarro survey units. This will enable us to survey our network on an annual basis. This approach will transition us from manual methods to a more accurate and technology-driven process. We will be able to detect and repair leaks sooner, helping us to reduce carbon emissions, and better support the achievement of decarbonisation objectives.

The Picarro survey units will help us to more accurately detect gas leaks from the network and enable us to take a more proactive approach in selecting which assets we need to repair or replace. The data obtained from Picarro will help:

1. Prioritise targeted areas for remediation and to identify areas that can be clustered for targeted repairs.
2. Provide greater visibility of JGN's network integrity.
3. Determine areas where the pressure can be reduced to minimise leakage, particularly when the cost-benefit analysis does not stack up for asset replacement.

<sup>22</sup> See 'Australia joins Global Methane Pledge', 23 Oct 2022, at <https://minister.dcceew.gov.au/bowen/media-releases/australia-joins-global-methane-pledge>

Figure 5.5: Customer views on leak-detection technology vehicles

Throughout our engagement our customers told us that they care deeply about the environment and want us to invest in new technologies which will help lower carbon emissions as Australia strives towards achieving its net zero ambitions.

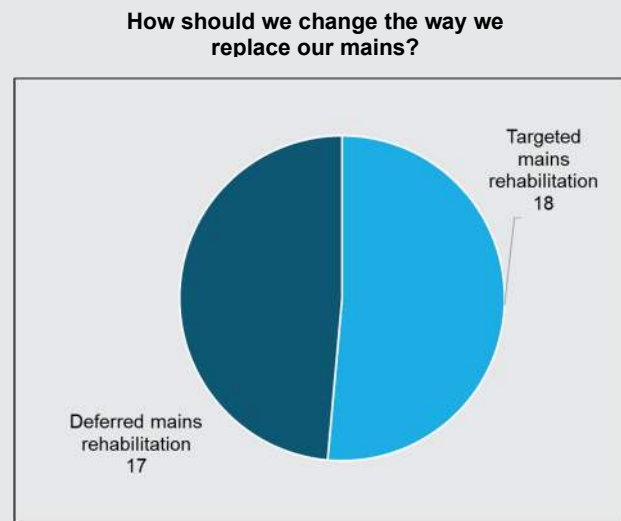
We engaged with customers over two customer forums on how we should approach our mains replacement program, in the context of the energy transition, and uncertainty surrounding the future role of gas networks.

Customer Forum participants were provided a range of mains rehabilitation options to consider for the next five year period.

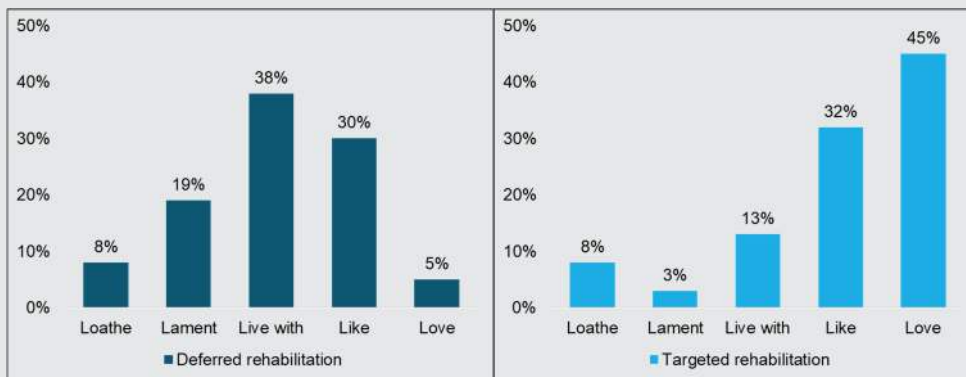
In Customer Forum 5, we tested three mains replacement approaches (see chapter 4 for more detail). There was an almost even split of votes between a *deferred* and *targeted* approach to mains rehabilitation.

In Customer Forum 7, we tested both the deferred and targeted approaches again. For the targeted approach, 90% of customers voted that they could “live with”, “like” or “love” it. For the deferred approach, this figure was at 73%.

The targeted approach involves using digital technologies to identify gas leaks, which allows us to take a targeted (as opposed to broad) approach to replacing our mains. This would reduce capital expenditure over the next five years. Customers were also informed that the deferred option would result in an increase in operating expenditure.



**Support for each mains rehabilitation option (L scale rating on preferences)**





## Step change: Emissions reporting

The International Sustainability Standards Board (ISSB), under the International Financial Reporting Standards (IFRS), is setting a global benchmark for sustainability reporting on business performance in terms of emissions reduction. This standard has been adopted by the Australian Government which means organisations like ours will need to comply with these standards. The Australian Accounting Standards Board (AASB) has released a draft on what will be implemented, and consultation on the draft will conclude in March 2024. The new legislation for emissions reporting is likely to commence from 1 July 2024, and our new reporting period will start on

January 2025. The costs associated with compliance to the new IFRS reporting standards include:

- Financial auditing fees to obtain independent assurance that the new reporting standards have been properly followed
- Developing internal control procedures and data collection processes to comply with the more granular reporting requirements
- Strategic planning to ensure a smooth transition that satisfy the regulatory changes.

We forecast a cost of \$2.1M to comply with the new emissions reporting requirements.

### Questions for your consideration

- Do you support the operating expenditure projects and priorities?
- Do you think that our operating expenditure program focusses on the right priority areas amid the energy transition challenges we face?
- Do you have a view on the step changes in our operating costs?

## **6. The revenue we require to deliver our 2025 Plan**



### Highlights

- Our proposed revenue to deliver the 2025 Plan is \$421M higher than the 2020-2025 period.
- Our revenue requirement for the Draft 2025 Plan includes \$300M in accelerated depreciation. The amount of accelerated depreciation was developed following extensive customer consultation and modelling of future demand scenarios.
- While accelerating depreciation raises near-term prices, it lowers longer-term prices to keep the gas network competitive amid falling demand.
- As the energy transformation unfolds, we will revisit depreciation assumptions along with other initiatives to readjust strategies accordingly. This prudent way forward balances bill impacts on current and future customers.

## 6.1 Our forecast costs

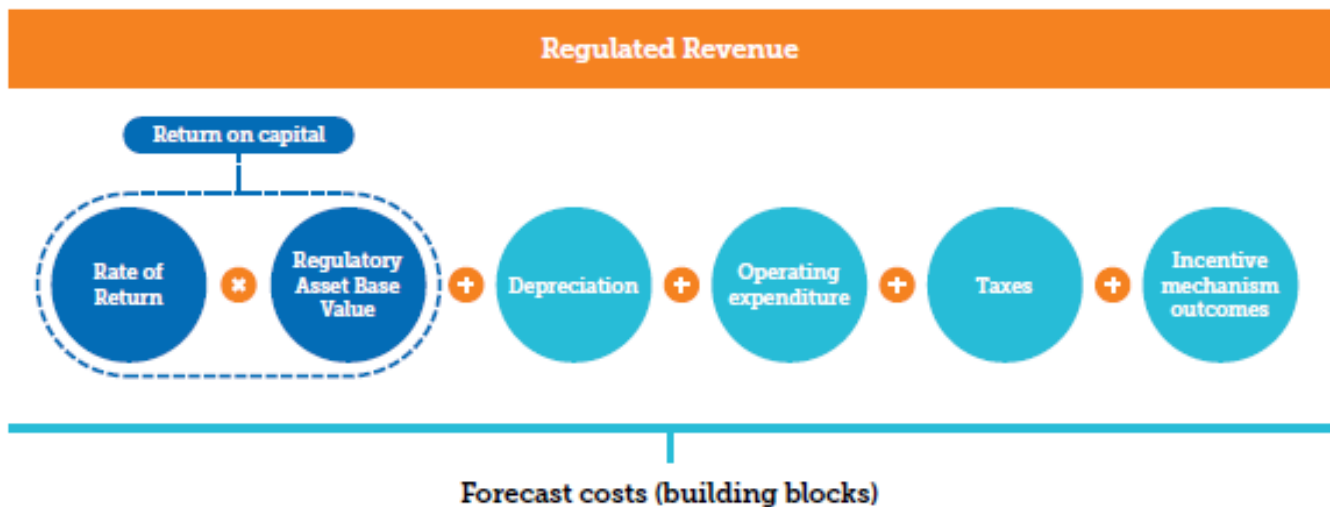
To run our business effectively over the 2025-30 period, we need to earn enough revenue to recover the following costs:

- Forecast operating costs.
- Funding costs—interest and other costs related to financing our debt and equity for past and forecast capital expenditure.
- Depreciation on our assets—the amount we need to recover over this period so that we will recoup our capital costs over the expected lifetime of each asset.

- Tax costs—to pay our tax liabilities over the period.
- Forecast incentive scheme related revenue adjustments.

We recover these 'building block costs' from our customers using an approach specified in the gas regulatory framework (see Figure 6.1). These building block costs form the basis of our forecast revenue which is approved by the AER and earned from our customers through network tariffs. More information on each of these building blocks is outlined in sections 6.2 to 6.5.

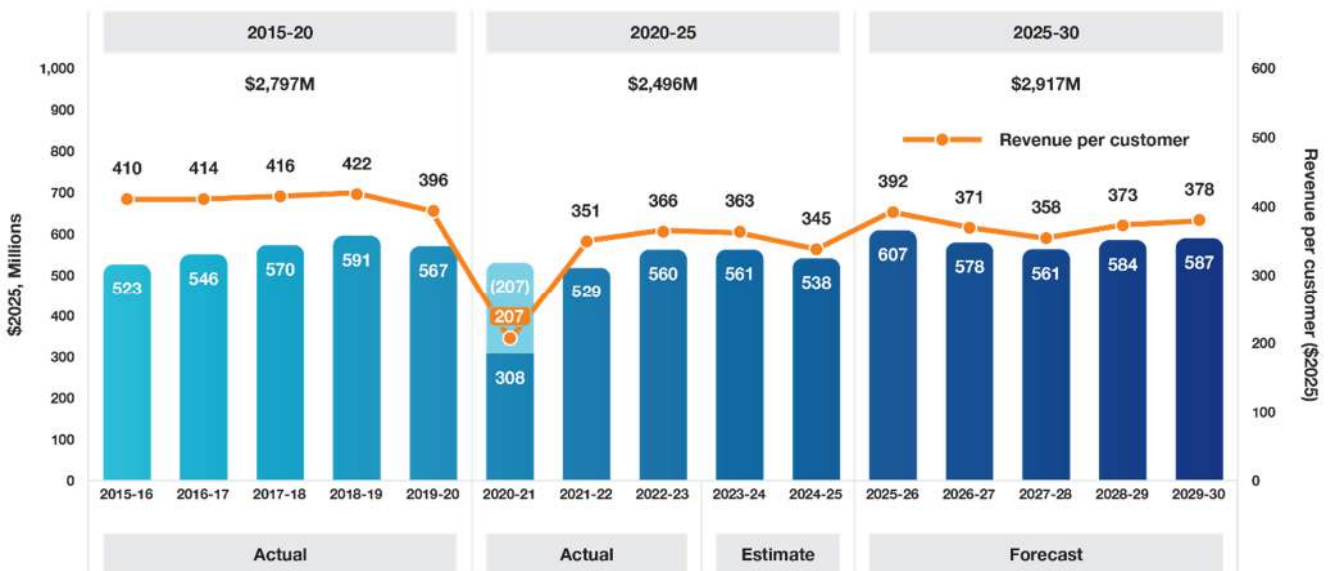
Figure 6.1: Building block costs



**Table 6.1: Revenue and price build-up from building block elements (2025 \$M)**

	2025-26	2026-27	2027-28	2028-29	2029-30	Total
Return on capital	206	202	198	192	185	984
Depreciation (return of capital)	92	100	110	120	131	552
Operating expenditure	263	262	259	256	252	1,293
Incentive schemes	35	3	(17)	4	6	32
Net tax allowance	11	10	11	12	13	56
<b>Annual revenue requirement</b>	<b>607</b>	<b>578</b>	<b>561</b>	<b>584</b>	<b>587</b>	<b>2,917</b>
Price path (in real terms)	1.89%	1.89%	1.89%	1.89%	1.89%	
Price path excluding incentive schemes (in real terms)	1.50%	1.50%	1.50%	1.50%	1.50%	

**Figure 6.2: Our building block revenue**



Note: In 2020-25, we returned \$207M of revenue we received from customers in the previous period. This hand back was made by adjusting our 2020-21 unsmoothed revenue.

The revenue that we require to deliver our 2025 Plan is \$421M higher than the revenue allowance for the current 2020-25 planning period. There are three key drivers for this difference:

- For the current 2020-25 planning period we included a downward adjustment to our 2020-25 building block costs, to return approximately \$207M of revenue over-recovered from the 2015-20 period.
- The forecast revenue for 2025-30 period includes recovery of \$300M accelerated depreciation, discussed in section 6.3, which was not included in our 2020-25 revenue allowance.
- Our operating expenditure forecast reduced by \$43M reflecting efficiency improvements we achieved over the 2020-25 period.

The increase in revenue leads to an average \$48 increase per customer as shown in Figure 6.2 but remains stable per customer when compared over the three planning periods.

Throughout our Gas Networks 2050 engagement program, customers and stakeholders have empathised the need for fairness across generations when considering how we best respond to the challenges of the energy transition. One clear message that came through on the topic of planning for the future was that we must act now, rather than delaying action.

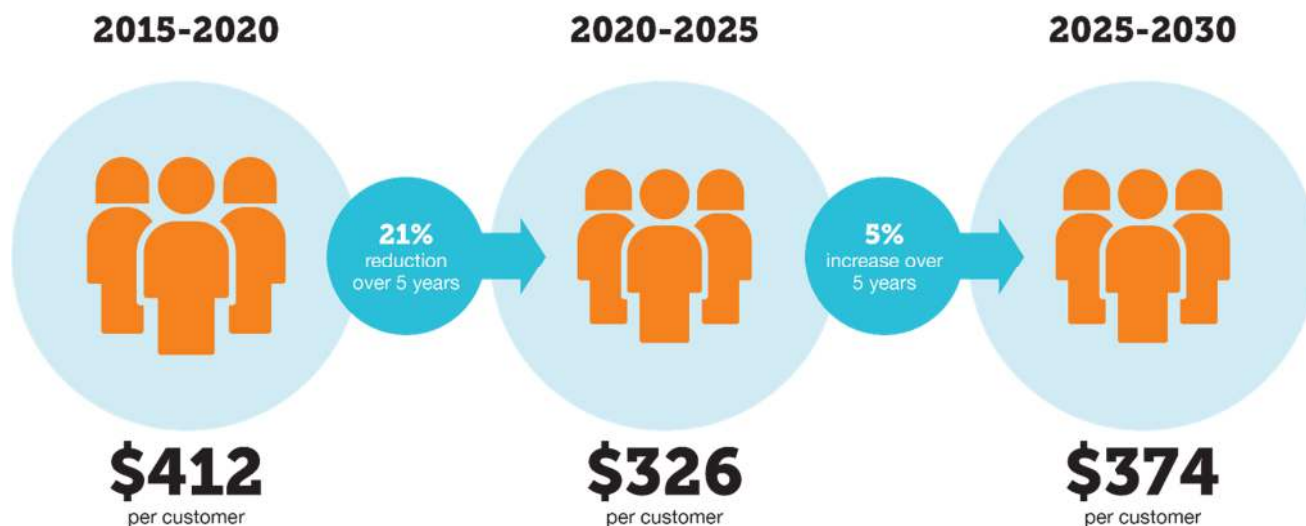
As discussed in chapter 3, our Draft 2025 Plan will implement a suite of initiatives that seek to minimise adverse customer outcomes and price shocks over the long term. Recognising affordability and cost of



living pressures impacting customers today, we have also sought to carefully balance the need to take action now against the short-term price impacts of our plans. We believe that our Draft 2025 Plan reflects a balanced approach and that while implementing these

initiatives will increase the revenue per customer that we require over the 2025 Plan period, if we do not take action now, customer outcomes will be worse over the long term.

Figure 6.3: Average annual revenue per customer<sup>23</sup>



## 6.2 Return on capital

Our funding costs are based on an estimate of the return on equity and the return on debt over the 2025 Plan period, which combined together informs our return on capital allowance.

The National Gas Rules (NGR) outline the framework for calculating the return on capital, and the AER's February 2023 Rate of Return Instrument (2023 RORI) details the approach we must follow when calculating each return on capital parameter. This includes the AER's methodology for calculating the value of imputation credits to equity holders, which is used to calculate the cost of tax component to the building block.

The return on capital varies with changes in interest rates which are determined by market conditions and our forecast regulatory asset base (RAB), which is the

value of all our assets we use for the provision of gas network services. The RAB is multiplied by the rate of return to arrive at the return on capital allowance. We estimate that the value of our asset base at the start of the 2025-30 period will be \$3.95B and will decrease by approximately 8% to \$3.65B by the end of the period. This decrease is partially due to our proposal to accelerate depreciation over the next period which is deducted from our RAB.

Over the 2025 Plan period, we expect that the real RAB per customer will decrease from \$2,570 to \$2,370, which is a reduction of over 7%. A lower RAB per customer is in the long term interests of customers as it will place a downward pressure on future network bills.

<sup>23</sup> The 2020-25 revenue per customer has been adjusted to include the one-off revenue handback to provide a like-for-like comparison with the 2025-30 period, as it represents the true level of costs required to operate the network. The revenue per customer without the revenue handback is \$354 per customer.

Figure 6.4: How our Regulatory Asset Base is Calculated

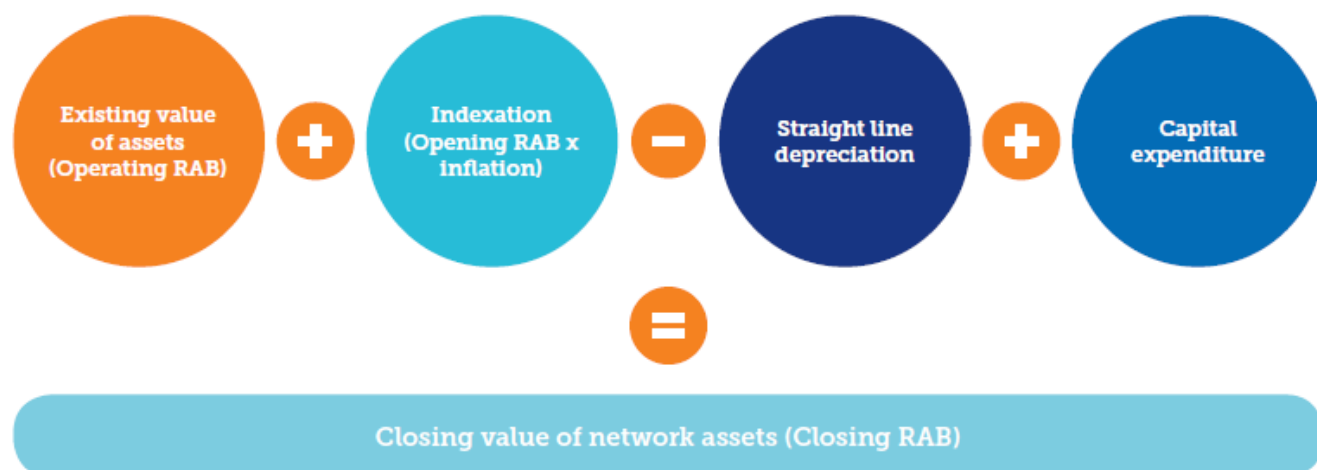
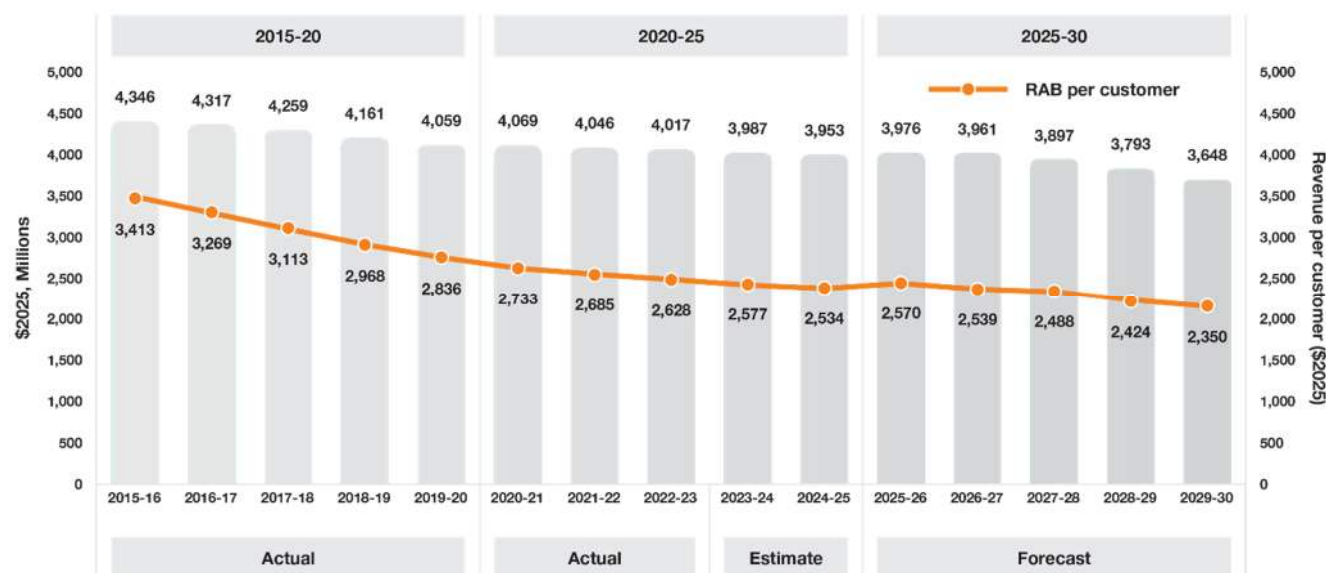


Figure 6.5: Changes in our regulated asset base over time



In line with the AER's Rate of Return Instrument (2023 RORI), our calculation of the rate of return proposes a 5.2% rate of return on the RAB for the

Draft 2025 Plan. Table 6.2 outlines the key rate of return parameters that we used to calculate the 5.2% rate of return.

Table 6.2: Our proposed rate of return

Parameter	Total
Return on equity	7.25%
Return on debt	3.84%
Inflation	3.55%
Leverage	60%
Gamma	57%
Corporate tax rate	30%
Nominal Vanilla WACC	5.2%

The demand risks and uncertainties we face as a result of the energy transition are not accounted for in the rate of return parameters. To mitigate these risks

we are proposing to accelerate the depreciation of our assets which we discuss in the following section.

## 6.3 Depreciation

Depreciation, or the return of capital, returns the capital investments that we make over the expected useful life of the assets. It is returned to our investors to enable them to fund the purchase of new assets and replace existing assets when they reach the end of their useful life to ensure the ongoing provision of reliable gas services. We have calculated our proposed depreciation allowance using the approach required in the NGR and consistent with the AER's expectations.

In addition to the standard approach to calculating depreciation which we refer to as straight-line depreciation, we are proposing to accelerate the recovery of some of our existing investments. This is one of the key initiatives we are proposing in response to managing the energy transformation that we discuss in Chapter 3.

The current regulatory practice of assuming long economic asset lives and back-ended capital recovery was set at a time when the number of customers using the gas network was expected to grow in perpetuity. This treatment allowed both existing and future customers to pay for their share of gas infrastructure. However, as long term future gas demand is expected to decline due to changing government policies, this treatment could mean that more costs are spread over fewer customers in the future. If we continue with the current pace of capital recovery and this issue is left unaddressed, it could:

- Discourage efficient investments into the network, resulting in customers leaving the network earlier than they are otherwise willing to.
- Increase the price volatility and uncertainty in future periods when there would be insufficient time to act.
- Miss an opportunity for customers to have an affordable alternative renewable gas option in the future.

Our proposed approach to accelerate the recovery of our capital base is consistent with the policy objective for depreciation, and economic regulation more broadly. This is because it will help provide confidence to our investors that the investments they make in our network will be recovered over their economic life. In addition, as the return on capital allowance does not allow gas distribution companies to earn a higher return despite the risk of asset stranding, we think that it is appropriate to look at other ways, such as

accelerating depreciation, to recover our costs with more certainty.

Accelerated depreciation provides a number of benefits in terms of supporting the efficient future utilisation of our gas network, including:

- Avoiding the potential for the inequitable capital recovery of our assets, helping ensure that gas remains more affordable over the long term, which will help mitigate customers leaving the network earlier than they may otherwise need or want to.
- Minimising the impact associated with demand responses because the relative difference between gas and electricity prices remains stable, so that gas continues to be price competitive. This protects the longer term interest of customers who remain on the gas network and helps prolong the life of our network, providing customers with choice of fuel and access to our network into the future.
- Encouraging continued investment to maintain network reliability by assuring our investors about capital recovery.

Accelerating regulatory depreciation changes the timing of cash flow to our business but does not change the value (in net present value terms) of the costs that we recover. This avoids any potential to create windfall gains or losses. Regulatory depreciation can also be reviewed at each planning period and it can be adjusted as circumstances change in the future.

The Future of Gas model has enabled us to test different depreciation profiles across the four plausible future scenarios developed by the Expert Panel to formulate a measured accelerated depreciation allowance which can deliver stable bills over the long term.

Figure 6.6: End-customer energy prices for residential customers after accelerating depreciation

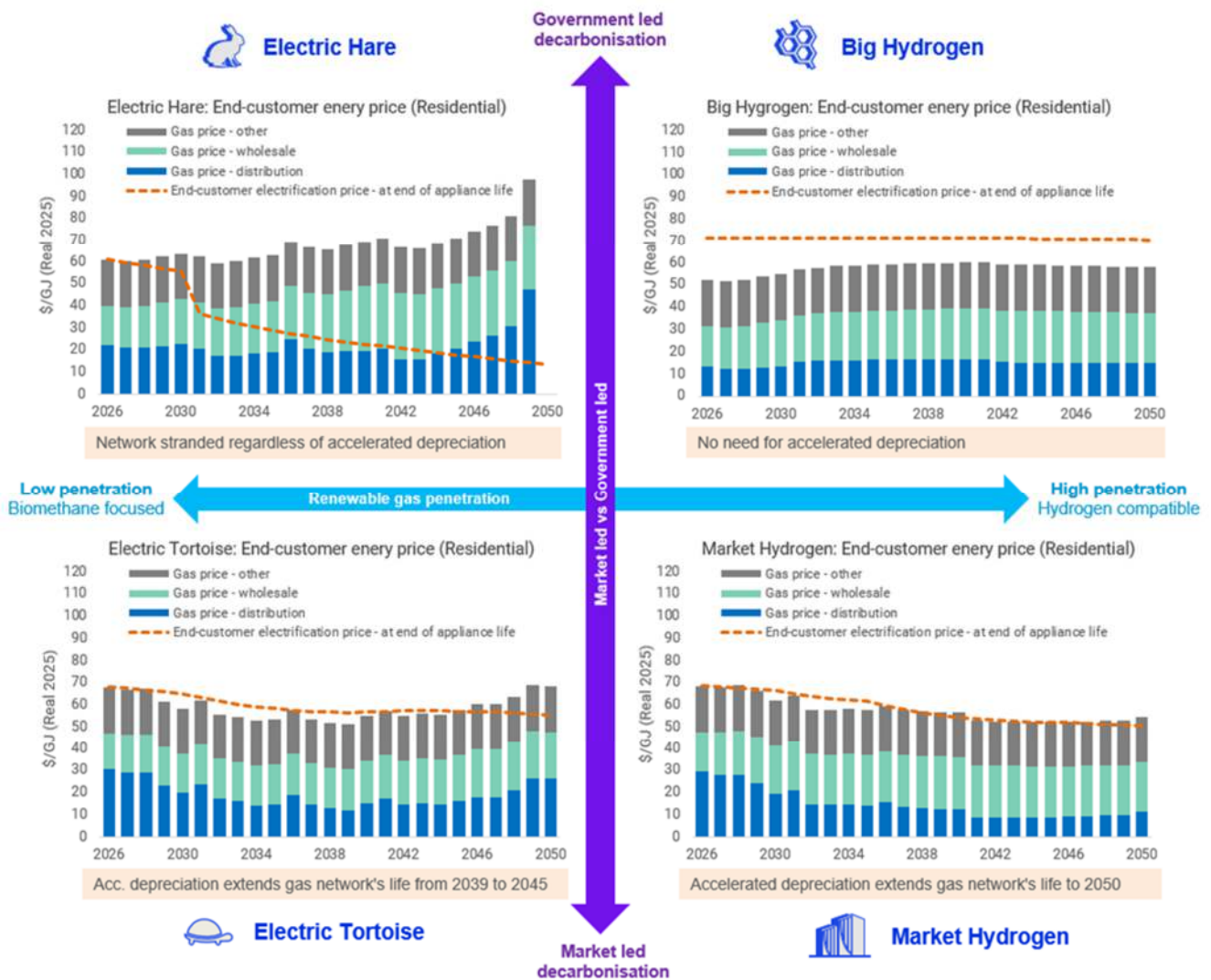


Figure 6.6 demonstrates that end-customer gas prices remain competitive against electricity (shown by the orange dashed line) for an extended period in both the Electric Tortoise and Market Hydrogen scenarios.

In the Electric Tortoise scenario, gas prices remain below electricity prices until 2046, and in the Market Hydrogen scenario, this competitiveness extends to 2050. In the Electric Hare scenario, the impact of presumed government subsidies to support the uptake of electric appliances leads to gas becoming uncompetitive from 2031, regardless of any market interventions.

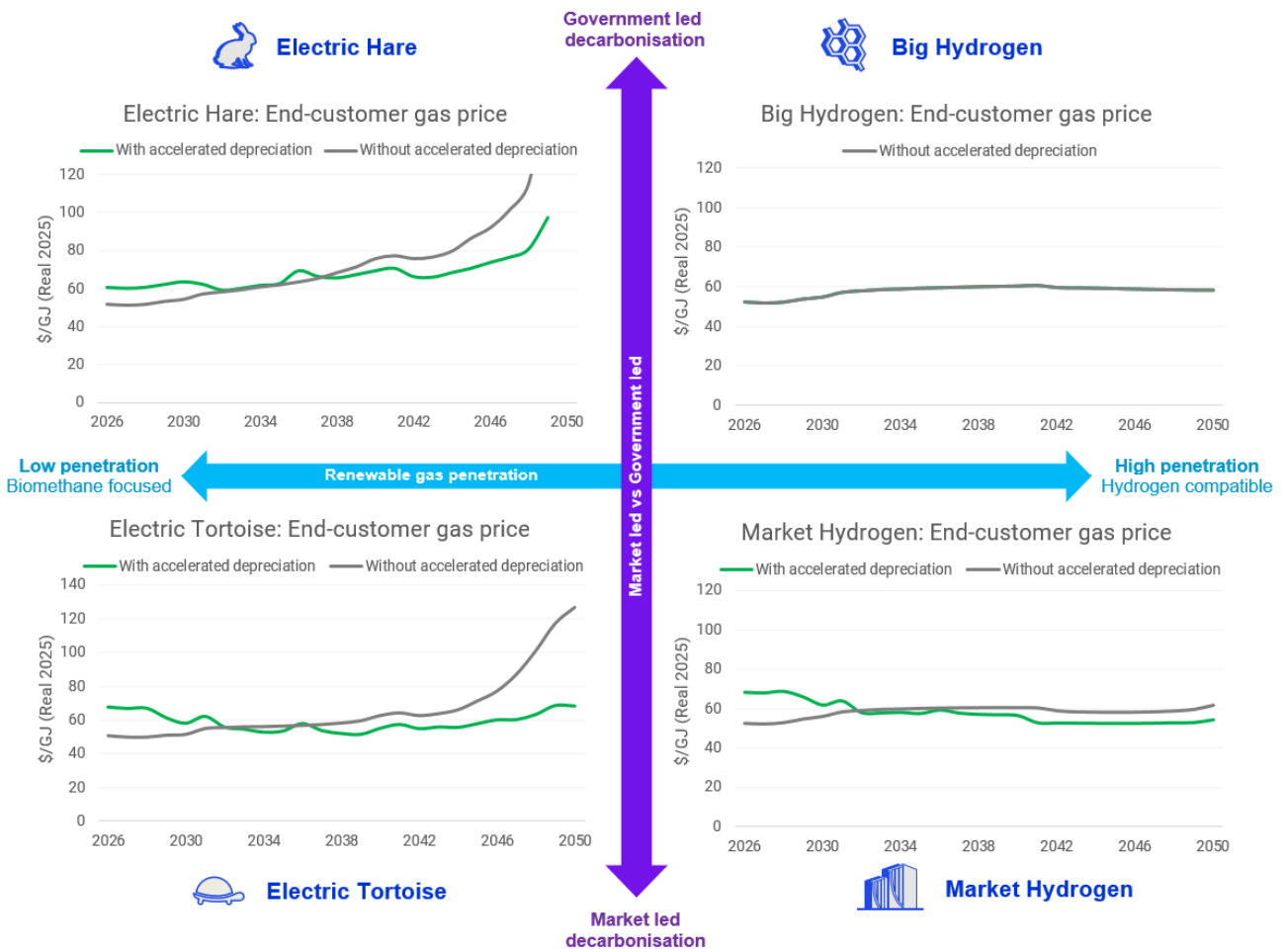
Under the Big Hydrogen scenario, there is a lower demand response as gas remains competitive throughout the forecast period which means a lower reliance on accelerated depreciation that is complemented with a higher level of investment in our network to support renewable gas.

As illustrated in Figure 6.7, accelerated depreciation flattens prices over time across all scenarios and supports the long term affordability of gas. This shows that it is prudent to act early to manage the future risk of asset stranding and allows flexibility to adjust depreciation over time as more information becomes available.

Of the four plausible scenarios it developed, the Expert Panel considered that the Electric Tortoise scenario had the greatest likelihood of eventuating. Acting early by taking smaller steps through a measured approach to accelerated depreciation is particularly effective under this scenario, providing stable pricing for customers in the longer term and supporting the efficient future utilisation of the gas network.



Figure 6.7: Comparison of gas prices with and without accelerated depreciation



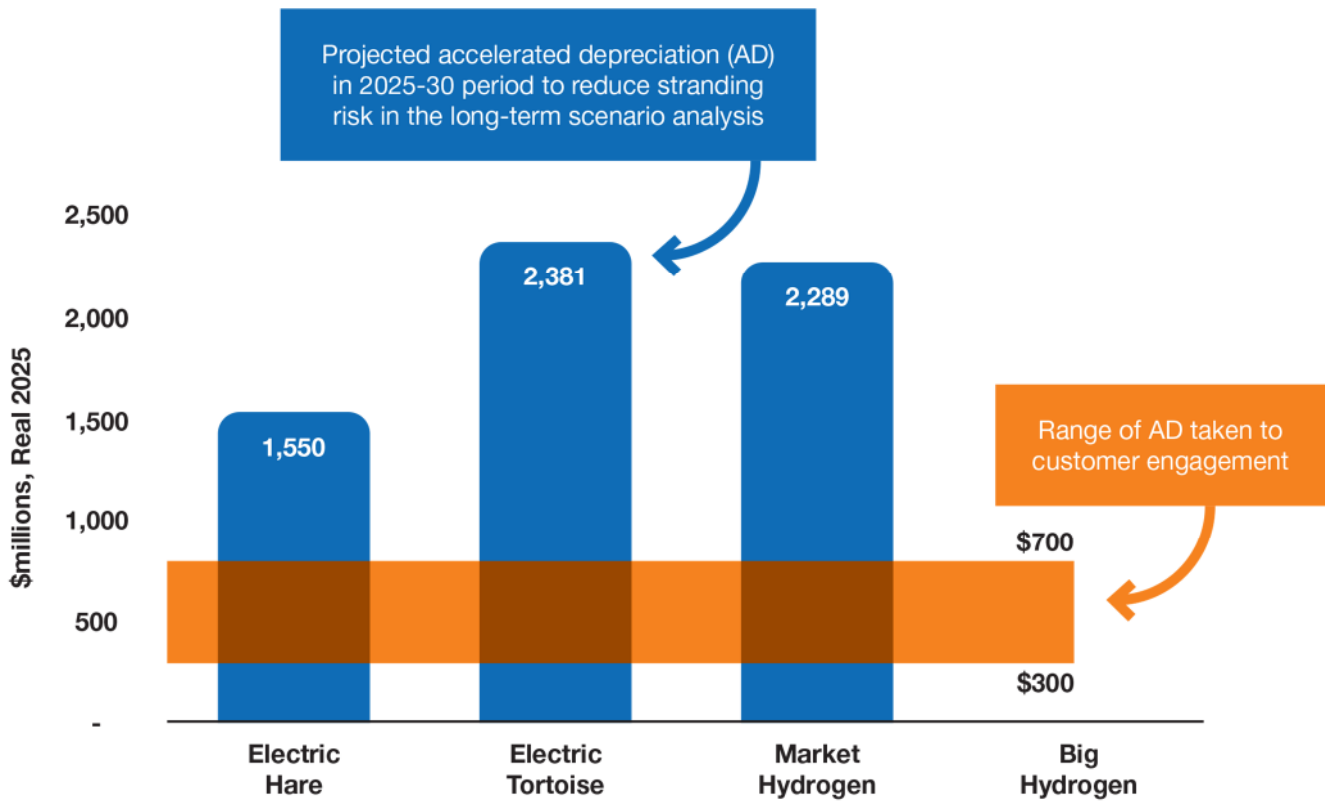
### 6.3.1 Our engagement with customers

To help inform our proposed accelerated depreciation allowance we collaborated with the Customer Forum on the range of accelerated depreciation options put forward. To determine the range of options, we used the Future of Gas model which projected a broad range of accelerated depreciation options over the 2025-30 period to reduce the risks of asset stranding, as shown by the blue bars in Figure 6.8. Recognising that affordability is a key customer value, we limited the accelerated depreciation options that we explored with the Customer Forum to the lower of range of \$300M-\$700M. We believe that this strikes a balance

between current concerns around affordability and mitigating stranding risk.

A \$0M option was not put forward to the Customer Forum as we consider this would not support the immediate need to respond to the uncertainty presented by the energy transition to net zero. Additionally, presenting an option that we would not contemplate goes against our engagement objectives, discussed in chapter 2, which includes building trust and collaboration with customers in formulating our Draft 2025 Plan.

**Figure 6.8: Projected accelerated depreciation over 2025-30 under the Expert Panel scenarios and taken to customer engagement**

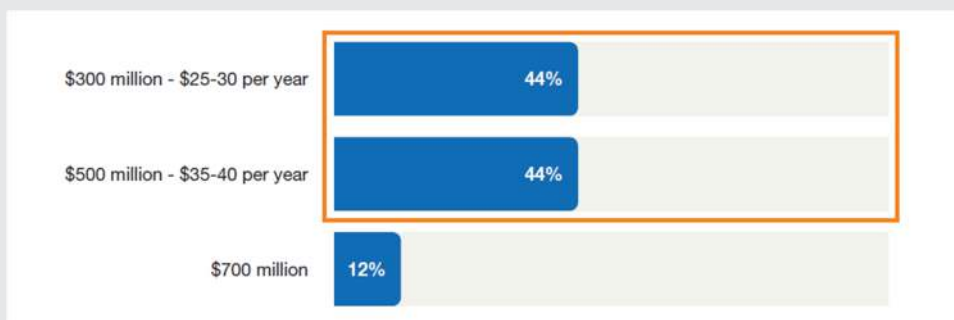


Note: The blue bars presented in this chart correspond to the 2025-30 values illustrated in Figure 6.8 above. In Electric Tortoise and Market Hydrogen, the \$2.4B and 2.3B of accelerated depreciation, respectively, mitigates stranding risks and prolongs the life of our network. However, Electric Hare faces limitations due to government electrification incentives, reducing accelerated depreciation to \$1.5B and leaving significant stranding risks unaddressed. No accelerated depreciation is needed in Big Hydrogen as it faces little stranding risks.

During Customer Forum deliberations participants were mindful of affordability and the impact of the energy transition on those customers who may be more sensitive to price rises. Customer Forum participants highlighted the importance of finding the right balance between current cost of living pressures and proactive initiatives focussed on long term customer outcomes, including accelerated depreciation.

A breakdown of voting from Customer Forum 5 held in July 2023, is shown in Figure 6.9 below, with 44% of customers (or 15 people) voting for \$300M, and 44% of customers (or 15 people) voting for \$500M, and 12% (or 4 people) preferring the \$700M option<sup>24</sup>.

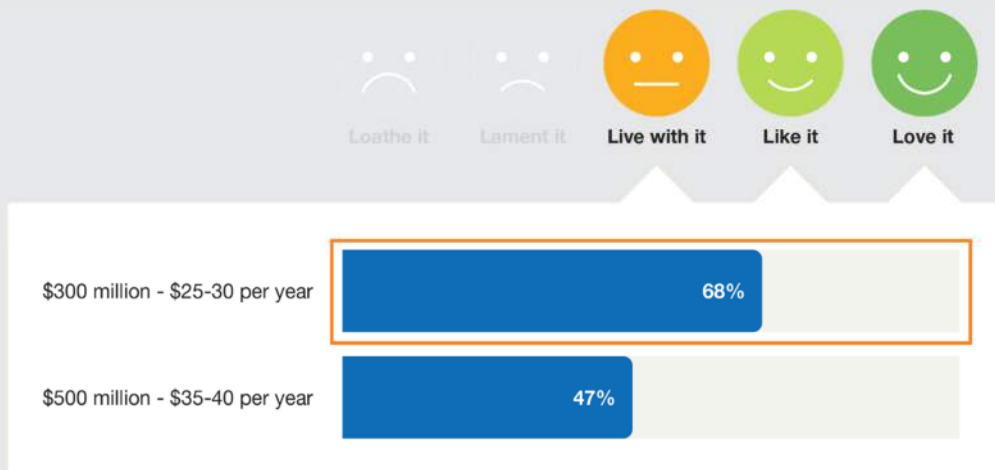
**Figure 6.9: July 2023 Customer Forum voting on accelerated depreciation**



In Customer Forum 7, held in September 2023 we retested the options with our customers. Due to the lack of support for the \$700M option in July, we only brought forward the \$300M and \$500M options for further consideration. The votes from the Forum participants are shown in Figure 6.10.

<sup>24</sup> In this forum, customers are asked to choose between the 3 options - \$300M, \$500M and \$700M.

Figure 6.10: Customer Voting in September 2023 on Accelerating Capital Recovery



In deliberative processes, we aim for 80% majority in reaching a general consensus. Participants were supportive of this initiative but were torn between the \$300M and \$500M options, primarily due to affordability concerns and wanting to keep bills as low as possible for the 2025 Plan period.

Although the support for this initiative fell just short of 80%, the Customer Forum expressed support for this initiative when it considered it as part of the full package of initiatives, as evidenced by Customer Forum Recommendation 6, and by its voting on the final package of initiatives (accelerated depreciation plus the other initiatives we tested) in Customer Forum 7, with 89% in support.

### 6.3.1 What is our proposal on accelerated recovery

For the Draft 2025 Plan we have included an accelerated depreciation allowance of \$300M. In determining the proposed level of accelerated capital recovery we consulted with customers, projected demand outlooks for the four future scenarios to understand the competitiveness of gas relative to electricity, and modelled the billing implications for each scenario to appreciate the longer term impact to customers.

Taking these factors into consideration we have adopted a measured approach to accelerated depreciation that is balanced when considered against the other initiatives. For example, the accelerated depreciation that we have proposed is far less than what would be required if we were planning for a future in which our network had no role to play in a decarbonised energy sector. Indeed, under all of the four plausible future scenarios developed by the Expert Panel, our network will continue to play a role beyond 2050, transporting renewable gases. Our proposed investment in renewable gas connections complements our proposal to accelerate depreciation, with both initiatives reducing future asset stranding risk, and extending the life of the gas network for our customers.

In consolidating all the initiatives we intend to undertake over the 2025-30 period, including accelerated depreciation and renewable gas investments, the proposed \$300M accelerated depreciation translates to a real price increase of 1.9% per annum over 2025 Plan period. This prudent approach allows us to balance the immediate financial impact on customers while positioning ourselves strategically to support the efficient future utilisation of the gas network.

While accelerated depreciation increases prices in the short term, it places a downward pressure on prices in the long term, as we demonstrate in Figure 6.7. This will help our gas network stay competitive, support the transition to renewable gas, and help keep prices lower for remaining customers as demand reduces across the network. This in turn avoids the potential for any inequitable capital recovery of our assets. It also lowers the risk to our investors that they will not be able to recover all the investments that they have committed to in our gas network.

As we learn more about the how the transformation of the energy sector will progress, we will revisit our depreciation assumptions in conjunction with our other initiatives, and readjust our strategies accordingly in future planning periods.

## 6.4 Incentive scheme arrangements

The regulatory framework incentivises us to find more efficient ways of delivering our services, which ultimately benefits customers in the form of lower bills. Incentive schemes give us temporary ‘rewards’ in the

form of increases in revenue for performing well, and ‘penalties’ or reductions in revenue if we don’t. The schemes are designed to pass the benefits of improved efficiency to customers over time.

### Operating cost efficiency scheme

We are currently subject to an operating cost efficiency scheme known as an efficiency carryover mechanism (ECM). The system provides us with a continuous incentive to identify and improve operational efficiencies. Any savings we make are shared with our customers in a ratio of approximately 70% (customers) to 30% (JGN). As a result of our performance against this incentive scheme, we will either receive a reward or a penalty in our revenue in the following regulatory period. In other words, our performance in the current regulatory period impacts the amount of revenue we receive in the next period.

We are forecasting additional revenue of \$2M over 2025-30 due to our performance against this incentive scheme in the current regulatory period 2020-25. This reward in our revenue demonstrates that we are responding to the incentives to reduce our operating expenditure where possible.

Our current view is that we should retain this incentive scheme for 2025-30. We believe that this is in the long term interests’ of our customers, as it will help drive us to deliver ongoing efficiencies.

### Capital expenditure sharing scheme (CESS)

The CESS incentivises us to only undertake efficient capital expenditure during a regulatory period by rewarding efficiency gains and penalising efficiency losses. Consumers benefit from the improved efficiency via lower network prices in the future associated with a lower RAB value. When the CESS is applied in conjunction with other incentive schemes such as the ECM, we are incentivised to balance operating expenditure, capital expenditure and service performance objectives, which supports outcomes aligned to our customers’ long term interests.

JGN’s CESS includes a contingent payment mechanism to ensure that CESS payments are contingent on JGN maintaining service quality. The contingent payment mechanism reduces rewards where JGN’s performance falls below its historical targets. This means that CESS incentive payments will reduce if cost efficiency is gained by compromising service quality.

Our contingent payment mechanism incorporates six service quality parameters: unplanned SAIDI<sup>25</sup>; unplanned SAIFI<sup>26</sup>; leaks in mains and services; leaks in meters; confirmed poor supply and; estimates of meter reads. The targets for which are determined using historical performance. Actual service performance is measured against the set targets. Over the current period, we have met our service quality targets.

The building block costs used to calculate the annual revenue requirement for each year of the regulatory control period must include revenue increments or decrements for the relevant regulatory year arising from any CESS. We are forecasting additional revenue of \$29M due to our CESS performance.

We propose to continue to apply the CESS in the next regulatory period given its impact on long term affordability for our customers through lower RAB value.

<sup>25</sup> This is a measure of the duration of unplanned outages across our network.

<sup>26</sup> This is a measure of the frequency of unplanned outages across our network.



## 6.5 Corporate income tax

Compensation for the cost of tax is necessary to ensure that sufficient funds are available to meet our tax obligations. The NGR require that the cost of corporate tax is estimated as a separate building block. Apart from capital expenditure and operating expenditure, the principal inputs that go into the calculation of the tax building block item are taxable income, the statutory income tax rate, and the value of imputation credits as estimated by the AER in its 2023 RORI.

Combining these inputs and incorporating the outcome from recent AER reviews, we estimate a tax building block of \$56M over the next regulatory period.

### Questions for your consideration

- Does the proposed \$300M in accelerated depreciation strike the right balance between near-term bill impacts and long term pricing benefits?
- How would you assess the customer engagement undertaken on accelerated depreciation? Was it adequately collaborative?
- Overall, do you think the revenue proposal strikes the right balance for customers in maintaining affordability while addressing the energy transition challenge?

## 7. Forecasting new connections and gas consumption



## Highlights

- We engaged an independent expert to develop the forecast of new connections and gas demand for our 2025 Plan.
- We expect to see significant reductions in new connections and demand over the 2025-30 period.
- The forecast reduction in consumption of the volume market is validated by aligning with similar downtrends in AEMO's main scenarios from its 2023 Gas Statement of Opportunities.
- Gas consumption by JGN's demand market customers is forecast to decline over 2025-30. Some large surveyed customers forecast increasing consumption as they switch from higher emission fuels. Other customers with processes easier to electrify are expected to reduce their consumption.

## 7.1 New connections and gas demand over 2025-30

Our customer number and gas consumption forecasts are an important component of our 2025 Plan. These forecasts influence our costs and are used to calculate prices.

We commissioned Core Energy & Resources (Core) to prepare an independent forecast for the 2025-30 period. Core has significant experience in energy forecasting, having prepared forecasts for the Australian Energy Market Operator (AEMO) and a number of network businesses, including us in prior pricing periods. We selected Core as its methodology

and forecasts have previously been reviewed, tested and accepted by the AER.

Core has forecast that new connections and demand will decline over the 2025-30 period. This chapter describes Core's forecasting methodology and its resulting forecasts of new connections and gas demand over the 2025-30 period.

The forecasts will be updated by Core prior to when we submit our Initial Proposal to the AER in June 2024, to incorporate the 2023 actual consumption information and further information we have received from surveying our larger demand customers.

## 7.2 Forecasting methodology

We split our customer base into two markets:

- The volume market which consists of residential and commercial customers who use less than 10TJ of gas per year and are generally charged on how much gas they consume.
- Our demand market consisting of our largest customers who consume more than 10TJ a year. These customers are primarily charged on how much capacity they require.

Core applies a different forecasting approach for each market.

Core has used an econometric model to forecast gas usage across the 1.5 million customers in the volume market, by determining the relationship between gas demand and variables like weather and energy efficiency of appliances. It also used data from the Australian Bureau of Statistics (ABS) to factor economic trends that can influence gas use.

Core then combined the average gas consumption forecast with a forecast of customer numbers to forecast the total usage.

To forecast customer numbers, Core relies on a dwelling construction forecast developed by the Housing Industry Association (HIA). Recognising the changing policy environment, not all dwellings will connect to our network. Some households will choose not to connect to gas, while others will be outside of our network area. To reflect this, Core reviewed the historical ratios of connections and dwelling construction trends and forecast the ongoing ratio for the 2025 Plan period. The forecast ratio took into account the historical trend and also factored in growth in dwelling construction outside the JGN network area. The forecast also allowed for an increase in electrification of new dwellings as observed through disclosures from developers, builders and certain industry associations. Core also used historical data on permanent and temporary disconnections from our network.

A different approach was applied to our demand market customers. Due to the smaller number of

these large customers, it is feasible to consider known load changes. To assist with this process, we surveyed the top 20 customers to understand their plans around their future gas usage. Core used this information as an input to its forecasting model. Core also analysed the customers in sector groups to differentiate between hospitals, manufacturers and so forth, and tested relationships between each sector's consumption with weather trends and economic activity. When a trend was identified, it was used to forecast consumption in the future.

As our network has grown and we have connected more customers, total gas consumption has increased. Despite growth in customer numbers, we have continued to see a steady decline in consumption on a per customer basis. The reduction in consumption is driven by a combination of factors including energy efficiency improvements, appliance substitution, smaller dwellings and higher gas prices.

---

## 7.3 Volume Market Forecast

For the volume market, the total gas consumption is a product of the forecast average gas consumption and forecast customer numbers. Figure 7.1 compares the actual and forecast consumption from our network against the total consumption across the whole of NSW and the ACT, as reported and forecast by AEMO in the 2023 Gas Statement of Opportunities (GSOO)<sup>27</sup>. About 80% of the residential and commercial gas consumption across the whole of NSW and the ACT is from within our network. The remainder comes through other networks (such as the Canberra network) which has higher average consumption per customer due to the relatively colder climate.

After many years of growth in gas consumption, driven by increasing customer numbers, Core is forecasting a reduction in gas consumption for the volume market for the 2025-30 period. To validate the reduction in gas consumption, Core referred to AEMO's GSOO to check for alignment in forecast

trend assumptions. Figure 7.1 shows that the reductions in consumption forecast by Core is broadly consistent with the reductions forecast in AEMO's Orchestrated Change and Progressive Change scenarios which Core consider most relevant for this purpose.

The following sections on gas consumption per connection and customer numbers give more detail on the drivers for this reduction.

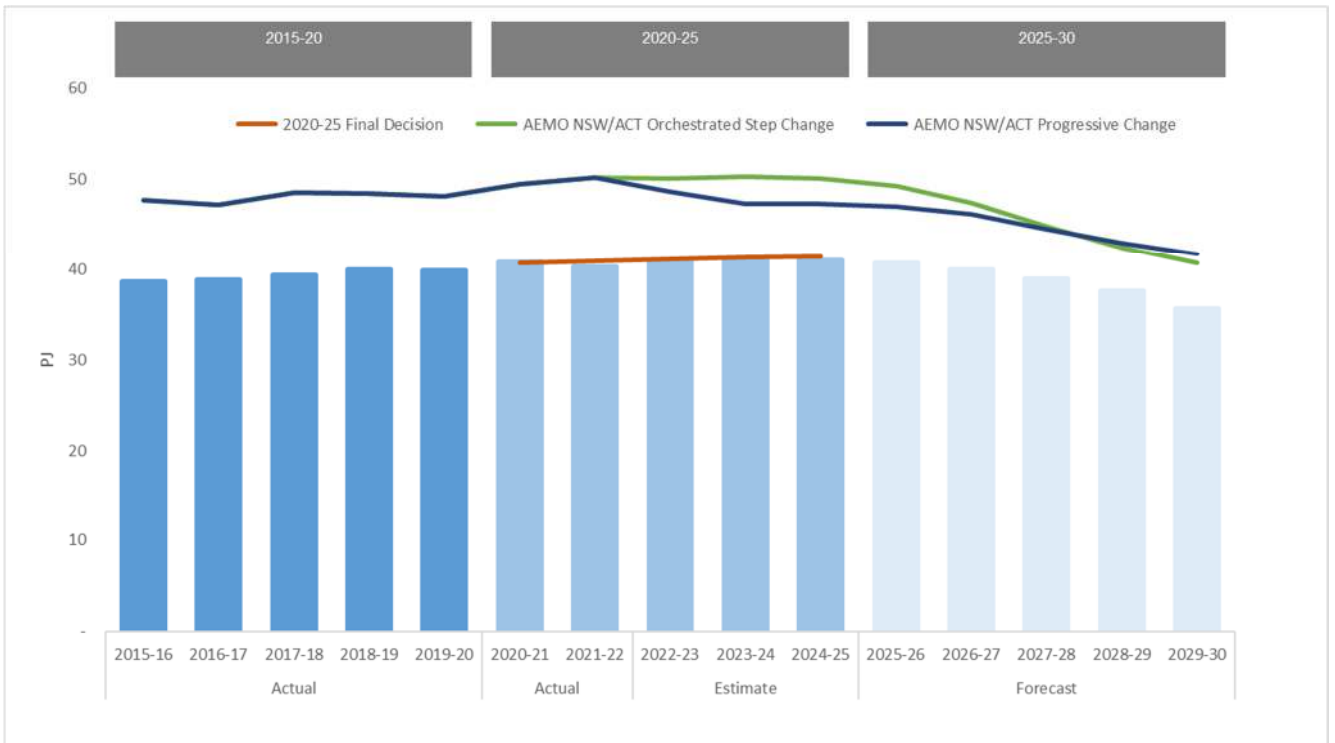
### Gas consumption per connection

As shown in Figure 7.2 consumption per connection fell sharply during 2015-20. This trend of reducing consumption per connection has continued into the current period, noting that 2020, 2021 and 2022 were impacted to varying degrees by COVID and resulting shutdowns influencing changes in consumption patterns for residential and commercial customers.

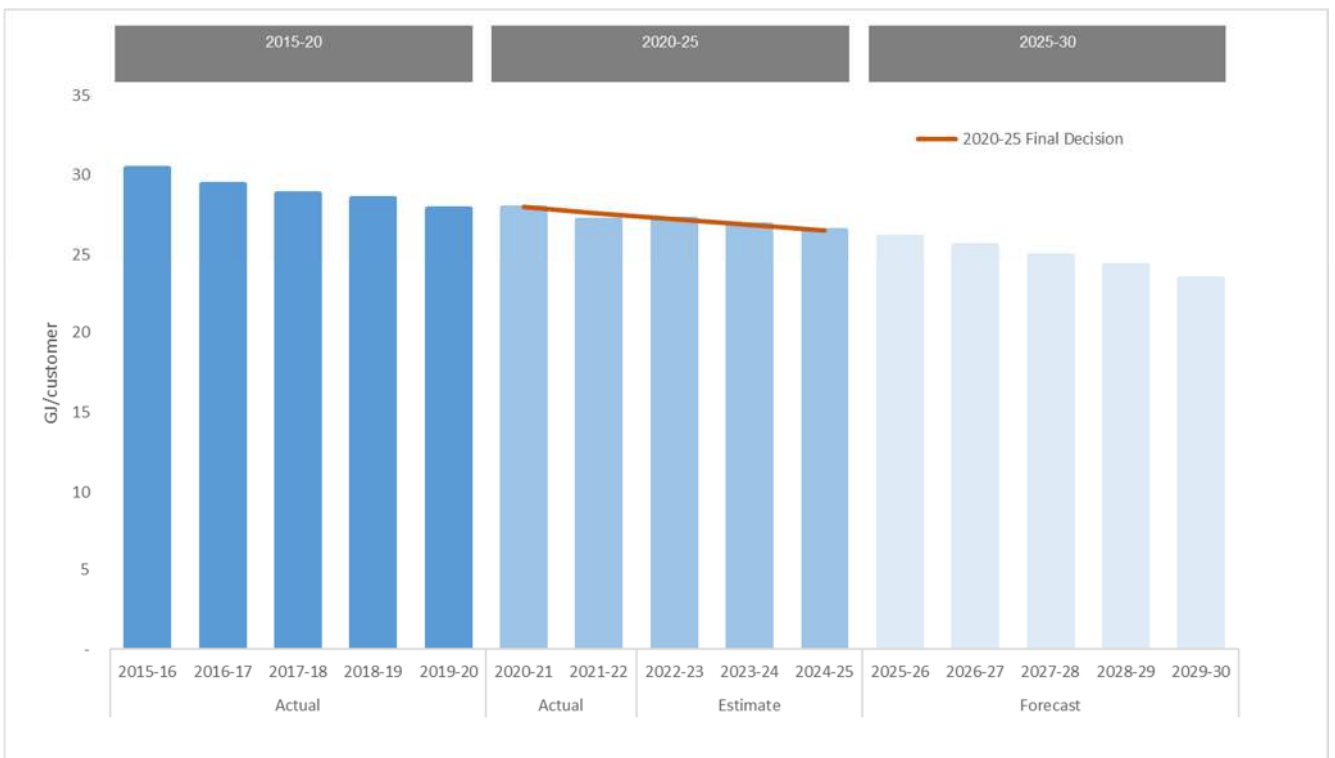
<sup>27</sup> AEMO, Gas Statement of Opportunities, March 2023



**Figure 7.1: JGN volume market gas consumption (PJ)<sup>28</sup>**



**Figure 7.2: Volume market consumption per customer**



<sup>28</sup> JGN volume market gas consumption forecast does not cover all of NSW or ACT whereas AEMO forecasts covers all of NSW and the ACT which explains the offset in Figure 7.1



Core has forecast that residential and commercial gas consumption per customer will continue to fall in the next period. The reasons are slightly different for each customer group.

For residential customers, the reasons are:

- Increasing solar and battery storage penetration as a substitute for gas.
- Growing trend toward replacement of gas heating with reverse cycle air-conditioning when appliances are due to be replaced or during renovation.
- Growing trend in use of alternative water heating technologies.

- Advances in dwelling construction standards which favour alternative energy sources.
- Advances in building and appliance efficiency and lower levels of appliance penetration (lower water and or space heating penetration) resulting in lower gas consumption.

For commercial customers, the reasons are:

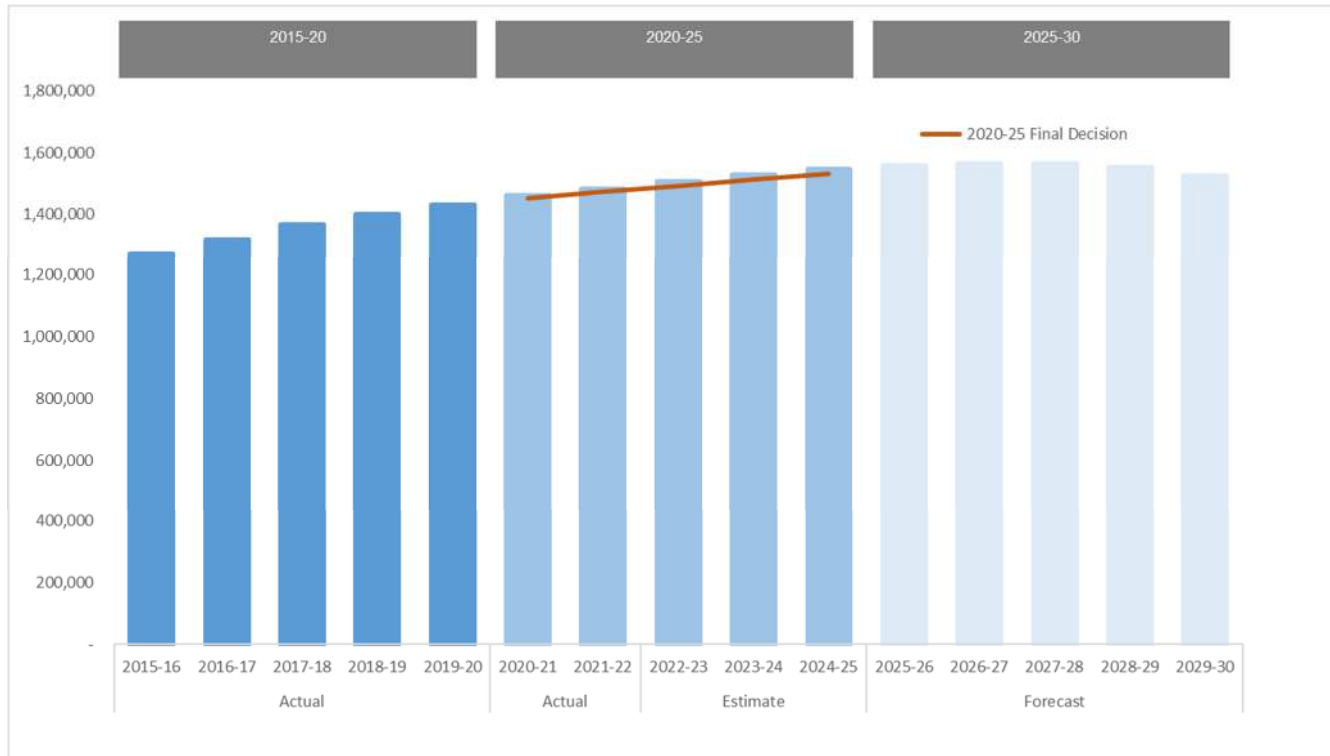
- Electrification of new buildings and NSW planning laws favouring electrification.
- Continuing advances in energy efficiency.
- Growing trends in using alternative water heating technologies and reverse-cycle air conditioning.

### Customer numbers

Core has forecast that the total number of customers on our network will start reducing towards the end of the 2025-30 period. This is shown in Figure 7.3. This is due to the forecast of the number of customers connecting to the gas network being less than the number of connections being abolished or temporarily disconnected each year. The reduction in total

customer numbers is further enhanced by Core forecasting an increase in the number of customers seeking to either abolish or temporarily disconnect from gas as a consequence of choosing to electrify their homes and no longer use gas.

Figure 7.3: Total customers (Volume Market)



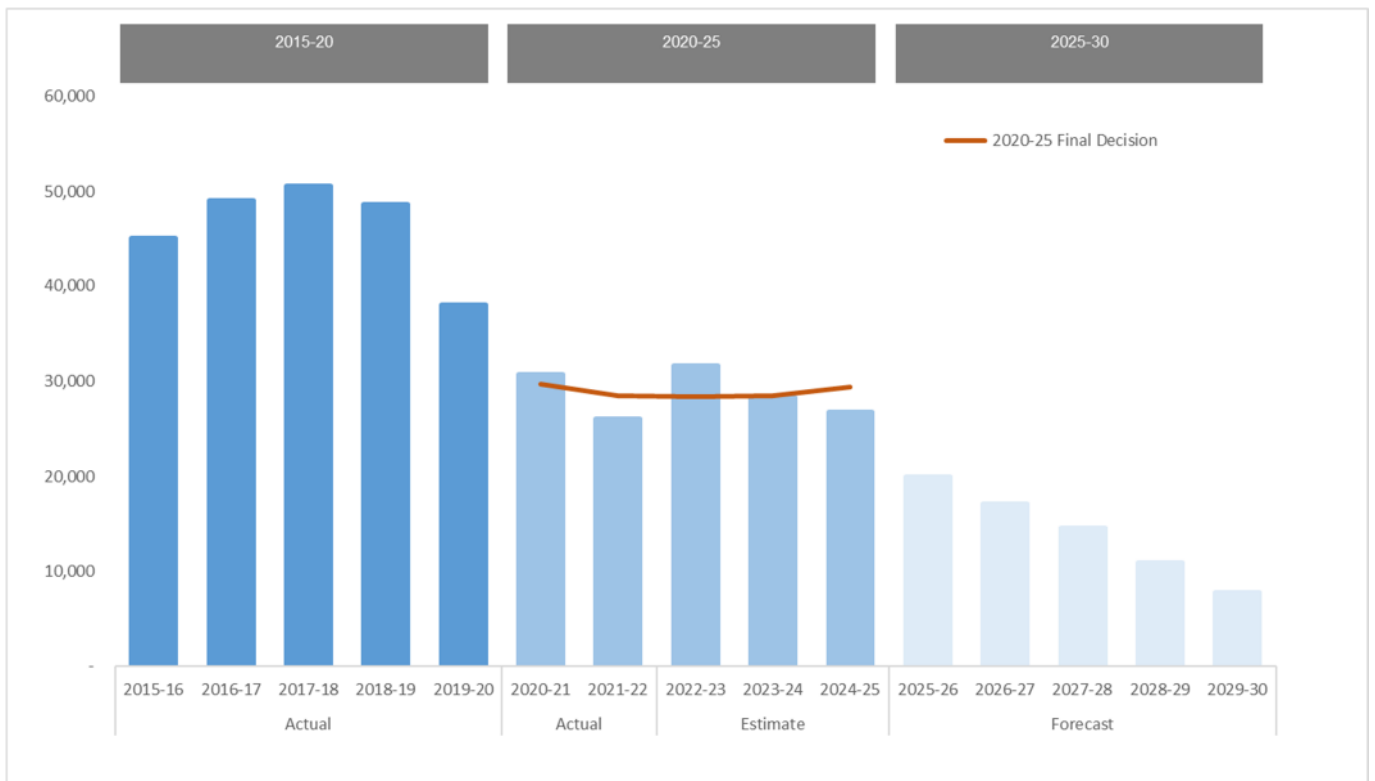
In the 10 years to 2019 there was a dramatic increase in customer numbers, primarily due to new connections associated with the Sydney housing boom. Since the peak of connecting over 50,000 new customers in 2018, new gas connections have reduced, with just over 26,000 new customers connecting in 2022.

Core has forecast further reductions in the number of new customers connecting to our network over the 2025-30 period. This is being driven by:

- Lower residential and commercial development and construction rates across NSW.

- Changes to our connections policy which will result in fewer connections being provided free of charge (see chapter 4).
- Changes to BASIX<sup>29</sup> making it easier for all electric homes to meet BASIX standards and requiring solar panels to be installed to supplement a 5-star gas hot water system (which was commonly used to meet the required energy standards).
- More households using electric appliances, including solar and reverse cycle air conditioning, responding to government incentives in this area.
- Planning rules in NSW encouraging electrification in new buildings.

Figure 7.4: New connections



## 7.4 Demand Market Forecast

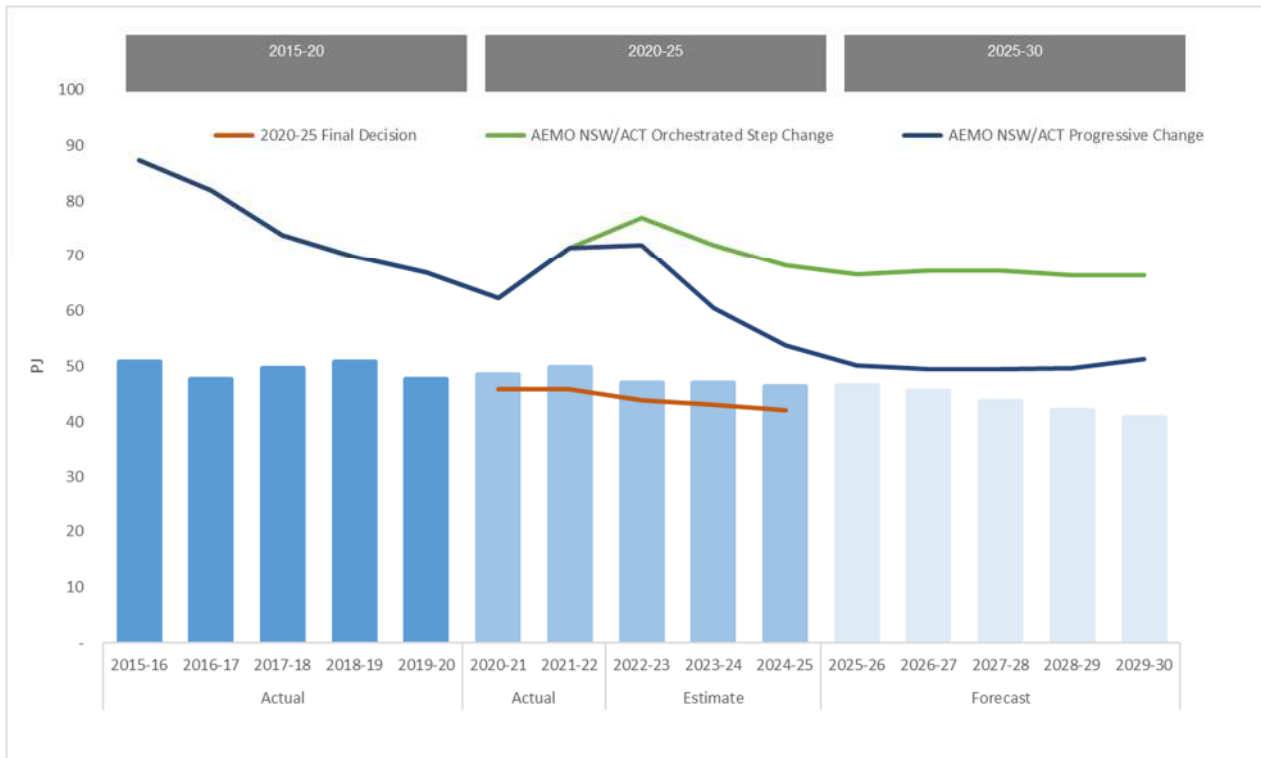
Demand market consumption is generally flat with any observed increases primarily driven by changing consumption patterns from a few very large customers.

Consumption by demand market customer is forecast to decline over the 2025–30 period. While a few of the larger customers who were surveyed are forecasting

an increase in gas consumption as they move away from coal or other higher emission fuels to natural gas, other surveyed customers are forecasting a maintenance of, or reduction in, gas consumption. For the non-surveyed customers, their consumption is forecast to decline at an accelerated rate compared to the historical trend reflecting an electrification of the easier to electrify appliances/processes.

29 BASIX is part of NSW’s development application process. It mandates building standards to achieve reductions in water and energy consumption and greenhouse gas emissions.

Figure 7.5: Total demand market gas consumption (PJ)<sup>30</sup>



As with the volume market forecast, Core validated its forecast against AEMO’s 2023 GSOO. The comparison for the demand market against the 2023 GSOO shows the trend for JGN forecast falling

between the AEMO Progressive and Orchestrated Change scenarios in terms of the rate of change in declining consumption.

### Questions for your consideration

- Are there any other key factors or information sources you think should be incorporated into the forecasting approach?
- Do you think the alignment shown between JGN’s forecasts and AEMO’s scenarios helps provide confidence in the projected trends?
- Given the forecast decline in gas demand, do you think the initiatives discussed in other sections of the 2025 Draft Plan are appropriate to retain network viability amid energy transition uncertainties?

<sup>30</sup> JGN demand market gas consumption forecast does not cover all of NSW or ACT whereas AEMO forecasts covers all of NSW and the ACT which explains the offset in Figure 7.5

## 8. Accessing our network





## Highlights

- In the current regulatory period, JGN has a single reference service. For the forthcoming 2025 Plan period, we proposed to split the single Reference Service into two separate Reference Services: a Transportation Reference Service and an Ancillary Reference Service.
- We also propose to continue to offer two Non-reference services: an Interconnection Service and Negotiated Services.
- We proposed minor changes to the Interconnection Service to ensure consistency with revised requirements under the National Gas Rules.

## 8.1 Our Services

JGN currently offers a single reference service which covers transportation of gas to a delivery point as well as metering, meter reading and ancillary activities (such as special meter reads, disconnection, reconnection and abolishment). In addition, JGN offers two non-reference services, an Interconnection Service and Negotiated Services. Figure 8.1 depicts JGN’s existing reference and non-reference services. JGN submitted its Reference Service Proposal to the AER in June 2023. After some minor amendments following stakeholder feedback, the AER approved the Reference Service Proposal in November 2023.

In our Reference Service Proposal we proposed splitting the current single reference service into two separate reference services, namely a Transportation Reference Service and an Ancillary Reference Service. We proposed continuing to offer two non-reference services, namely an Interconnection Service and Negotiated Services, with minor changes to the Interconnection Service to ensure consistency with revised requirements under the NGR.

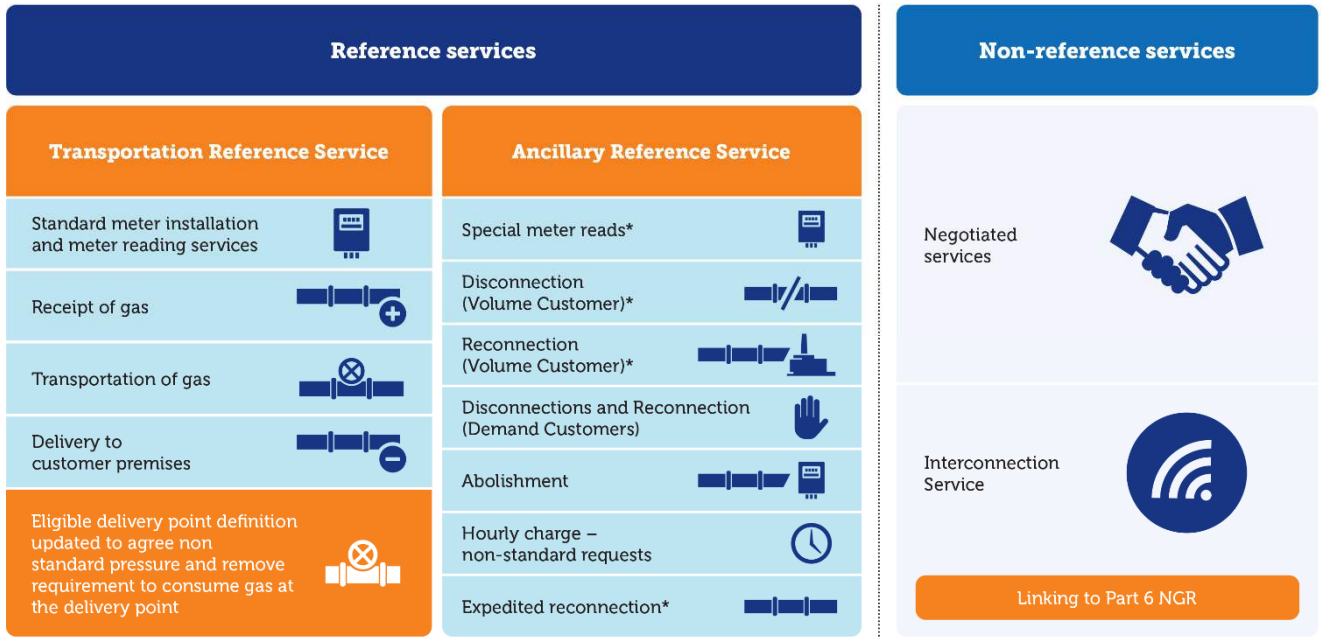
The services JGN proposes to offer under the 2025-30 Access Arrangement are shown in the Figure 8.2.

Figure 8.1: JGN's existing reference and non-reference services





Figure 8.2: Proposed services for the 2025-30 AA Period



Note: Services marked with an \* have a charge per wasted visit

More details on the services and the changes can be found in JGN’s [Reference Service Proposal](#).

## 8.2 Proposed changes to the 2020-25 Access Arrangement

We are proposing the following key revisions to our 2020-2025 Access Arrangement:

- Changes to reflect the AER’s new 2022 rate of return instrument
- Amendments to the NGR since our last Access Arrangement was approved by the AER, in June 2020
- Splitting of the current single Reference Service into a Transportation Reference Service and an Ancillary Reference Service
- Relocation of some provisions from the Reference Service Agreement to the Access Arrangement
- Changes to the structure of our tariffs and the introduction of a tariff for medium-high consuming commercial customers (see section 9.3)
- Changes to the tariff variation mechanism (see section 9.3)
- Minor changes to our cost pass-through events for harmonisation.
- Improved drafting in areas that are unclear.

## 8.3 Proposed revisions to the Reference Service Agreement

The separation of the current Reference Service into a Transportation Reference Service and an Ancillary Reference Service needs to be incorporated into the RSA as well as recent changes to the NGR. In addition to those changes we are also seeking to refresh the document to improve the readability and drafting, and remove clauses that are duplicated elsewhere.

Our approach to the RSA is to largely maintain the position set out in the previous RSA where possible. As with previous RSA reviews, our focus has been to minimise changes to the position unless our experience during the current period suggests it is necessary.

To date, we have consulted with retailers and self-contracting users in both seminars and one on one meetings, seeking feedback on areas of the RSA they find unclear or where they have found practical issues with the current drafting. We have also sought feedback on any areas they consider could be improved.

We are incorporating the feedback and our changes into a draft RSA which will be circulated to retailers and self-contracting users for review. The results of feedback from this review will be incorporated into the RSA that will be submitted to the AER in June 2024.





# 9. Pricing for current and future generations





### Key points for this chapter:

- We are making improvements to our reference tariff structures for the 2025 Plan period to ensure that we respond to the changes occurring in the gas market in a way that supports the long term interests of customers' with regards to the efficient use of gas and our network over time.
- We have engaged with customers and stakeholder to better understand what they want and value, and to inform the development of our proposal.
- We are proposing a hybrid tariff variation mechanism that entails the sharing of volume risks between JGN and our customers.
- We propose grouping our customers by their gas usage and implementing varied pricing to more accurately reflect the cost of providing services to these customers.

## 9.1 Our tariffs and charges

Like most businesses, we need to recover the costs of providing our distribution network services from the customers who use them. We do this by charging network tariffs, which are set so they recover the costs of transporting natural gas through our network to customers' premises in a safe, reliable and responsive way. Customers may not see their network tariff itemised on their gas bill, as retailers incorporate our tariffs in their end prices and charges, along with the other costs of producing and supplying gas. As shown in Figure 1.2, our network tariffs make up around 35% of a typical residential customer's total gas bill.

The total network tariff incorporated into customers' gas bills may be made up of several separate charges:

- *a fixed charge* - an annual supply charge that applies to each premises gas is delivered to (\$ per annum)

### Our tariff structures

We group customers that have similar characteristics together so that similar customers pay similar prices. These groupings are known as our 'tariff classes'. At the broadest level we differentiate between:

- residential/small commercial customers ('volume market')
- large industrial customers ('demand market').

The two customer groups are subdivided into tariff categories, with some further segmentation by geographic location. Our network serves customers in coastal areas, such as Sydney, Newcastle, Wollongong and the Central Coast, and over 20 country centres including those within the Central

- *a variable charge* - a usage charge that applies to the *volume* of gas used (\$ per gigajoule (GJ))
- ancillary charges - fees for certain services or activities (such as special meter reads or disconnections) that apply only when customers or retailers have requested or required those services (\$ per service and/or per hour).

Most of our customers pay the fixed and variable charges, but the amount they pay varies to reflect their different characteristics and the different ways they use gas. Some of our customers may also pay an ancillary charge if they request those services.

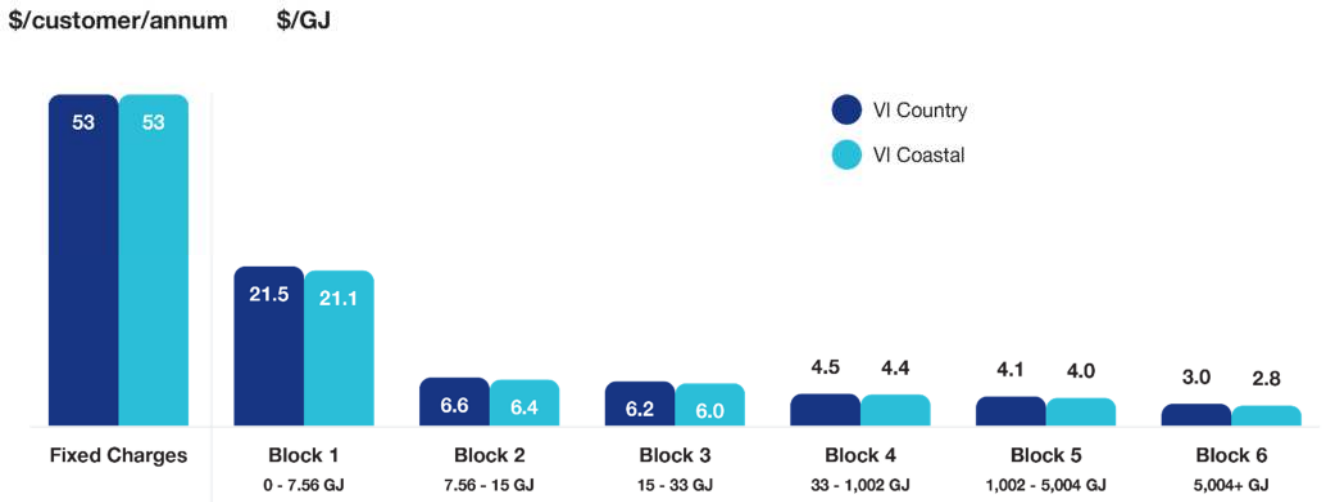
All current charges are set out in our tariff schedule which is assessed by the AER as part of the price review process and then updated annually. We publish a new tariff schedule each year, which applies from 1 July to 30 June.

Tablelands, Central West, Southern Tablelands and Riverina regions of NSW. We group our volume market customers by 'country' and 'coastal' locations to reflect the relative costs of supplying these customers. The different costs involved in serving our coastal and country customers are primarily due to the costs of the Wollongong-Sydney-Newcastle trunk pipeline that serves only the coastal customers.

For our volume market, we apply banded usage charges, in six consumption blocks representing different thresholds of annual consumption. Prices are lower for gas consumed in higher blocks—that is, the average network price we charge decreases with the more gas that is used. This is shown in Figure 9.1.



Figure 9.1: Current tariffs and block structure for volume market individual customers<sup>31</sup>



We call our large industrial and commercial customers “demand customers”. Demand customers are expected to use more than 10TJ of gas per annum. Most of our large industrial and commercial customers

are charged on the basis of the amount of network capacity they require, which is referred to as their chargeable demand.

### What is tariff variation mechanism

The tariff variation mechanism refers to how our tariffs and charges are updated each year. The mechanism enables us to respond to changing market conditions and recover our building block costs. Currently, both our haulage services and ancillary services are regulated under a weighted average price cap tariff variation mechanism (‘price cap’). Ancillary services, such as disconnection, meter removal and special meter reads, are provided to individual customers. This is in contrast to haulage services which involve shared network assets providing haulage services to large numbers of customers at the same time.

‘Price caps’ limit the average increase in prices from one year to the next. An important feature of the price cap is that it places the ‘volume risk’ with JGN. As part of each price reset process, the AER decides our revenue allowance, which is then used to set our prices based on forecast volumes of gas transported through our network. If actual volumes are lower (higher) than the forecast volumes used to set tariffs, we will recover less (more) revenue than expected. The price cap allows us to retain all revenue that we

earn if our revenue exceeds the allowed revenue, and does not compensate us if actual revenues are lower than the allowed revenue.

Price cap regulation incentivises us to grow the volume of natural gas transported through our network and the declining tariff blocks incentivises our customers to consume larger quantities of natural gas allowing them to derive more value from their appliances. More customers consuming higher volumes of gas also keeps the prices lower for all customers as the relatively fixed haulage service costs are spread across larger volumes.

In contrast to a price cap, a revenue cap tariff variation mechanism (‘revenue cap’) places volume risk with customers. It does this by ensuring that the distributor earns the revenue allowance set by the AER, irrespective of the volume of gas transported through the network. This is achieved by making adjustments to the tariffs in future years to ensure that the revenue earned is in line with the revenue allowance. The revenue cap provides no incentive to grow gas volumes.

<sup>31</sup> JGN - 2023-24 Tariff Variation Notice – April 2023

## The AER's review of tariff variation mechanism

In 2023, the AER initiated a review of gas distribution network reference tariff variation mechanisms and declining block tariffs. Through its issues paper the AER sought stakeholder views on declining block tariffs and price caps in the backdrop of changes to the National Gas Objectives to incorporate an emissions reduction objective, and the policy environment in some states and territories encouraging gas customers to switch to electricity.

Based on stakeholder feedback the AER decided that rather than determining a single approach for the industry, gas network businesses should instead undertake substantive stakeholder consultation to inform their tariff variation mechanism and tariff structure proposals, as part of the Reference Service Proposal process (explained in chapter 8). As the AER's final decision on this issue was published after we submitted our Reference Service Proposal, we have instead undertaken consultation with our

customers and stakeholders on these matters as part of our 2025 Draft Plan engagement.

The AER also noted that a key issue for consideration is the assignment of volume risk, noting that it should be assigned to the party best able to manage the risk. While historically gas distributors have been better placed to manage the risk the AER is concerned that gas distributors have consistently over the last 10 years earned more revenue than forecasted due to volume outperformance.<sup>32</sup>

In the case of JGN, the volume outperformance is largely attributable to an unprecedented amount of growth in our network, driven by the building boom in Sydney over the 2015-20 period. Our customers have benefited from this growth — the increase in customers and gas demand has placed a downward pressure on bills — as there are now more customers sharing the largely fixed network costs.

## 9.2 What our customers have said

As discussed in section 2.3.9, we established a Customer Tariff Forum to inform our review of our tariff structures and form of price control (or tariff variation mechanism), and we engaged with the Advisory Board to help inform the design of our tariff engagement program. Because of the complex nature of tariffs and form of price control mechanism, members of the Advisory Board and Expert Panel, complemented with external guest speakers, were asked to play a role as the 'Brains Trust'. The 'Brains

Trust' functioned as an independent expert to support Customer Tariff Forum participants, providing information and assisting in group deliberations by offering their views on our tariff options and form of price control. As part of our engagement with the Customer Tariff Forum, small businesses and retailers, we tested their preferences in relation to risk sharing, the declining tariff block structure, tariff principles and how we might streamline our tariff structures.

### Customer preferences

Throughout our engagement program, we have heard that affordability is a key issue for all of our customer groups. Customers understand that the transition to net zero requires action to be taken now to lessen the burden on future generations and that measured short-term impacts to bills is in the interest of future

generations. Some customers also want to limit the role tariffs play in promoting more gas consumption to lower emissions. This creates a challenge for us to strike a balance between affordability and environmental objectives.

### Risk sharing

Customers expressed a strong opposition to transferring all volume risk to customers and voted against a revenue cap mechanism. They told us that they prefer JGN to bear more volume risk on the basis that we are better placed to manage it, but that they also want customers to share some risk going forward. Some customers considered that our current price cap tariff variation mechanism provides more

certainty to continue using gas in the way they currently do, helping with affordability and cost of living pressures.

Other customers prefer to share some volume risk to reflect risks relating to climate policies outside of JGN's control and for JGN to operate efficiently. We discuss this in section 9.3.

<sup>32</sup> AER, Final decision: Review of gas distribution network reference tariff variation mechanism and declining block tariffs, October 2023, page 5.

## Tariff principles

During the preparation of the Draft 2025 Plan, we engaged with residential and small business customers, and retailers to explore how we should charge for the provision of our services over the next five years. This included engaging on a set of pricing principles. These principles aim to ensure that our tariff structure addresses affordability issues,

improves fairness, promotes stable prices so our customers can manage their household and business budgets, and ensures that JGN's services remain competitive into the future. Table 9.1 sets out the pricing principles we consulted on with our customers during our Customer Tariff Forum, and how we will meet these principles as part of our Draft 2025 Plan.

**Table 9.1: Pricing principles**

Pricing principle	How do we plan to meet this
<b>Cost reflectivity:</b> the prices charged for services reflect the underlying costs of providing those services.	<ul style="list-style-type: none"> <li>— To improve cost reflectivity, we are splitting out large volume market customers as a separate tariff category. This will allow us to develop more cost-reflective tariffs for this category of customers and reduce the number of tariff blocks. Over time, the cost drivers for each customer segment will change and evolve.</li> <li>— To more accurately capture the utilisation of our network by demand customers, we plan to incrementally increase the proportion of revenue we recover from this customer segment.</li> </ul>
<b>Price stability:</b> minimising large tariff variations to help customers manage bills in future.	<ul style="list-style-type: none"> <li>— To avoid bill shock for smaller volume market residential and commercial customers we are continuing with declining tariff blocks.</li> </ul>
<b>Simplicity:</b> understandable and avoiding unnecessarily complex tariff structures.	<ul style="list-style-type: none"> <li>— For simplicity, we propose to remove the geographic location distinction (that is coastal and country) for volume market customers and reduce the number of tariff blocks.</li> </ul>
<b>Revenue adequacy:</b> efficient cost recovery to generate sufficient revenue to cover the costs of operating JGN's network.	<ul style="list-style-type: none"> <li>— The prices we propose will reflect the forecast gas volumes we expect in the next regulatory period and enable us to recover revenue to meet our efficient costs.</li> </ul>
<b>Fairness:</b> usage cost is set according to costs of the network and covers equity considerations like cost of living pressures.	<ul style="list-style-type: none"> <li>— The separation of large volume market customers will allow us to charge large volume customers a higher fixed charge relative to smaller customers. In addition, our overarching Draft 2025 Plan proposal seeks to balance the need to act now to support intergenerational equity, while keeping in mind current cost-of-living pressures.</li> </ul>

## Feedback on our tariff structures

As part of our engagement with the Customer Tariff Forum, small businesses and retailers, we explored the declining tariff block structure, and customer views around how we might streamline our tariff structures via an L-scale.<sup>33</sup>

<sup>33</sup> The Residential Tariffs Customer Forum, Small Businesses and Retailers voted on the proposed tariff changes using a five-point L-scale (Love, Like, Live with, Lament and Loathe). Percentages are shown as those that voted for the 'Live with', 'like' or 'love' to the option. Please note that each group voted on every option individually, so the totals do not equal 100%.

**Table 9.2: Feedback on tariff principles**

Topics we engaged on	Customer response
Separating large volume customers from other volume customers	<ul style="list-style-type: none"> <li>— All participants (residential and commercial) voted for separation of larger customers</li> <li>— Customers consider this as fair and equitable, allowing for tailored responses to different customer types.</li> </ul>
Reduce number of tariff blocks in volume market	<ul style="list-style-type: none"> <li>— All customers voted in favour of this change.</li> <li>— Customers considered this would simplify our tariff structures, making them flatter and to some extent reduce the incentive to increase gas consumption</li> </ul>

### Engagement with retailers

We engaged with retailers to understand the impact our proposed changes will have on them and to get their perspectives. All retailers voted in support of splitting large volume customers and reducing number of tariff blocks. We also undertook a retailer survey on

how our proposed changes might impact them but we received only limited feedback. We propose to do further workshops and testing in February and March 2024 with retailers.

## 9.3 Proposed changes to our tariff variation mechanism and tariff structures

In its Final decision on the *Review of gas distribution network reference tariff variation mechanism and declining block tariffs* (October 2023), the AER concluded that most stakeholders did not support moving from a price cap to revenue cap tariff variation mechanism because the existing assignment of volume risk to distributors was seen as appropriate and preferable to assigning volume risk to customers.

The AER however shared concerns about gas distributors consistently outperforming target haulage service revenues under price caps due to higher than expected volumes. It also noted that under a price cap distributors have the ability to use clause 65 of the NGR to seek a new revenue determination if they expect lower volume forecasts for the remaining years of the access arrangement period. However, customers do not have the same opportunity to re-open an approved access arrangement if actual volumes are higher than forecast.

In this respect, the AER noted that

‘Cap and collar’ tariff variation mechanisms are one potential way of mitigating this price risk faced by customers under price cap regulation. However, subject to design of the hybrid tariff variation mechanism, it would also absolve distributors of their volume risk.<sup>34</sup>

In our customer engagement, we explored options on the tariff variation mechanism, including price cap, revenue cap and hybrid which involves sharing of volume risk between JGN and our customers. Customers were not supportive of moving to a revenue cap but indicated that they were willing to bear some volume risks, acknowledging the impact of future uncertainty on prices. We discuss this further below.

In light of customer feedback, and AER concerns about price caps, we have explored a hybrid tariff variation mechanism. A hybrid mechanism shares the volume risk between JGN and its customers and also seeks to address the AER’s concerns around sustained volume outperformance, by limiting the outperformance JGN can earn.

<sup>34</sup> AER, Final decision: Review of gas distribution network reference tariff variation mechanism and declining block tariffs, October 2023, page 7.



## Hybrid tariff variation mechanism

There are many ways that a hybrid tariff variation mechanism might be applied. To explore the application of a hybrid with our customers, we considered the following features:

### Cap and collar



- **Limiting the volume under/over performance to a certain tolerance level (this will involve introducing a cap-and-collar of an agreed threshold above and below the forecasted volume)** When actual volumes are within the agreed threshold (above or below) of forecast volumes in a given year (measured as a percentage of the total volume), no adjustment is required to haulage tariffs in future years. This is similar to how we update tariffs currently.

### Sharing of risk



- **Sharing of risk beyond the tolerance level (sharing risk between Jemena and the customer related to the under/over performance)** – if actual volumes are higher/lower than the tolerance level or agreed threshold, then the revenue earned above/below the threshold level will be shared with the customers. This is a new feature that allows sharing of volume risk with customers beyond a certain threshold.

We tested three different hybrid tariff variation mechanism options with customers:

- **Hybrid option 1 (Cap & collar)** – JGN would bear all volume risk up to a tolerance or threshold level (cap-and-collar) and customers would bear all volume risk beyond the tolerance level. For example, if a volume outperformance or underperformance is above the agreed threshold level the revenue over or under-recovery will be borne by the customers. That is, if there is volume outperformance above the threshold level customers will receive a price reduction in future years and if there is underperformance recovery then customers will need to pay higher prices.
- **Hybrid option 2 (Sharing mechanism)** – There is no tolerance or threshold level specified and all volume risk is shared equally between JGN and customers. For example, if there is volume outperformance relative to forecast, then half the benefit of that outperformance will go to customers through lower prices in future. If there is volume underperformance then customers will need to fund half of the under-recovered revenue through higher prices in the future.
- **Hybrid option 3 (Cap & collar + sharing mechanism)** – JGN would bear volume risk up to a tolerance level, and JGN and customers to share the volume risk 50:50 beyond the tolerance level. This is a middle scenario to the above two options. If there is volume over or under performance up to the agreed threshold level, the risk of revenue over/under recovery will be borne by JGN. This is similar to the current price cap and protects the customers up to a threshold level. Beyond the threshold level, any volume over or under performance will be equally shared between JGN and customers. This lowers the incentive for JGN to increase volumes compared to the incentive under the price cap.

### Testing hybrid options with customers

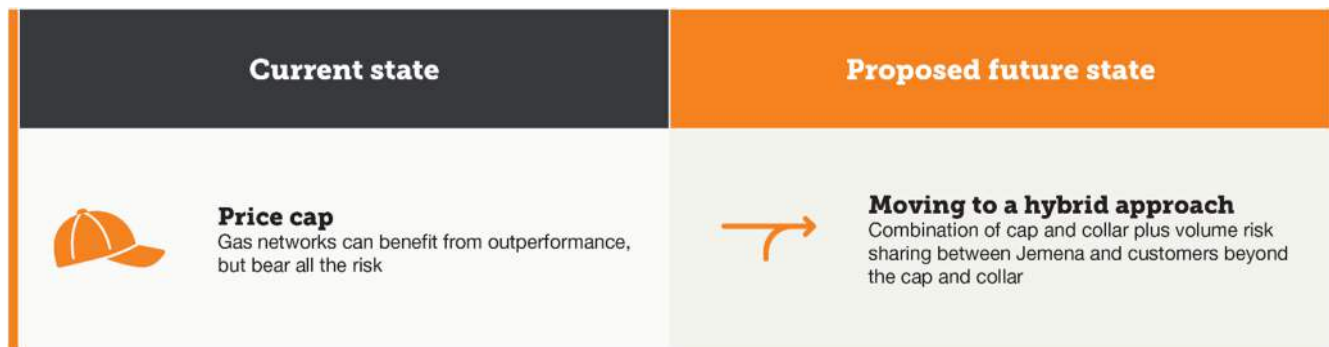
In our Residential Tariffs Customer Forum, participants considered how the different forms of hybrid tariff variation mechanism options might impact customers. Based on the impacts most customers voted for Hybrid option 3 as their preferred option.

Hybrid option 3 received the most Tariff Forum participant votes (88%), via the L-scale, compared to the other two options. Small business customers voted for options 1 and 3 equally (and more than option 2). Customers noted that hybrid option 3 seems the fairest option as in the first instance risk is borne by JGN and only above a certain threshold will risks be shared with customers. Some customers also consider that once the mechanism is stable over time there may be an opportunity to explore if 50:50 sharing beyond the tolerance level could be modified to a different sharing ratio. They also consider this option to have the least price volatility compared to the other two options.

### Proposed tariff variation mechanism

Based on the feedback received through our customer engagement and stakeholder feedback received by the AER in response to its issues paper, we are proposing to move to hybrid option 3. This option provides a measured move away from a price cap and balances affordability and environmental concerns. This option can also address the AER's issue around gas networks earning higher than forecast revenues by limiting volume outperformance, provide benefits of stable prices relative to a revenue cap tariff variation mechanism and allow for sharing of benefits and costs with customers.

Figure 9.2: Proposed change to tariff variation mechanism for haulage service



To illustrate how a proposed hybrid tariff variation mechanism would operate, we provide two stylised examples below.

**Figure 9.3: Examples of proposed hybrid option**

*For simplicity we show 2 illustrative options—3% and 5%—of agreed tolerance or threshold level. We will consult with customers and stakeholders on the threshold prior to submitting our proposal to the AER in June 2024.*

**Example 1 – the actual volume is 5% lower than the forecast approved by the AER**

**Case 1: Threshold of 5%**

Because the volume difference is within the 5% agreed threshold level, JGN bears the full revenue loss of underperformance. Customers are not impacted. This is similar to the current price cap mechanism.

*Sharing of revenue loss from volume differences within the agreed threshold*

Within ±5%	JGN	-5%
Outside ±5%	JGN	0%
	Customers	0%

**Case 2: Threshold of 3%**

The volume under performance is more than the 3% agreed threshold level. JGN bears the revenue loss of the 3% volume underperformance. For the volume underperformance outside the threshold level of 3%, JGN bears 1% and customers share 1% through higher prices in future years.

*Sharing of revenue loss from volume differences higher than the agreed threshold*

Within ±3%	JGN	-3%
Outside ±3%	JGN	-1%
	Customers	-1%

**Example 2 – the actual volume is 5% higher than the forecast approved by the AER**

**Case 1: Threshold of 5%**

Because the difference in volume is within the 5% agreed threshold level, JGN retains the full revenue gain of outperformance. Customers are not impacted. This is similar to the current price cap mechanism.

*Sharing of revenue gain from volume differences within the agreed threshold*

Within ±5%	JGN	5%
Outside ±5%	JGN	0%
	Customers	0%

**Case 2: Threshold of 3%**

The 5% difference in volume is higher than the 3% threshold. JGN retains the revenue gain up to the 3% threshold similar to current price cap. For the additional 2% above the threshold level, JGN retains 1% and customers share 1% through lower prices in future years.

*Sharing of revenue gain from volume differences higher than the agreed threshold*

Within ±3%	JGN	3%
Outside ±3%	JGN	1%
	Customers	1%

### Proposed changes to our volume market tariff structures

To simplify our tariff structure and to improve cost reflectivity we are proposing the following changes to the volume market tariff structures:

- **Remove differentiation between country and coastal customers** – we currently apply separate tariff categories for country and coastal customers. However, this differentiation is not adopted by retailers and not passed onto customers. To help simplify our tariff structures, we are proposing to remove this distinction between our country and coastal customers. As retailer tariffs do not currently distinguish between country and coastal customers, this change is not expected to impact any volume market customers.
- **Reduce the number of tariff blocks from six to four** – some of our tariffs across consumption blocks are currently only marginally different providing us with an opportunity to reduce the number of blocks. While this will lower our ability to rebalance tariffs it will remove redundancy where the tariffs are similar across blocks. This change also supports simplification of our tariff structures.

- **Differentiate between large and small/medium customers** – Our large volume market customers—those consuming 200 GJ or more—currently pay a very small fixed charge. For example, the fixed charge of a typical bill for a commercial customer consuming 300GJ represents only 3% of the total network bill. This compares to 24% fixed charge component for a typical 15GJ residential customer. We are proposing to raise the fixed charge for our large volume market customers to better reflect the nature of the fixed costs we incur in delivering our haulage service. We propose to increase the fixed charge proportion of the typical large customer bill to 20% to bring it in line with that of a typical residential customer.

Our proposed changes to the block structure are outlined in Figure 9.4.

Figure 9.4: Proposed change in our tariff block structure for volume market customers

Tariff class	Block 1	Block 2	Block 3	Block 4	Block 5	Block 6
VI - Coastal	0 - 7.56	7.56 - 15	15 - 33	33-1002	1002-5004	5004+
VI - Country						
VB - Coastal						
VB - Country	0 - 250	250 - 500	500 - 1000	1000+		

Tariff class	Block 1	Block 2	Block 3	Block 4
VI - Less than 200GJ	0 - 7.56	7.56 - 15	15 - 33	33 +
VI - High consumption (>= 200GJ)	0 - 300	300-1000	1000-5000	5000 +
VB	0 - 250	250 - 500	500 - 1000	1000+

Note: The numbers represent the range of GJ consumption in the block

### Our demand market tariff structures

While we are not proposing to make any changes to our demand market tariff structures, we plan to gradually increase the revenue proportion we recover from our demand customers. This enhances the cost reflectivity of our tariffs. Concurrently, we will provide these customers with an opportunity to reset their chargeable demand to reflect their use of our network which will lower their bills if their gas demand is lower.

### Ancillary services

In terms of our ancillary reference services, due to their discrete nature, we consider that it is reasonable to continue to apply a price cap form of control to these services.



### Managing permanent disconnections (abolishment)

In its recent decisions for Victorian gas distribution networks, the AER decided to cap the small customer connection abolishment ancillary reference service tariff at \$220 in real terms over the 2023–28 period, and socialise the balance of small customer abolishment costs up to \$950 across haulage tariffs.<sup>35</sup>

In JGN's current tariff schedule, we have an ancillary reference service charge for the abolishment of customers connections (where the meter capacity is less than or equal to 25m<sup>3</sup>/hr). This charge of \$1,256 is payable by the party requesting the abolishment. This cost includes excavating, clamping and cutting the pipe, welding a cap on the pipe, recording a final meter read and serial number, and purging the connection pipe to remove all traces of gas.

We currently process approximately 4,000 permanent disconnections per year. A permanent disconnection might be required for safety reasons, for example, a knockdown or rebuild of a property, a renovation or redevelopment of a site. Alternatively, if customers remove all their gas appliances, they might choose to disconnect from the gas network altogether.

In light of the AER's decision for Victorian businesses, we engaged with our customers on whether this ancillary service should be charged on an 'user pay' basis (as currently applies for JGN) or partially socialised across the customer base (as per the AER's Victorian decisions).

As part of the package of initiatives considered by the Customer Forum for the Draft 2025 Plan, we asked participants to consider our current approach to permanent disconnections.

In Customer Forum 7, 84% of the Customer Forum voted for maintaining our current approach, with a clear preference for a 'user pays' model. They did not consider it fair for the costs of abolishments to be shared across the customer base.

Small businesses that we engaged with were split on this topic. 84% voted for some sharing across the customer base for permanent disconnections. Their reason for voting this way was because they wanted the cost to be spread more across the customer base and subsidised by JGN or the government. However, some small businesses (16%) felt it should be funded by the individual leaving the network.

Although we recognise different views across the customer base on this initiative, in our Draft 2025 Plan, we are proposing to maintain our current approach for abolishments.

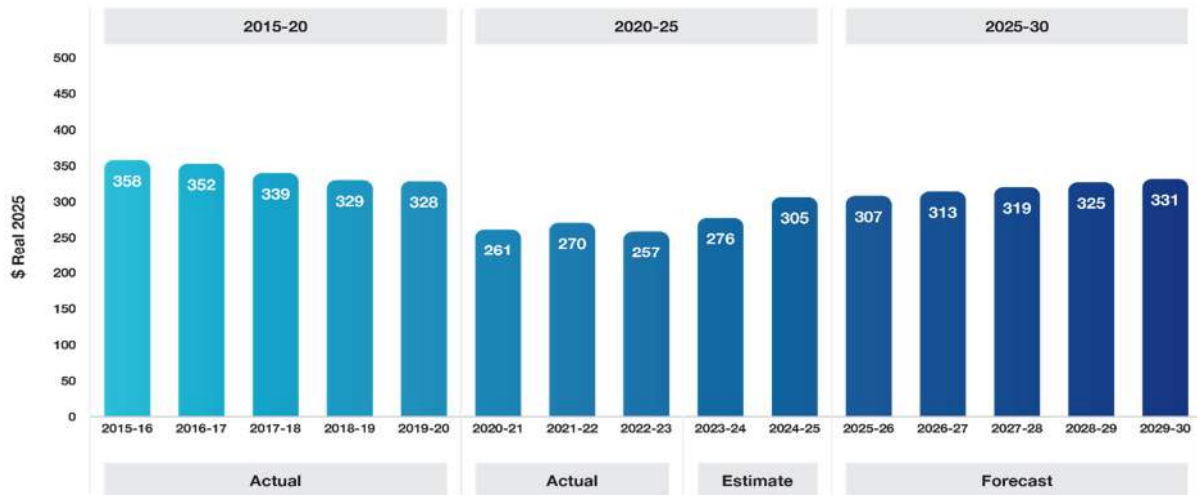
## 9.4 What our Draft 2025 Plan means for prices

Our Draft 2025 Plan will implement a number of initiatives to position us for the future, but also takes into account current cost of living pressures. In formulating these initiatives we considered the plausible future scenarios (chapter 3) and impacts on current and future generations of our customers. Our proposal is measured and aimed to ensure our gas network remains competitive as we transition to a renewable gas network, which is an important attribute contributing to keeping prices lower for remaining customers as demand reduces across the network.

We expect the price impact for a typical residential customer on our network would increase marginally from the current regulatory period into the next, as illustrated in Figure 9.5.

<sup>35</sup> AER, Attachment 9 – Reference tariff setting | Final decision – AGN (Victoria & Albury) Access Arrangement 2023–28, June 2023

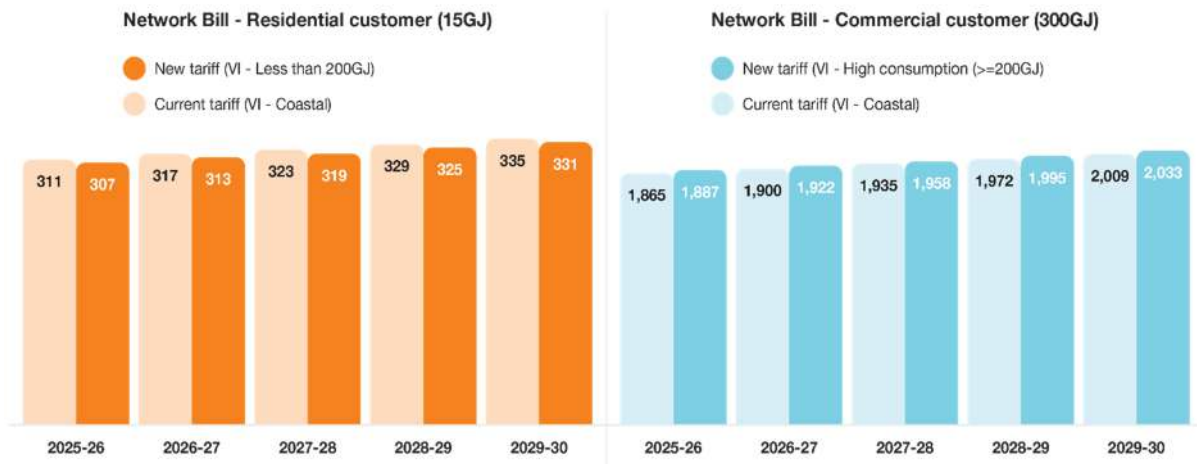
Figure 9.5: Annual network bill for a typical residential customer consuming 15GJ per annum<sup>36</sup>



With the introduction of new tariffs designed to categorise customers based on their consumption levels, the price impacts on residential and commercial customers with varying consumption patterns will diverge. For a typical residential customer with an annual consumption of 15GJ, the network bill is projected to be lower compared to the scenario

where the existing tariff structure continues to apply. Conversely, a typical commercial customer consuming 300GJ annually would experience a higher network bill when compared to the scenario where the existing tariff structure continues to apply. This is illustrated in Figure 9.6 below.

Figure 9.6: Comparison of current and new tariff structures for typical customers



### Questions for your consideration

- Does the risk sharing approach proposed under the hybrid form of control seem fair and balanced?
- Do you have a view on the cap and collar threshold (%)?
- Do you have a view on the 50:50 sharing of volume risk between us and customers beyond the cap and collar threshold?
- Do you think the proposed changes to our tariff structures align with the customer pricing principles outlined such as affordability, stability, and competitiveness?
- Do you think that it is reasonable that we gradually increase the revenue proportion we recover from our demand customers?

36 In the 2020-25 period, a \$207M downward adjustment was made to our 2020-25 building block costs to return revenue over-recovered during the 2015-20 period. Without this downward adjustment, the annual network bill would be higher over the 2020-25 period.