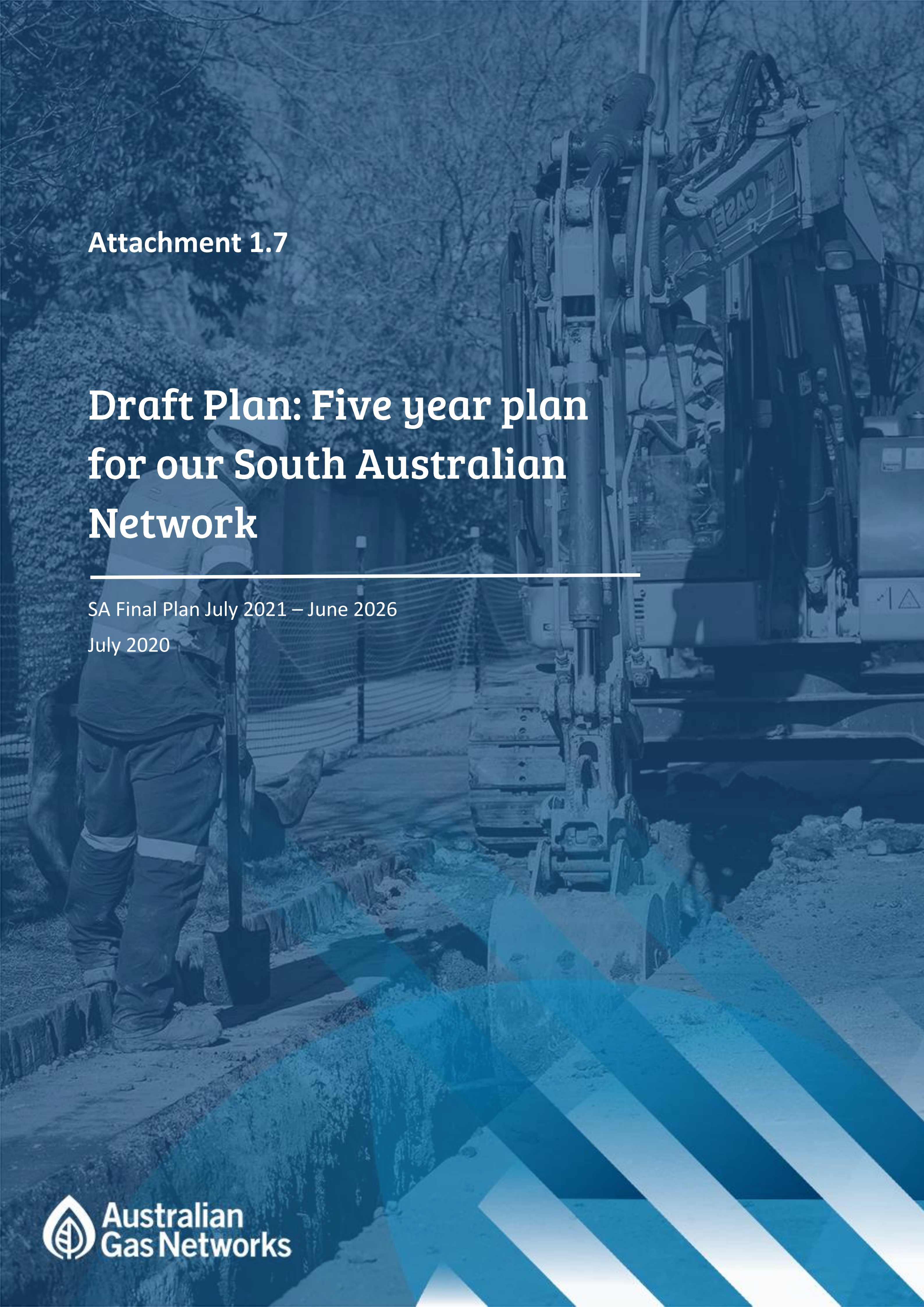


Attachment 1.7

Draft Plan: Five year plan for our South Australian Network

SA Final Plan July 2021 – June 2026

July 2020

Australian Gas Networks

Australian Gas Networks

Five year plan for our South Australian network

July 2021 - June 2026

Draft Plan
February 2020

Contents

We are Australian Gas Networks. We deliver gas safely and reliably to more than 450,000 South Australian homes and businesses every year.

Part of the Australian Gas Infrastructure Group, we own and operate the gas distribution network in South Australia.

We serve residential, commercial and industrial business customers in Adelaide (from Two Wells to Aldinga) and regional centres in the upper North, Barossa, Riverland and South East of the state. We have a strong track record of service to customers in South Australia, dating back more than 150 years.

We understand that affordability, reliability and sustainability of energy services are important to South Australians, both now and in the future.

With this in mind, our future plans will be developed by ensuring we listen, understand and respond in the interests of our customers.

We are pleased to present our Draft Plan for the South Australian gas distribution network for the 2021/22 to 2025/26 Access Arrangement (AA) period.

Our Draft Plan sets out our plan for the next AA period and underpins our commitment to offer affordable, safe and reliable services to our customers.

Australian Gas Networks (AGN) is part of Australian Gas Infrastructure Group (AGIG), one of Australia's largest energy infrastructure businesses. Our South Australian distribution network plays a crucial role in the economy and community more broadly in serving the energy needs of households, small businesses and industry in Adelaide and the regions.

Our intention is that customers are at the centre of our plans. This will ensure that we deliver for our customers now and into the future. Our plan seeks to clearly outline what we have delivered for our customers in the current) AA period (2016/17 to 2020/21) and what we will deliver in the next AA period (2021/22 to 2025/26).

In the current AA period we have demonstrated our commitment to delivering on the safety, reliability and service expectations of our customers. In 2018/19 we achieved:

- our highest ever customer satisfaction rating 8.4 out of 10; and
- excellent public safety performance – responding to 99% of publicly reported leaks within 2 hours;
- very high reliability – one hour off supply every 40 years on average; and
- 1,000 km of mains replaced since 2016 – future proofing our network.

Our Draft Plan outlines how we will continue to deliver on these expectations. It follows more than 12 months of engagement with our customers and stakeholders. Our engagement activities have included a series of workshops, ongoing engagement with our stakeholder reference groups, and co-design workshops.

Three key themes have emerged from this engagement:

- not surprisingly affordability and price remain the key issue for the majority of our customers;
- customers want to ensure expenditure and investment remain at levels necessary to maintain the safety and reliability of the network; and
- the future of gas is a key issue for our customers who want to ensure that the benefits of natural gas continue to be available as South Australia strives towards a carbon neutral economy.

Our Draft Plan delivers on these themes. An upfront price cut of 8% from 1 July 2021 follows on from a 23% cut to our prices five years earlier. Meanwhile our expenditure will maintain the safety of the network, including through around 860 km of mains replacement.

We also outline the initial investments that will position the South Australian network for the future. A recurring theme from our customer and stakeholder engagement was around emission reductions, and specifically what we are doing to decarbonise energy supply.

Further, emission reductions are increasingly driven by government policy and technology as well as customer preferences. South Australia has now proposed to reduce its emissions to 50% of 2005 levels by 2030. It is therefore vitally important that gas networks remain at the forefront of this transition. That is why we are presenting proposals to integrate green hydrogen and biogas into our network.

We are confident about the future of the network – it represents a significant investment that can deliver safe, reliable and affordable energy with zero emissions in the future.

However, the transition underway in the energy sector is not without risks for gas networks – risks over and above those being faced by electricity networks. Yet gas and electricity networks receive effectively the same rate of return. In this light, the prices we propose represent exceptional value for our customers and the South Australian economy.

In developing the Draft Plan our objectives are to develop a plan that delivers for current and future customers, is underpinned by effective stakeholder engagement, and is capable of being accepted by our customers and stakeholders.

Publishing the Draft Plan is a key part of our no surprises approach. It helps to ensure that customers remain at the centre of our planning.

I strongly encourage our customers and stakeholders to provide feedback and seek out our engagement activities across South Australia. With your feedback, we can develop and provide a Final Plan to the Australian Energy Regulator in July 2020 reflective of customer and stakeholder needs now and into the future.

Ben Wilson

Chief Executive Officer, Australian Gas Infrastructure Group


Gas Meter

Draft Plan

2021/22 – 2025/26

Customers are at the centre of our planning in South Australia

Our customers and stakeholders value:

- Maintaining a high level of community safety and reliability that our customers expect
- Sustaining our strong track record of customer service
- Keeping costs low, while still investing for the future

8% price cut from 1 July 2021

Lower prices

Our plan from July 2021

Delivering for customers	A good employer	Sustainably cost efficient
43,000 new connections	Top decile employee engagement	Stable operating and capital expenditure
>8.2 customer satisfaction	**>99%** mandatory training compliance	Initial investments to secure the long-term future of the SA distribution network
public leak reports within **2 hours** >95% and 100% compliance with Leak Management Plans	Target Zero Harm across our operations	**860 km** of mains replacement completing the replacement of our highest risk mains

Summary of consultation questions

Throughout this Draft Plan we have highlighted a number of questions for consideration which we are seeking feedback. Your feedback will help us refine our plans, and ultimately put forward a Final Plan that is capable of acceptance by our customers and stakeholders.

Customer and stakeholder engagement	1.	Do you have any feedback on our customer and stakeholder engagement program?
	2.	Have we considered customer and stakeholder feedback and responded appropriately in this Draft Plan?
Pipeline and reference services	3.	Do you think the pipeline and reference services we have proposed are appropriate?
Operating expenditure	4.	Do you support investment in a vulnerable customer assistance program? Do you have any feedback on the activities we have proposed?
	5.	Do you support investment in replacing lost gas with renewable gas to reduce carbon emissions?
	6.	Do you support investment in an education centre and learning program, to help position South Australia as a leader in hydrogen technology?
	7.	Do you have feedback on the activities that an Education centre should perform? For example: • Staffed centre, open to the public, housing hydrogen appliances, information packs etc. • Primary school education program, including regional outreach • Stakeholder centre, open for Government and industry meetings – positioning SA as a leader in the renewable gas space?
	8.	Do you support our approach to forecasting operating expenditure? Is there sufficient information to understand our proposals and the basis of the costs included in our forecast?
Capital expenditure	9.	Do you support our approach to forecasting capex, including our approach to mains replacement in the next AA period?
	10.	Is there sufficient information to understand our proposals and the basis of the costs included in our capex forecast? Is there any other specific information that would assist in the assessment of our proposal?
Capital base	11.	Do you have any comments on our proposed approach to adjust our capital base over the current and next AA periods, including how we have taken into account our mains replacement program?
	12.	Do you consider that the RBA-based approach will produce better forecasts of inflation relative to the Bond Breakeven approach? Are there any other approaches to forecasting inflation that should be used/considered?

Financing costs	13. Do you have any comments on our approach to setting the financing and tax costs in this Draft Plan?
Incentives	14. Do you support our proposal to maintain the opex efficiency benefit sharing scheme EBSS? 15. Do you support our proposal to introduce a contingent capital expenditure efficiency scheme (CESS)? If so, are there any other matters you think should be incorporated into the CESS? 16. Do you think a network innovation scheme should be implemented? If so, what level of funding do you think should be allowed under this scheme; for example $1 per year ($2.5 million), $2 per year ($5 million) and so on? What type of projects should be in scope? 17. Do you think a customer service incentive scheme (CSIS) should be implemented?
Demand	18. Do you consider our approach to forecasting demand to be reasonable? 19. Are there other factors we should consider in developing our demand forecast? For example, are you aware of any potential future energy policy changes that will effect gas demand over the next AA period? 20. The South Australian government has legislated to reduce carbon emissions by at least 60% below 1990 levels. Do you think this target will impact gas demand over the next AA period, and if so, how should this be factored into our demand forecasts?
Revenue and prices	21. Do you support our objectives of maintaining stable credit metrics and aligning revenue with underlying costs in setting our proposed price path? Would you prefer an alternate price path, and if so, on what basis? 22. Do you consider that explicit consideration should be given as to whether a pricing proposal provides sufficient cash flow to maintain the credit rating assumed by the AER in setting the cost of debt? If so, how do you think this assessment should be done – for example, by considering the credit metrics against levels assumed by ratings agencies? If an adjustment to prices is required, how should this be undertaken – for example, through changes in capitalisation or depreciation?
Network access	23. Do you support AGN continuing to standardise terms and conditions across its networks?
Other	24. Is there anything that our Draft Plan hasn't considered that is important to you? 25. Do you have any further comments or feedback on our Draft Plan overall?

1 Plan Highlights

IN THIS CHAPTER:

We have a strong track record of safety, reliability and customer service in the current period.

An upfront price cut for the next AA period of 8% builds on price cuts of 23% delivered at the beginning of the current AA period.

Our Draft Plan outlines the activities and investments we propose to undertake for the 2021/22 to 2025/26 period and the resulting price change for our customers.

Our intention is that customers are at the centre of our plans. Therefore our Draft Plan has been informed by a customer and stakeholder engagement program lasting more than 12 months.

This section highlights how we have developed our Draft Plan, our achievements for the current period and the key elements of our proposal for the next period.

1.1 Developing this plan

We engaged extensively with a diverse range of customers and stakeholders to understand their values, needs and expectations of the services we provide.

Across a series of 14 dedicated customer workshops spanning five locations and 239 participants, we listened and informed our Draft Plan.

In the development of this Draft Plan we have completed stages one and two of our engagement program. Further feedback and engagement activities will help to further refine our Final Plan for submission to the AER in July 2020.

1.2 Our track record

Over the current period we have met the high expectations of our customers and stakeholders, including meeting key safety, reliability and customer service standards set for our business.

Our vision is to continue to deliver quality services that our customers value, be recognised as a good employer and to remain sustainably cost efficient. During the current period we have delivered on that vision, and we aim to continue our progress during the next AA period.

Our key achievements during the current AA period so far are summarised below.

Delivering for customers

- Our customer satisfaction scores have continued to increase, to 8.4 in 2019, our highest score ever.
- Excellent public safety performance – responding to 99% of publicly reported leaks within 2 hours.
- Very high reliability – one hour off supply every 40 years on average.
- We will have connected over 30,000 customers this period, bringing our total customer base to around 450,000.
- 93% of Emergency calls have been answered within 30 seconds, with an average time to answer calls of 8.4 seconds.

A good employer

- The Total Recordable Injury Frequency Rate (TRIFR) has averaged 10.6 across AGN since we began tracking this metric in 2018.
- Employee engagement scores have remained at or near the

top decile for our industry, averaging 76%.

- 99% of compliance training has been completed within the required timeframes.

Sustainably cost efficient

- We will have replaced over 1,000 km of mains in the current period, consistent with the undertaking we gave to our customers and stakeholders.
- The Adelaide CBD mains replacement is on track for completion, which will see all mains classified as high risk in the Adelaide CBD replaced by the end of the current AA period.
- Opex is expected to be 11% below our allowance, the benefits of which are passed onto our customers in our proposals for the next period. These saving reflect one-off benefits from our merger with AGIG in 2017.

1.3 What we will deliver

Our Draft Plan for the next period builds on our strong performance over the current period. The activities and expenditure we propose to undertake in the next five years are summarised below.

Delivering for customers

- We will connect around 43,000 new residential, business and industrial customers.
- We will replace around 860 km of mains, completing the replacement of the highest risk mains in our network.
- We will respond to clear customer and community expectations to commence the transition to a low carbon gas supply.
- We will invest $32 million on projects and programs to continue to meet the service expectations of our customers, including meter replacement, IT and digital services.

A good employer

- We will continue to target zero harm throughout our operations.
- We will maintain top decile employee engagement scores to ensure we remain customer and safety focussed.

Sustainably cost efficient

- Our combined operating and capital expenditure will be maintained at current levels, while our network continues to grow in size and customer numbers.
- We will make the initial investments that will secure the long-term future of the SA distribution network as the state works towards net-zero emissions by 2050.

Overall, our Draft Plan delivers an upfront price cut of 8%, followed by increases of 1.2% per year (before inflation) thereafter reflecting the growth in our regulated asset base. This builds on our price cut of 23% delivered at the beginning of the current period, and means that by 2025/26 customers will be paying around 20% less (before inflation) than what customers paid in 2010/11.

The transition underway in the energy sector is not without risks for gas networks – risks over and above those being faced by electricity networks.

We are confident about the future of the network. Our South Australian network represents a significant investment that can deliver safe, reliable and affordable energy with zero emissions well into the future.

When these risks are taken into account, the prices we propose represent exceptional value for our customers and for the South Australian economy.

Purpose of this plan

Regulatory framework

The National Gas Law (NGL) and National Gas Rules (NGR) provide the framework for the regulation of certain gas pipelines in Australia. This framework is enacted in South Australia through the *National Gas (South Australia) Act 2008*.

In South Australia, the Australian Energy Regulator (AER) is responsible for regulation under the NGL and NGR framework, including the approval of AA proposals and revisions every five years.

The AA contains our proposed reference services and the terms and conditions under which a customer can gain access to the South Australian distribution network.

This includes:

- the services offered on the network;
- the price paid for those services; and
- the non-price terms under which access will be provided.

Our review objectives

Our aim is to develop a plan that:

- ✓ delivers for current and future customers;
- ✓ is underpinned by effective stakeholder engagement; and
- ✓ is capable of being accepted by our customers and stakeholders.

This Draft Plan seeks feedback on our plans for the South Australian distribution network for the five-year period commencing 1 July 2021 (the next AA period). It will inform our Final Plan, which we are required to submit to the AER by 1 July 2020.

The Draft Plan provides our preliminary views on the activities and expenditure we propose to undertake in the next AA period. It includes feedback received to date from our customers and stakeholders

After the opportunity to comment on the Draft Plan, our customers and stakeholders will also have further opportunity to engage as we develop our Final Plan. The AER will also engage with stakeholders through its own process.

How to read this plan

The first six chapters of this document provide an overview of our plans, our business, our stakeholders, our pipeline services and the process we have undertaken to develop a plan that meets our vision.

Each subsequent chapter then steps through the regulatory building blocks that form our required revenue and prices. These are:

- *Operating expenditure* (opex) – the expenditure we require to run our business day-to-day (Chapter 7);
- *Capital expenditure* (capex) – the investment in our assets required to deliver services to our customers (Chapter 8);
- *Capital base* – the total value of our investment in the South Australian network, which we have not yet recovered from customers and therefore need to finance (Chapter 9);
- *Financing costs* – the cost of financing our capital base and meeting our tax obligations (Chapter 10);
- *Demand forecasts* – the total amount of services we forecast our customers will demand over the period (Chapter 11); and
- *Incentive arrangements* – additional rewards and penalties that we consider should be applied to strengthen our efficiency and performance, while promoting the long-term interests of our customers (Chapter 12).

In the last two chapters, we outline how we have calculated the total revenue required, the resulting prices for our services (Chapter 13), and the terms and conditions for access (Chapter 14).

All numbers quoted throughout this Final Plan are dollars of June 2021, unless otherwise labelled.

Next steps

We encourage our customers and stakeholders to provide feedback on this Draft Plan. Your feedback is a key means of achieving our objective of submitting a Final Plan that delivers for our customers and is capable of being accepted.

At the end of each section we have highlighted key questions/issues on which we are seeking your feedback. A full list of the questions posed is also provided at the end of this document.

Your feedback can be provided by 17 April 2020:

- online at gasmatters.agig.com.au
- by mail
- in person

Contact information is provided on the back cover of this document.

2 Our business

IN THIS CHAPTER:

We are one of Australia's largest gas infrastructure businesses.

Our vision and values drive what we do and the way we do it.

We deliver gas safely and reliably to more than 450,000 South Australian homes and businesses every year.

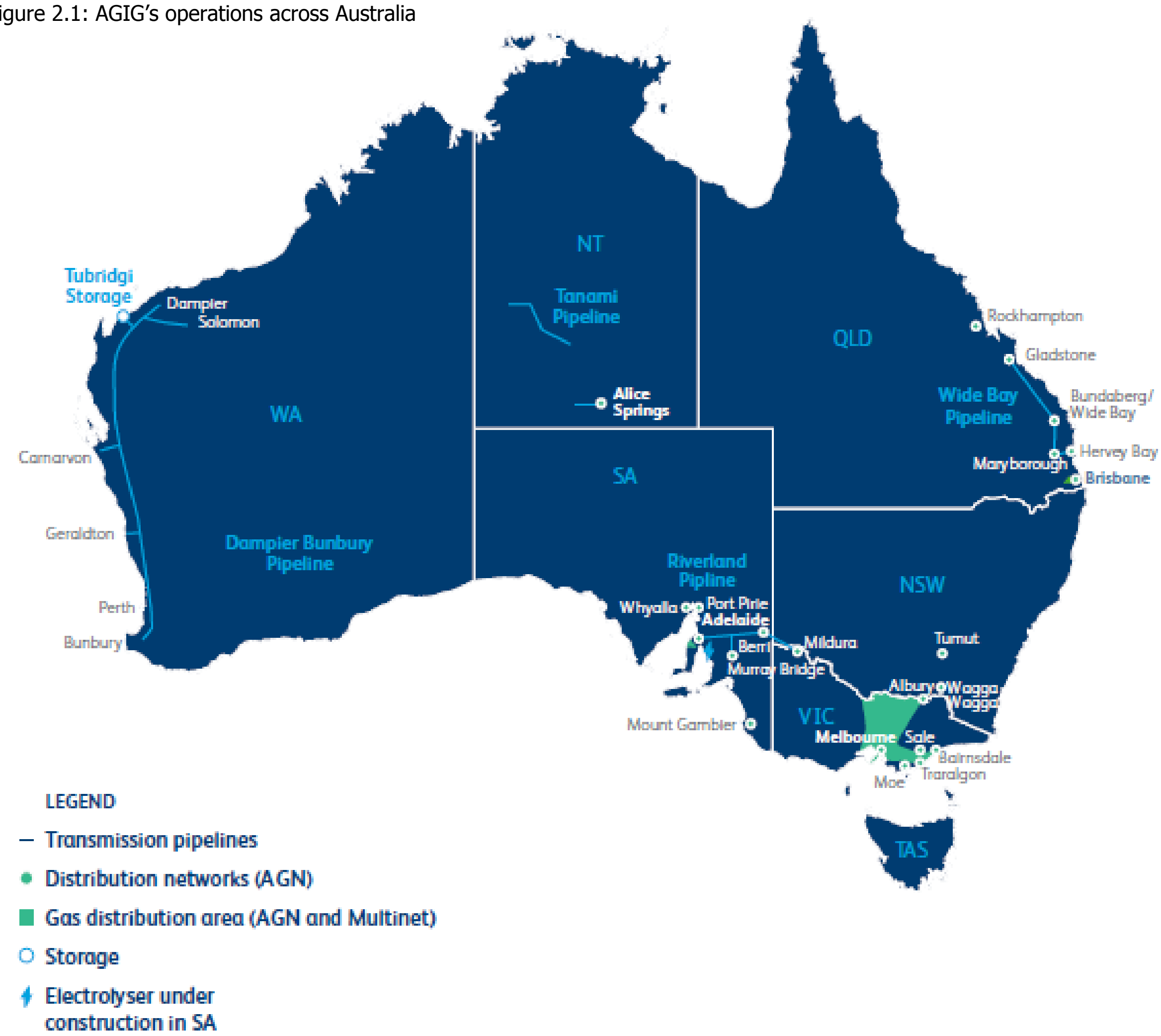
Australian Gas Networks (AGN) is part of the Australian Gas Infrastructure Group (AGIG), one of the largest gas infrastructure businesses in Australia.

2.1 About AGIG

AGIG serves over two million customers across every mainland state and the Northern Territory. Our assets include around 34,000km of distribution networks, over 4,000km of transmission pipelines and 57 petajoules of storage capacity.

In 2017 AGN, Multinet Gas Networks (MGN) and Dampier to Bunbury (DBP) came together to create AGIG. The scale and expertise of AGIG is delivering enhanced benefits to AGN's customers in South Australia in the current AA period as outlined in Chapter 3 below.

Figure 2.1: AGIG's operations across Australia



2.2 Our vision

Our vision is to be the leading gas infrastructure business in Australia. Our definition of leading is to achieve top quartile performance compared to other Australian gas infrastructure businesses across all our key targets.

To help achieve this vision, we have set ourselves the following objectives, which we believe are consistent with being the leading gas infrastructure business in Australia.

- *Delivering for customers* – this means ensuring public safety and the provision of high levels of reliability and customer service.
- *A good employer* – this means ensuring the health and safety of our employees and contractors, and having an engaged and skilled workforce.
- *Sustainably cost efficient* – this means getting the work done within benchmark levels by continually looking for ways to improve cost of service, pursuing growth, and ensuring we are environmentally and socially responsible in the way we provide services.

The activities and investments in this Draft Plan are designed to achieve these objectives. The chapters that follow will discuss our plans in the context of these objectives alongside the requirements of the NGL and NGR.

We also publicly report under our Vision, most recently in our 2018 Annual Review.

2.3 Our values

Our values of respect, trust, perform and one team drive our culture, how we behave and how we make decisions. As the owner and operator of critical infrastructure providing essential services to Australians, we must ensure we act with integrity and do the right thing for current and future generations.

Our vision

To be the leading gas infrastructure business in Australia. By achieving top quartile performance on our targets.

Delivering for customers

- Public safety
- Reliability
- Customer service

A good employer

- Health and safety
- Employee engagement
- Skills development

Sustainably cost efficient

- Working within industry benchmarks
- Delivering profitable growth
- Environmentally and socially responsible

Our values

Drive our culture: how we behave and how we make decisions.

Perform

We are accountable to our customers and stakeholders, we are transparent on our performance and we deliver results. We continously improve by bringing fresh ideas and constructive challenge.

Trust

We act with integrity, we do the right thing, we are safe guardians of essential Australian infrastructure. We act in a safe and professional manner.

Respect

We treat our customers and our colleagues the way we would want to be treated, and we embrace and respect diversity.

One Team

We communicate well and support each other, and we are united behind our shared vision.

2.4 Delivering for customers first

A central element of AGIG's vision is to deliver for our customers. We know that if we do not deliver for our customers on safety, reliability, customer service, price and sustainability they will pursue other energy solutions.

Furthering our commitment to put customers at the centre of our business, we are proud to be a founding member of the Energy Charter – giving extra visibility and accountability to this commitment.

This commitment reflects our ongoing practice of engaging with customers and stakeholders, including publication of a Draft Plan prior to formal lodgement of our Final Plans with regulators. In developing this Draft Plan, we have engaged with our customers through several activities. This engagement process has enabled customers and other stakeholders to inform and shape our proposals. The outcomes of this process are explained throughout this document, while the stakeholder engagement program is detailed in Chapter 5.

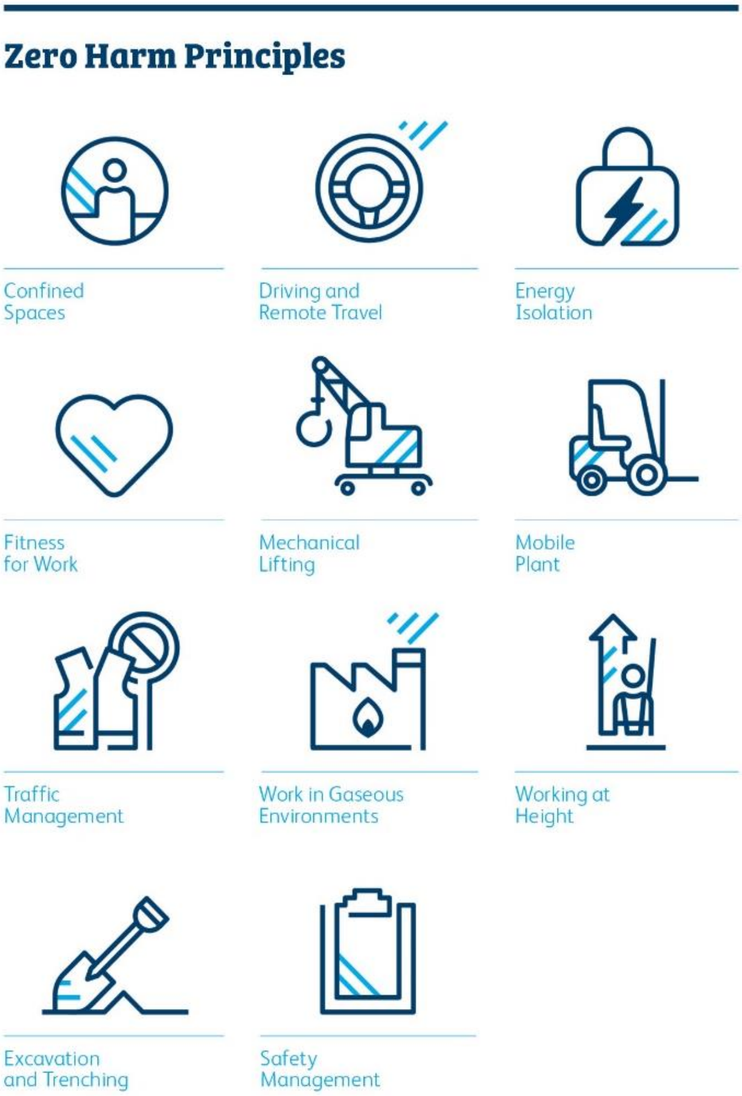
2.5 Zero Harm

Maintaining the safety of our workforce and the public is always front and centre in all our activities. When developing our Final Plan and the work programs that underpin it, our aim is to do everything we can to meet the obligations of our safety case and asset management strategies.

We are continually striving to achieve Zero Harm and have comprehensive health and safety policies, procedures and training that support the delivery of this ambition.

Our Zero Harm Principles (shown in Figure 2.2) highlight areas of risk in our operations where we have non-negotiable rules for our staff and contractors to follow. These are essential to keep our workforce and the public safe. They also help us create a strong safety culture where every employee is personally committed to managing health and safety.

Figure 2.2: Our Zero Harm Principles



2.6 The gas supply chain

AGIG owns and operates gas infrastructure, including transmission pipelines, distribution networks and gas storage facilities across Australia. Our assets play an important role in the safe and reliable supply of gas to customers at various parts of the gas supply chain. Key components of the gas supply chain include upstream production and processing, transmission, distribution, storage and downstream consumption.

Our customers purchase gas from retailers, which is delivered directly to them by our South Australian distribution network.

2.7 Our role in South Australia

Natural gas plays a pivotal role in South Australia providing a reliable source of energy for homes, businesses and power generation. Gas represents almost 40% of the total energy consumption in the state.

Figure 2.3 shows the location and key features of our South Australian distribution network. The network is more than 8,100 km long, serving residential, commercial and industrial business customers in Adelaide (from Two Wells to Aldinga) and regional centres in the Upper North, Barossa, Riverland and South East of the state.

AGIG is also at the forefront of the emerging hydrogen industry in Australia through our investment in Hydrogen Park South Australia (HyP SA). HyP SA is a key part of our vision to be environmentally and socially responsible, by developing and implementing a pathway to zero emissions for our South Australian distribution network.

More information on HyP SA and our low carbon journey is available in Boxes 2.1 (page 22) and 4.1 (page 32).

Our Services

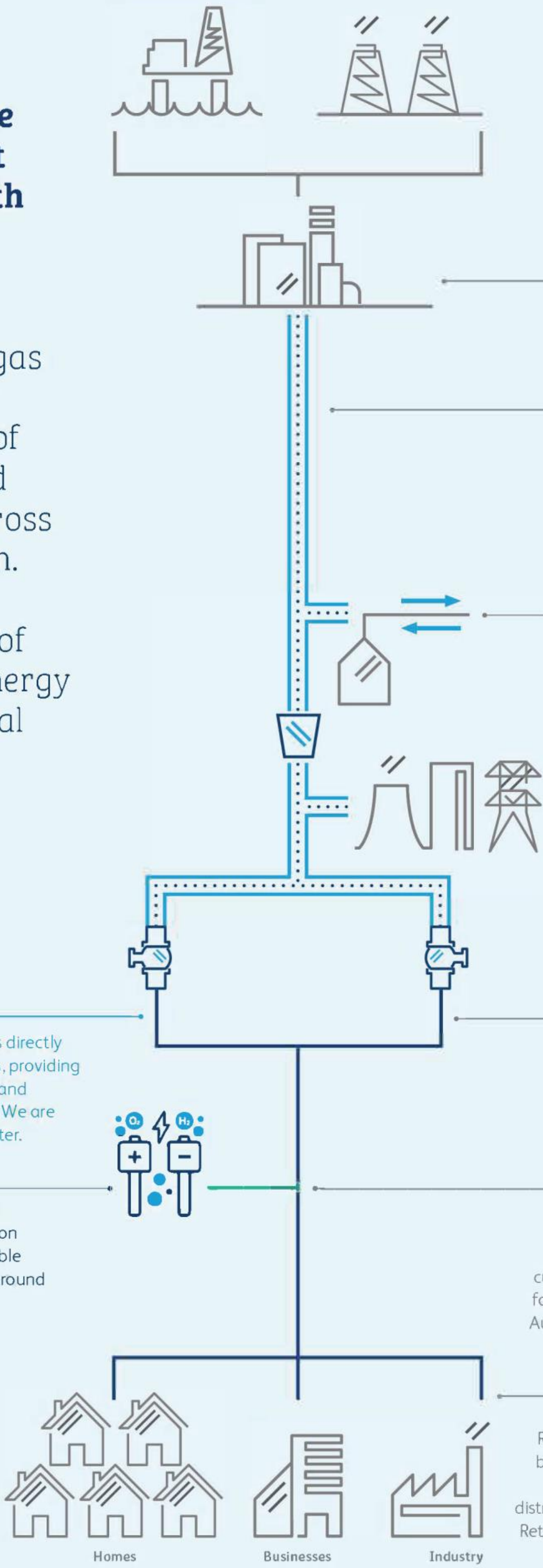
In South Australia we own and operate infrastructure that delivers gas to South Australian homes and businesses.

We do not own the gas in our networks, we deliver it on behalf of energy retailers and large customers across the gas supply chain.

We serve the needs of producers, major energy users, and residential and business users.

Our **distribution networks** deliver gas directly to homes and small business customers, providing essential energy for hot water, heating and cooking for over two million customers. We are also responsible for reading the gas meter.

Our **renewable gas facility** Hydrogen Park South Australia will begin production in mid-2020. We will supply this renewable hydrogen blended with natural gas to around 700 customers.



AGN Services
Non-AGN Services

The Gas Supply Chain

The process in which gas is produced and used; from the field to users.

Production and processing
Onshore and offshore gas fields are drilled to access gas reserves and gas is processed to specification.

Transmission
Transmission pipelines are large high-pressure pipelines which carry gas from the gas fields/ processing plants to key markets (large users and distribution networks). At the end of transmission pipelines pressure is reduced before it enters the distribution network.

Storage
Gas storage facilities are used to balance fluctuations in gas demand.

Large users and power generation
Most large gas users such as industrial facilities and power generators connect directly to transmission pipelines to source gas for their operations.

Distribution
Low-pressure gas from transmission pipelines is distributed via a network of pipelines in towns and cities to customer sites.

Renewable gas
The gas sector's vision for the future includes supplying renewable/carbon-neutral gas to customers. Biomethane or renewable hydrogen facilities are currently under construction across Australia, with first renewable gas injection in to distribution networks expected in 2020.

Retail
Residential, commercial and industrial customers buy gas from retailers. Retailers contract with gas producers, gas transmission pipelines and gas distribution networks to enable supply to customers. Retailer's bill customers for providing these services.

South Australian Gas Infrastructure / Network

Box 2.1: Planning for our low carbon future

Our network is on the pathway to a cleaner energy future. We will achieve this by using renewable or carbon neutral gas, such as hydrogen and biomethane.

The energy sector is rapidly changing

Since the beginning of the current AA period, there has been significant change in the energy sector with global, national and state level commitments to reducing emissions rapidly.

To protect our climate, environment and the prosperity of future generations, there is a growing recognition that cleaner energy sources with zero or net zero emissions need to replace existing sources from fossil fuels by 2050. More importantly, governments, businesses and customers are rapidly shifting to cleaner forms of energy in response.

The Paris Agreement sets the goal for action across the globe, including in Australia, to limit global temperature increases to well below 2ºC and preferably limiting the increase to 1.5ºC.

In Australia a number of policies are of particular importance in achieving this goal. In particular:

- the Commonwealth has committed to reducing emissions by 26-28% below 2000 levels by 2030; and
- the South Australian Government is working towards net zero emissions by 2050, and has recently adopted a target of 50% below 2005 emissions by 2030.

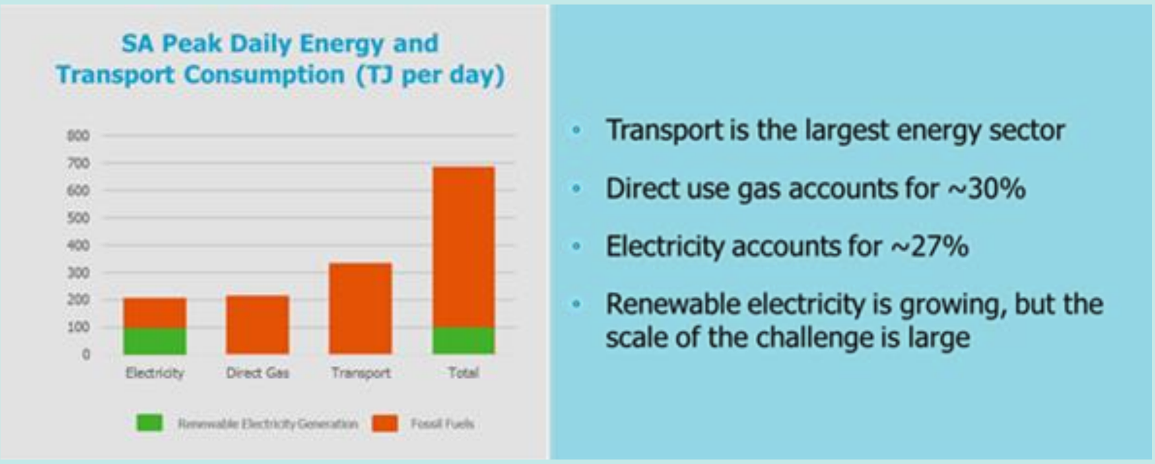
The force of the transition underway is particularly evident in the increasing uptake of renewable electricity – reaching 51% of the electricity produced in South Australia in 2018. While the transition to cleaner forms of energy is underway, it is clear more needs to be done, and we need to play our part.

To achieve net zero emissions will require a shift in all energy use, not just electricity. And it is clear that gas is essential to our economy and modern lifestyles.

Figure 2.3 shows that renewable electricity and electricity overall represents only a small portion of our total energy use. Gas and transport fuels provide a significant portion of total energy consumption.

We recognise that if South Australia is to meet its emission reduction targets we need to focus on large-scale decarbonisation of the entire energy supply chain, including gas delivered by our South Australian distribution network. We need options beyond electricity if customers are to receive clean and reliable energy at the lowest possible cost.

Figure 2.3: South Australia's daily energy consumption 2015/16 – 2017/18



To achieve net zero emissions will require a shift in all energy use, not just electricity. And it is clear that gas is essential to our economy and modern lifestyles.

Customers like the benefits of gas and want it to continue to play a role in achieving net zero emissions

Our customers like gas and the benefits it brings – comfort, convenience and reliability. As a result, the number of gas connections on our South Australian network continues to grow – from 442,000 in 2016/17 to 454,000 in 2018/19.

In our stakeholder engagement program it has been clear that customers recognise the need to reduce emissions. Customers expect AGN to find solutions that maintain the benefits of gas and also reduce emissions.

"Climate change needs to be addressed by all businesses but most importantly by a large network."
Customer, Phase 2 Workshop

Gas networks will be part of the solution by using carbon-free or carbon-neutral gases such as hydrogen and biomethane in place of natural gas. These two renewable gases are described in more detail below.

Gas, the Natural Choice for the Future

While natural gas has lower emissions than electricity from fossil fuels, for our gas distribution network to be part of the long-term transition to zero emissions, we need to develop and invest in alternative fuels. In particular, we are focussing our efforts on hydrogen and biomethane.

From natural gas, to biomethane to hydrogen, it is clear that there is a role for gas in the future. It is reliable, customers like using it and it will become the lowest cost option to achieve emissions reductions.

The cost of producing hydrogen through electrolysis is declining rapidly as noted in the CSIRO *National Hydrogen Roadmap.* At a project level costs are falling even faster than expected by CSIRO.

Based on these reductions research by Deloitte and used as part of the Hydrogen Strategy Group's report to the Council of Australian Governments, suggests using hydrogen to replace existing uses of natural gas is 40% cheaper than electrifying these same uses of energy. Renewable gases like hydrogen and biomethane maintain the benefits for customers of natural gas with none of the emissions that contribute to climate change.

Renewable gases can also be used to lower emissions from other sectors like transport, industry and electricity generation. The National Hydrogen Strategy, which was released in December 2019, recognised the enormous potential of hydrogen for domestic use and export.

"Our vision is a future in which hydrogen provides economic benefits to Australia through export revenue and new industries and jobs, supports the transition to low emissions energy across electricity, heating, transport and industry, improves energy system resilience and increases consumer choice." Dr Alan Finkel, Australia's Chief Scientist

South Australia has great potential to harness the benefits of a hydrogen economy. The State's renewable electricity resources, expertise in energy export and gas infrastructure position us well to decarbonise our own systems as well as global markets. Importantly a new hydrogen economy will translate to new jobs and growth.

"Hydrogen offers an opportunity to ensure that the transition to cleaner energy is affordable and reliable for South Australian consumers. Once produced using renewable energy, hydrogen can be blended into gas networks, used in transport, or reconverted back to grid electricity when needed." South Australian Hydrogen Action Plan, Government of South Australia, September 2019.

Hydrogen can be used much like natural gas to heat homes, power vehicles and produce electricity, but importantly when burned it produces only water vapour and energy as heat, with no carbon emissions. If produced from water using electrolysis powered by renewable electricity hydrogen is zero emissions. Blended with natural gas, hydrogen is likely to require no need for modification to existing appliances or the network. However, higher volumes will require some modification to account for the different characteristics of hydrogen and methane.

Biomethane is the net-zero emission gaseous fuel recovered from a wide range of renewable sources, such as wastewater, food waste and landfill. Because the gas is recovered from other sources (preventing it from entering the atmosphere), it can be a source of net zero emissions. More importantly, biomethane can be produced to have much the same composition as natural gas today, meaning it can be injected into our networks with no modification to the network or user appliances.

3 Our track record

IN THIS CHAPTER:

In 2019 we achieved our highest ever customer satisfaction score of 8.4.

We will connect over 30,000 customers this period, bringing our total customer base to around 450,000.

We have completed or are on track to complete major projects including the Adelaide CBD mains replacement.

In the 2016/17 to 2020/21 period we have continued to deliver the strong safety, reliability and service standards expected by our customers.

Our focus in the current period has been on maintaining the safety and reliability of the network, improving our responsiveness to customer needs, and reducing costs.

In accordance with our vision, our aim is to be the leading gas infrastructure business in Australia by achieving top quartile performance on all of our key targets.

Our activities throughout the current period have been guided by our key objectives of delivering for customers, being a good employer and remaining sustainably cost efficient. Figure 3.1 below summarises our performance in the current period to date against our vision.

Overall, we have met the key safety standards set for the business and delivered the major outputs set by the AER.

3.1 Delivering for customers

We deliver for customers by maintaining public safety, reliability and customer service standards. In the current period to date:

- excellent public safety performance – responding to 99% of publicly reported leaks within 2 hours;
- very high reliability – one hour off supply every 40 years on average;
- 93% of Emergency calls have been answered within 30 seconds, with an average time to answer of 8.4 seconds; and
- customer satisfaction scores have continued to increase, to 8.4 in 2019, our highest score ever.

3.2 A good employer

To be a good employer we focus on the health, safety, engagement, skills and training of our workforce. In the current period to date:

- the TRIFR has averaged 10.6 across AGN since we began tracking this metric in 2018;
- we have introduced a number of health and safety initiatives including annual zero harm workshops, a HSE culture model and reporting, and HSE recognition awards;
- employee engagement scores have remained at or near the top decile for our industry, averaging 76%; and
- 99% of compliance training has been completed within the required timeframes.

Figure 3.1: Our performance against our vision in current period (2016/17 to date, with forecast performance to the end of the period where applicable)

Vision

Delivering for customers

Which means

- Public safety
- Reliability
- Customer service

Our performance 2016/17 to date

- Excellent public safety performance – responding to 99% of publicly reported leaks within 2 hours
- Very high reliability – one hour off supply every 40 years on average
- 93% of emergency calls answered within 30 seconds, and an average response time over the period of 8.4 seconds
- 100% of leak surveys completed
- Customer satisfaction survey scored an average of 7.9, reaching 8.4 in 2019, our highest score to date
- Around 8,000 new connections per annum, with 99% complete within the required 20 days
- The proportion of complaints resolved within two days has increased over the period to 88% in 2019

Vision

A good employer

Which means

- Health & Safety
- Employee engagement
- Skills development

Our performance 2016/17 to date

- Total Recordable Injury Frequency Rate (TRIFR) averaging 10.6 since we began tracking this metric in 2018
- Employee engagement annual average score of 76%, remaining at or near the top decile every year
- Compliance training: 99% completion

Vision

Sustainably cost efficient

Which means

- Working within industry benchmarks
- Delivering profitable growth
- Environmentally and socially responsible

Our performance 2016/17 to date

- Mains replacement: on track to deliver over 1,000 km consistent with the benchmarks set for the current period
- Operated the network within the benchmarks for opex and capex set for the business
- On track for Adelaide CBD mains replacement

3.4 Sustainably cost efficient

To be sustainably cost efficient we focus on working within industry benchmarks, delivering profitable growth and being environmentally and socially responsible. In the current period:

- we will deliver over 1,000 km of replacement of our aging mains, consistent with that expected for this period;
- Adelaide CBD mains replacement is on track for completion, which will see all mains classified as high risk replaced by the end of the current AA period;
- opex is expected to be 11% below our allowance, the benefits of which are passed onto customers in our proposals for 2021/22-2025/26; and
- $12 million was invested to upgrade the Southern metro network and to connect McLaren Vale and other new developments.

4 What we will deliver

IN THIS CHAPTER:

We will continue to deliver for customers in the next AA period connecting around 43,000 new customers.

We will replace around 860 km of mains, completing the replacement of the highest risk mains in our network.

An upfront price cut of 8% builds on price cuts of 23% delivered at the beginning of the current period.

By 2025/26, customers will be paying nearly 20% less (before inflation) than what customers paid in 2010/11.

This Draft Plan reflects our vision to be the leading gas infrastructure business in Australia, continuing to deliver on the priorities of our customers – affordable, safe and reliable services now and into the future.

Customers have been at the centre of our planning for the next AA period. Based on their feedback we continue to focus on providing high levels of community safety, network reliability and customer service, at an affordable price.

Our Draft Plan presents further reductions in our prices by investing efficiently in our assets and operations. Highlights of what we will deliver are included in Figure 3.1 and described in more detail in the sections that follow.

4.1 Delivering for customers

Delivering for our customers means ensuring public safety and high levels of reliability and customer service.

Our customers expect that we maintain the safety and reliability of the network. In the next period we will deliver for customers by:

- responding to public leak reports within 2 hours more than 95% of the time and repair leaks within the timeframes set by our Leak Management Plan 100% of the time;
- deliver customer satisfaction scores at or above 8.2;
- laying reticulation mains and services, and installing meters, to connect around 43,000 new residential, business and industrial customers;
- replacing a further 860 km of old cast iron, unprotected steel and first-generation plastic pipes. We will replace all of our old cast iron mains by the end of the next period, which is a significant safety milestone;
- responding to customer and community expectations to commence the transition to a low carbon gas supply;
- $32 million on projects and programs to continue to meet the service expectations of our customers, including:
  - our meter replacement program ($19 million);
  - investment in our IT systems that support our customer service functions ($8 million);
  - providing more digital services and a greater variety of communication channels ($5 million).

Figure 4.1: Our performance targets for the 2021/22 – 2025/26 period

Vision

Delivering for customers

Which means

- Public safety
- Reliability
- Customer service

Our performance targets for 2021/22 – 2025/26

- 90 % of emergency calls answered within 10 seconds
- > 95 % of public leaks responded to within 2 hours
- 100 % of high priority leaks repaired in timeframes set out in our leak management plan
- 100 % of leak surveys completed to time
- Customer satisfaction survey score above 8.2
- Around 43,000 new connections over the period, with more than 98 % complete within the required 20 days
- 80 % of complaints resolved within two days

Vision

A good employer

Which means

- Health & Safety
- Employee engagement
- Skills development

Our performance targets for 2021/22 – 2025/26

- Total Recordable Injury Frequency Rate (TRIFR): <7
- Employee engagement remaining at or near the top decile every year
- Compliance training: 99 % completion

Vision

Sustainably cost efficient

Which means

- Working within industry benchmarks
- Delivering profitable growth
- Environmentally and socially responsible

Our performance targets for 2021/22 – 2025/26

- Around 860 km of mains replacement, comprising our low pressure and some early generation HDPE higher pressure mains. This program will see the removal of all of our old cast iron mains, a significant safety milestone
- Providing an initial price cut of 8 % with a 1.2 % increase per year thereafter, building on the price cut delivered this period.

4.2 A good employer

Being a good employer means prioritising the health and safety of our employees, focussing on employee engagement and skills development.

Investing in our workforce helps ensure we can continue to deliver services that meet our customers' expectations.

In the next period we will be a good employer by:

- continuing to target zero harm through workshops and embedding our HSE culture model;
- continuing ongoing health and safety initiatives, including our various wellbeing initiatives;
- maintaining top decile employee engagement scores to ensure we remain customer and safety focussed.

4.3 Sustainably cost efficient

Being sustainably cost efficient means working within industry benchmarks, delivering profitable growth and being environmentally and socially responsible.

In the next period we will be sustainably cost efficient by:

- delivering an upfront price cut of 8% on 1 July 2021, which builds on price cuts delivered by our business in the current period;
- maintaining combined operating and capital expenditure at current levels, despite our network growing in size and customer numbers;
- taking the first steps to help secure the long-term future of the South Australian distribution network as the state works towards net-zero emissions by 2050 such as:
  - proposing to customers that we offset a portion of our unaccounted for gas (UAFG) with biomethane, which is a net carbon neutral gas;
  - proposing to customers a South Australian Green Gas Community Education Centre at the Tonsley Innovation District; and
  - considering the introduction of a network innovation scheme, which could support the decarbonisation of our gas supplies and the move to smarter gas networks.

Box 4.1: Playing our part in the decarbonisation journey

AGIG is investing to develop and demonstrate renewable gases across our operations.

We are focused on using our expertise in infrastructure development and operation and our experience with customers across Australia, to deliver this green gas future.

Hydrogen Park South Australia

Hydrogen Park South Australia

In South Australia, we are kick-starting the hydrogen economy. From mid-2020, we will produce renewable hydrogen using water and renewable electricity through a process known as electrolysis. Hydrogen will be blended with natural gas and supplied to more than 700 residential and business customers in Mitchell Park, South Australia, an Australian first.

Over 2019 we made significant progress with this project. We engaged Valmec and GPA Engineering to design and construct the project; introduced the project to the community; had our Development Application approved; completed construction of our hydrogen storage vessel and along with the Premier of South Australia and South Australian Minister for Energy and Mining, broke ground onsite.

We are not only focused on delivering Hydrogen Park South Australia (HyP SA) but also on expanding its operations. Planning is underway for tube and trailer facilities to transport by truck the hydrogen to industry and add motor vehicle refuelling stations across the state.

Figure 4.2: Artist impression of Hydrogen Park South Australia

The Australian Hydrogen Centre

Australian Hydrogen Centre

We are establishing the Australian Hydrogen Centre (AHC), with a range of public and private sector partners.

The AHC will help advance the renewable hydrogen industry by developing feasibility studies to inject up to 10% renewable hydrogen into regional and metropolitan gas distribution networks in South Australia and Victoria. It will also develop a pathway to make the transition to 100% hydrogen networks.

In addition, the AHC will publish knowledge sharing reports to share key insights and data from the operations of HyP SA.

Founding members of the AHC include the Government of South Australia's Department for Energy and Mining and Victoria's Department of Environment, Land, Water and Planning, AusNet Services, Engie and Neoen Australia.

Renewable gas in the next AA period

Gas is an essential part of our economy and of our customer's daily lives.

We understand that our customers value the reliability and instantaneous nature of gas heating. However, affordability and a cleaner future are also key considerations.

With this in mind we have been leading industry in developing the renewable gas industry.

Over the current period we have been active contributors to the National Hydrogen Strategy and South Australia's Hydrogen Action Plan, whilst developing the Australian-first HyP SA project and the AHC.

We are participating in further research through the Future Fuels Cooperative Research Centre, and importantly we are continually engaging with our customers and stakeholders to ensure that our work continues to deliver for their future.

Whilst significant progress has been made during the current period, we can do more, and our customers have asked us to consider what more we could do to deliver this clean energy future.

Figure 4.3: Cooking on our hydrogen barbeque

In this Draft Plan we are considering a range of additional initiatives that will ensure the South Australian distribution network is ready for the transition to zero emissions. More information on these initiatives can be found in the following chapters:

- Greening UAFG by substituting natural gas with hydrogen or biomethane (Chapter 7).
- Establishing a Community Education Centre (Chapter 7).
- Establishing an innovation allowance, allowing us to access funds for renewable energy and other innovative projects when they arise (Chapter 11).

We look forward to receiving feedback on these initiatives.

5 Customer and Stakeholder Engagement

IN THIS CHAPTER:

We engaged with our customers and stakeholders to understand how they wanted to be involved in the development of our plans.

We held iterative workshops with customers across South Australia to understand customer needs and preferences.

We worked closely with stakeholders in reference group meetings, one on one meetings and interactive workshops.

We engaged extensively with our customers and stakeholders to inform and shape this Draft Plan. Our approach puts customers at the centre of our planning to ensure that we continue to deliver valued services for South Australians, now and in the future.

We engaged extensively with a diverse range of customers and stakeholders to understand values, needs and expectations of the services we provide.

Our Draft Plan outlines how we have responded to this feedback, and provides another opportunity for customer feedback on our overall plans.

This chapter explains our customer and stakeholder engagement program, activities we have undertaken, feedback we received, and how this feedback has influenced our plans.

5.1 Overview

Our objective is to develop a Final Plan which delivers for current and future customers, is underpinned by effective stakeholder engagement and is capable of being accepted by our customers and stakeholders.

We adopted a four staged approach to our engagement program which illustrated in Figure 5.1. We use this framework to report the outcomes against our engagement activities.

In the development of this Draft Plan we have completed stages one and two of our engagement program.

Figure 5.1: Our Four Stage Approach to Engagement

Stages 1 and 2 of engagement are now complete >

Stage 1
Strategy and research

Feb - May 2019

Purpose

We engaged with stakeholders to better understand customer needs and to consult on our proposed engagement approach.

IAP2 Spectrum

CONSULT/INVOLVE

Engagement Activities

- In April 2019 we published and distributed our Draft Customer and Stakeholder Engagement Plan for consultation
- We met with key stakeholders
- We expanded our South Australian and Retailer Reference Groups
- We continued to meet regularly with our reference groups, Government agencies and key stakeholders
- We established partnerships with stakeholders for engagement with the broader community and customers.

Key Deliverables

This Stage 1 Engagement Report

In July 2019 we published our engagement strategy: Stage 1 Stakeholder Engagement Report.

Stage 2
Developing our Draft Plan

May - Nov 2019

Purpose

In this stage we ran a series of engagement activities designed to inform the development of our Draft Plan.

IAP2 Spectrum

INVOLVE/COLLABORATE

Engagement Activities

- We held regular meetings with our South Australian and Retailer Reference Groups and key stakeholders
- We launched our online engagement portal Gas Matters
- Stakeholders were kept updated through our website
- We held information sessions to help stakeholders gain a better understanding of the gas industry and current issues
- We met with and surveyed large industrial customers
- We held iterative workshops with a broad cross section of customers across South Australia
- We held 3 co-design workshops with industry experts to consider how we could further assist vulnerable customers.

Key Deliverables

Stage 2 Engagement Report

In January 2020 we published summary reports of customer and stakeholder input into developing our Draft Plan and outcomes of our co-design workshops.

Stage 3
Consultation on our Draft Plan

Feb 2020

Purpose

This stage focuses on consultation on our Draft Plan.

IAP2 Spectrum

CONSULT/INVOLVE

Engagement Activities

- Publish and distribute Draft Plan
- Meetings/ briefings with key stakeholders
- Customers workshos
- Follow up Co-design workshop
- Reference Group meetings
- Deep dive engagement sessions (on demand).

Key Deliverables

Draft Plan

As part of our Draft Plan we will report on all customer and stakeholder feedback, and how this has influenced our plans.

Stage 4
Refinement and engagement

1st Half 2020

Purpose

Consultation feedback from Stage 3 will be used to finalise our plan.

IAP2 Spectrum

INFORM/INVOLVE/CONSULT

Engagement Activities

- Publish and distribute Final Plan (together with a customer and stakeholder consultation guide).

Key Deliverables

Final Stakeholder Engagement Report and submission of our Final Plan to AER

A summary report of customer and stakeholder engagement feedback and input across all stages of our engagement program.

Stage 1: Strategy & Research

In Stage 1 we consulted on our draft engagement strategy. We believe this a critical step in the process as it ensures our engagement program is fit for purpose, meets the needs of our customers stakeholders and identifies key topics for consultation early in the process.

We published our *Draft Customer and Stakeholder Engagement Plan for consultation* in April 2019.

We invited stakeholders to provide feedback on the most important aspects of our service and issues we should be considering in our future planning. This enabled us to focus on these topics in subsequent engagement activities in Stage 2.

In Stage 1 stakeholders identified the following key topics as issues of importance for consideration in the development of our plans:

- Price and affordability;
- Future of gas and decarbonisation; and
- Our capital works program.

A summary of all customer and stakeholder feedback from Stage 1 and how we responded is shown in Table 5.1.

In July 2019 we published our *Stage 1 Customer and Stakeholder Engagement Report*, which summarised key insights from our early engagement and documented our final engagement plan.

Stage 2: Developing our Draft Plan

In Stage 2 we delivered a range of engagement activities with our key stakeholders and customers

to support the development of our Draft Plan, including:-

- ✓ Regular South Australian Reference Group (SARG) Meetings;
- ✓ Regular Retailer Reference Group (RRG) Meetings;
- ✓ Customer workshops (two iterative phases to date);
- ✓ A major customer survey;
- ✓ Co-design workshops with stakeholders; and
- ✓ Online engagement on Gas Matters.

<u>Stage 2: Stakeholder Reference Groups</u>

Membership of our South Australian Reference Group (SARG) reflects the diversity of our customer base, with organisations representing residential customers, vulnerable customers, older Australians, multicultural communities, business and industrial customers, builders and developers, and local government.

The Retailer Reference Group (RRG) comprises representatives from gas retailers who operate in national markets which we serve, including South Australia.

Through regular meetings (10 in Stage 2) we consulted with key stakeholders on topics including:

- our pipeline services;
- customer experience and flexible solutions;
- our price structure;
- our capex and opex proposals;
- demand forecast;
- rate of return;
- incentives;
- setting our capital base; and
- future of gas

A full list of engagement topics discussed at meetings is shown in Tables 5.3 and 5.4.

<u>Stage 2: Customer Engagement</u>

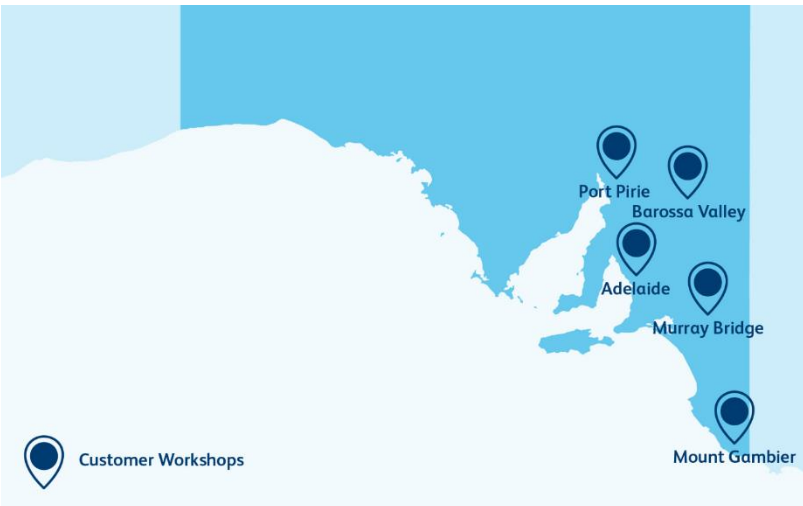
Engaging directly with customers in the development of this plan is a critical component of Stage 2 to ensure we align our plans and proposals with customer needs and expectations.

Our customer engagement workshops are run in three phases with the same groups of customers, allowing iterative engagement as our plans are developed.

To date we have completed two phases of workshops in the development of this Draft Plan.

Repeat engagement with the same groups of customers enables us to:

- ✓ Build customer knowledge over time to allow customers to make informed decisions
- ✓ Listen, test and validate our ideas in response to customer feedback as we develop our proposals
- ✓ Prioritise and explore issues in more detail in response to customer feedback



Two phases of workshops were held in 5 locations across South Australia with a total of 239 participants across 14 workshops.

We held dedicated workshops for residential, business, metropolitan, regional and culturally and linguistically diverse (CALD) customers.

Customer workshops were facilitated by an independent third party (KPMG) to provide independence in how customer feedback was captured and documented.

In Phase 1 and 2 workshops we covered the following topics with customers:

- Reliability of service;
- Public safety;
- Customer service;
- Network growth;
- Sustainability; and
- Innovation.

The first phase of workshops were designed to understand customer values, needs and service expectations. We also provided information for customers about our business, our role in the gas supply chain, and how we develop our business plans.

In the second phase of customer workshops we validated customer feedback, explored issues of importance further and tested costed proposals for feedback.

High level findings from the customer workshops are summarised as follows:

- ✓ Price and affordability is the most important issue for customers
- ✓ Customers value current levels of reliability and public safety and support AGN's proposal to maintain these service levels
- ✓ Customers expect AGN to deliver more customer services via digital channels,
- ✓ Customers consider sustainability and decarbonisation as very important and want AGN to consider more opportunities to reduce carbon emissions (for further consultation with customers)
- ✓ Customers support investment in innovation projects

More detail about the information we presented at customer workshops, the questions we asked and their feedback is outlined in Section 5.4 of this chapter.

<u>Stage 2: Major User Survey</u>

As part of Stage 2 engagement activities we also engaged with our large industrial customers and sought insights into future demand through a survey and a series of one-on-one meetings.

Stage 2: Co-design Workshops with Stakeholders

We are committed to delivering for all customers, including ensuring our services are accessible to those who are most vulnerable in our community.

As part of our Stage 2 engagement activities we also included a series of three co-design workshops with stakeholders on the topic: *How might AGN better support vulnerable customers – now and in the future?*

Co-design is a process by which organisations collaborate with stakeholders and customers to inform decision making.

Workshop participants were experts from the social and community services sector including financial hardship, disability, mental health, culturally and linguistically diverse (CALD) people, and older Australians.

Feedback from the workshops and how we plan to respond is addressed in section 5.4 of this chapter.

How have our engagement activities influenced and shaped our plans?

All feedback from regular South Australian Reference Group meetings, Retailer Reference Groups, together with feedback from meetings with stakeholders, customer workshops and government agencies has been captured and used to shape and refine our Draft Plan.

A summary of feedback and how it has informed our Draft Plan is included in Table 5.7.

Each chapter of this Draft Plan also includes a section on customer and stakeholder engagement.

Stage 3: Consultation on this Draft Plan

We are now in Stage 3 of our four staged approach (February – March 2020) and are consulting widely with customers and stakeholders on this Draft Plan.

To support stage 3 engagement we are:

- Publishing our Draft Plan online for a 2 month period for public consultation
- Engaging with customers in our third phase of workshops
- Continuing our meetings with SARG and RRG
- Briefings and one on one meetings with stakeholders

These activities support engaging on the details of our plans, including in the context of our broader business plans.

5.2 Our Stakeholders

We have identified a number of stakeholder groups with an interest in how we plan, manage and operate our gas distribution network.

In Stage 1 we consulted with key stakeholders and sought feedback to ensure we captured all relevant stakeholders.

Our South Australian Reference Group and our Retailer Reference Group represent a cross-section of our customers, energy retailers, government agencies and other businesses in the gas supply chain.

Our key stakeholder groups are illustrated in Figure 5.2.

Figure 5.2: Our stakeholders

5.3 Stage 1: Strategy & Research

The aim of Stage 1 was to better understand customer and stakeholder needs and expectations. It included consultation on our proposed engagement strategy.

This is an important step in our four staged approach to ensure we were engaging with the relevant key stakeholders and they were comfortable with proposed engagement activities.

We sought to understand what is important to our customers and stakeholders – and what topics they wanted to be engaged on.

As part of Stage 1 engagement we consulted on our Engagement Principles as shown in Table 5.2 overleaf. These principles were endorsed by all stakeholders.

In May 2019, we held one-on-one consultation meetings with 15 South Australian Reference Group members and 2 government agencies to discuss our proposed approach and explore key issues.

During stakeholder meetings we facilitated discussion around three consultation questions:

- *What are the most important aspects of our services?*
- *What issues should we be considering in our future planning for the pipeline?*
- *What aspects of our future plans would you like to engage on?*

As shown in Figure 5.4, the key areas of interest were price, future of gas and our capital works program.

Stakeholders told us that the cost of utilities (broadly) and affordability are important issues for business and residential customers and that they sought price certainty.

Many stakeholders noted the rapid changes taking place in the energy industry, and are interested in the future of gas and potential opportunities for renewable gas and including hydrogen blended into the gas distribution network.

Stakeholders place value on reliability and maintenance of current service levels and noted that for many customers gas is a critical input into their business operations.

Other topics of interest included our capital program and opportunities to raise community awareness of the gas supply chain.

We also sought feedback on our proposed engagement strategy, including our proposed approach to stakeholder engagement, identification of key stakeholders, proposed engagement activities and the timeline.

Feedback from stakeholders was used to inform our final engagement strategy – ensuring our activities were appropriate and allowed for meaningful engagement.

Upon concluding Stage 1 we released a report summarising customer and stakeholder feedback, and our final engagement strategy.

A copy of our Stage 1 Stakeholder Engagement Report is available on Gas Matters (gasmatters.agig.com.au)

A summary table of all feedback and how we responded in Stage 1 is illustrated in Table 5.1.

Table 5.2: Our Customer and Stakeholder Engagement Principles

Principle	Our Commitment	
Genuine and Committed	✓	We listen and respond to the needs of our customers and stakeholders, driving a culture of delivering value for our customers.
Clear, accurate and timely communication	✓	We provide information that is clear, accurate, relevant and timely
Accessible and Inclusive	✓	We involve customers and stakeholders on an ongoing basis in a meaningful way to ensure that our plans deliver for our customers.
Transparent	✓	We clearly identify and explain the role of customers and stakeholders in the engagement process, and consult with customers and stakeholders on information and feedback processes.
Measurable	✓	We measure success, or otherwise, of our engagement practices to ensure ongoing improvement

Figure 5.3: Stage 1 Key topics of interest for stakeholders

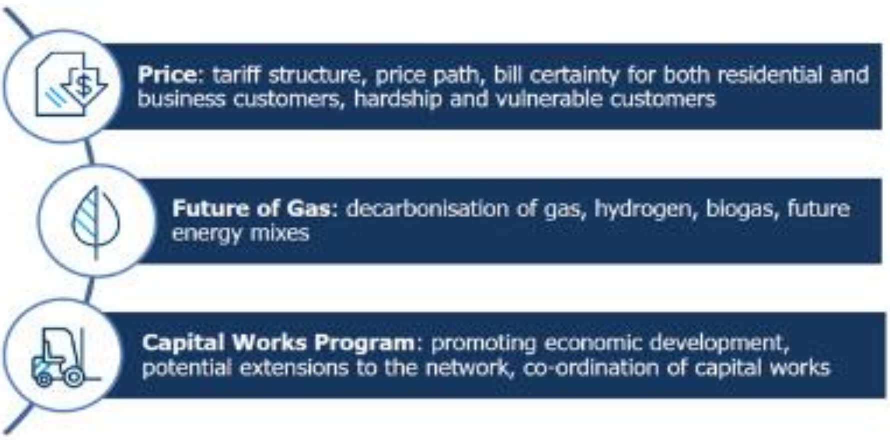


Table 5.1: Stage 1 Customer and stakeholder feedback summary

<table>
<tr><th>Topic</th><th>Customer and stakeholder feedback</th><th>Our response</th></tr>
<tr><td>Our engagement approach and principles</td><td>Stakeholders noted Stage 1 engagement activities were important to clearly define our customers and stakeholders, the broad areas for engagement and timing.
Stakeholders supported the Energy Charter, our principles of engagement, our 'no surprises' approach and our focus on our customers.
Reference Group Members mentioned the high quality of meeting materials and presenters. The information was well structured and the objectives clear.
Stakeholders supported our staged approach to developing our plans, particularly the release of and engagement on our Draft Plan.
Transparency and accessibility was highlighted by stakeholders as critical as we develop our plans.
Reference Group Members were keen to ensure the objectives of each meeting were clear and there was clarity on meeting agenda items.
Reference Group Members may consider opportunities to co-share responsibilities and attendance at meetings depending on agenda items.
Stakeholders indicated they would like to maintain a working relationship with AGN post the engagement around future planning.</td><td>We have confirmed our four stage approach to develop our Final Plan.
We have confirmed our commitment to our engagement principles and 'no surprises' approach.
We will ensure a strong customer focus, including clearly explaining how our plans are in the long-term interests of our customers.
We will continue to engage with our stakeholders and SA Reference Group members on key issues as part of our business as usual activities.</td></tr>
<tr><td>Our stakeholders</td><td>Stakeholders were of the view the Reference Group comprises a broad spread and cross-section of the community.
Stakeholders noted environmental representation should be considered.
Stakeholders were positive that senior levels of AGN staff were present at the meetings.
Stakeholders expressed interest that the stakeholder map identified the broader community as a stakeholder.
Stakeholders would like the stakeholder map in the Terms of Reference to be amended to correctly identify their membership.</td><td>We will consider opportunities to engage environmental representation.
We have revised our stakeholder map.
The Terms of Reference have been amended.</td></tr>
<tr><td>Our engagement activities</td><td>In relation to SA Reference Group meetings, stakeholders suggested that:
• meeting objectives are clear and agendas sent promptly
• consideration be given to having separate business and residential meetings (for specific issues)
• there could be benefit in members meeting together with the Retailer Reference Group
Reference Group Members are of the view the quality of meeting materials is satisfactory
Reference Group Members may look to co-share meeting responsibilities depending on agenda items
All stakeholders supported engagement with customers as part of the suite of engagement activities
Stakeholders were keen to ensure that customer engagement activities such as workshops or forums were representative of the community (e.g. CALD community, people with disabilities, Older Australians)
SA and Retailer Reference Group members supported the ongoing Reference Group meetings as an efficient way to receive input into the development of our plans
Stakeholders value regular one-on-one meetings to discuss specific issues in detail
Stakeholders indicated they would like to be kept informed of our progress and plans
Digital updates and factsheets were considered an efficient way to keep stakeholders informed
Some stakeholders expressed interest in working closely with AGN on identifying issues of importance and co-designing solutions</td><td>We have committed to issuing meeting agendas and materials in a timely way
Where appropriate, we will facilitate separate Reference Group sessions for residential and business customers
We will invite retailers to meet with South Australian Reference Group members where appropriate
We are documenting and reporting on our customer engagement activities
We will seek ongoing advice from Reference Group Members on ensuring representation of the community, and the development of materials
We will provide regular updates via a range of platforms to keep stakeholders informed
We are scheduling reference group meetings aligned to developing our plans.</td></tr>
<tr><td>Our timeline</td><td>Customers and stakeholders supported our timeline.</td><td>We have confirmed the timeline for developing our plans.</td></tr>
</table>

5.4 Stage 2: Developing our Draft Plan

In Stage 2 we delivered a series of engagement activities to inform the development of this Draft Plan, namely regular SARG and RRG meetings, two phases of iterative customer workshops, and a dedicated co-design workshop with stakeholders.

Our Stakeholder Reference Groups

We engaged with our Stakeholder Reference Groups as a key way to receive input on our plans as they have been developed.

Six meetings of the South Australian Reference Group (SARG), and four meetings of the Retailer Reference Group (RRG) were held between April and December 2019.

Meeting topics and materials were presented based on issues of importance to stakeholders raised in Stage 1, and key components of this Draft Plan.

A summary of key topics and information presented is summarised in Tables 5.3 and 5.4.

Both Groups were keen to understand our future plans in the context of price, and importantly that our proposals are cost efficient whilst delivering value for customers.

We provided early price modelling to members at our meetings in August and December 2019 as part of our 'no surprises' approach to engagement.

Feedback from our Stakeholder Reference Groups, and how we have responded in this Draft Plan, is included in Table 5.7.

Stakeholder Reference Group Membership

South Australian Stakeholder Reference Group

- Australian Industry Group (SA)
- South Australian Council of Social Service
- Multicultural Communities Council of SA
- Financial Counsellors of South Australia
- Urban Development Industry Australia (SA)
- Property Council of Australia (SA)
- Federation of Residents and Ratepayers Association Inc
- Business SA
- Consumers SA
- Council for the Ageing (SA)
- Local Government Association (SA)

Retailer Reference Group:

Our retailer reference groups includes representatives from the major retailers including AGL, Lumo/ Red Energy, Alinta Energy, Energy Australia, Origin Energy, Savant Energy Power, Simply Energy

Table 5.3: South Australian Reference Group (SARG) Meetings

Meeting #	Key Topics	Summary of Information presented
Meeting #1 (April 2019)	Our business and our Developing our future plans Our draft engagement plan Reference services	• Our vision and values • Role of the SA Reference Group and introduction • Overview of the regulatory framework • Our stakeholder engagement approach • Overview of proposed reference services
Meeting #2 (June 2019)	Final engagement plan Developing our future plans Pipeline and reference services	• Stakeholder insights/feedback from our engagement • Our pipeline and reference services proposal
Meeting #3 (August 2019)	Stage 1 Engagement Report Our capex proposal Future of gas and hydrogen Pipeline and reference services	• Customer growth and satisfaction results • Our Stage 1 Stakeholder Engagement Report • Overview of Phase 1 customer workshops and co-design • Capital works program, operating context and approach • Future vision for gas networks and innovation • Submission of the Reference Services Proposal
Meeting #4 (August 2019)	Early price modelling Phase 1 customer workshops Regulatory building blocks	• Early price modelling • Results from Phase 1 customer workshops • Building blocks overview – how prices are determined
Meeting #5 (October 2019)	Updated price modelling Phase 2 customer workshops Co-design: Vulnerable Customers Capex and opex proposals	• Our Energy Charter Disclosure Report • Early price forecast • Approach to Phase 2 customer workshops • Our online engagement portal, Gas Matters • Our co-design process supporting vulnerable customers • Our preliminary expenditure proposals
Meeting #6 (December 2019)	Rate of Return Capital Base Incentives Demand	• Updated price forecast • Observations from our co-design process • Results of our Phase 2 workshops • Regulatory modelling update

Table 5.4: Retailer Reference Group (SARG) Meetings

Meeting #	Key Topics	Summary of Information presented
Meeting #1 (April 2019)	Our business Developing our future ps Our draft engagement plan Reference services Terms and conditions	• Our vision and values • Role of the Reference Group and issues of importance • Overview of the regulatory framework • Our stakeholder engagement approach • Overview of proposed reference services • Our approach and timeframes for terms and conditions
Meeting #2 (July 2019)	Final engagement plan Developing our future plans Pipeline and reference services Draft terms and conditions	• Stakeholder insights/feedback from our engagement • Future of Gas and hydrogen • Our pipeline and reference services proposal • An overview of the draft terms and conditions
Meeting #3 (Nov 2019)	Capex and opex proposals Pipeline and reference services Draft terms and conditions	• Our Stage 1 Stakeholder Engagement Report • Overview of Phase 1 customer workshops and co-design • Capital works program, operating context and approach • Future vision for gas networks and innovation • Submission of the Reference Services Proposal • Feedback on draft terms and conditions
Meeting #4 (Dec 2019)	Phase 2 Customer workshops Regulatory building blocks overview Rate of return Demand forecast Draft terms and conditions	• Early price modelling • Results from Phase 1 customer workshops • Pricing - Regulatory Building blocks overview • Feedback on current draft terms and conditions

Customer Workshops;
Recruitment and participation

We engaged with a diverse group of customers through a series of iterative workshops to inform and shape this Draft Plan.

Our customer engagement workshops are run in three phases with the same groups of customers, allowing iterative engagement as our plans are developed.

We have completed two phases of workshops in the development of this Draft Plan, with a third phase of workshops to be held as part of Draft Plan consultation.

Two phases of workshops were held in 5 locations across South Australia with a total of 239 participants across 14 workshops. Customer attendance at each workshop is shown in Table 5.5.

We held dedicated workshops for residential, business, metropolitan, regional and culturally and linguistically diverse (CALD) customers.

Participants were recruited through a specialist third party provider and represented a broad cross section of the community.

We partnered with the Multicultural Communities Council of South Australia (MCCSA) to hold workshops with customers from CALD communities. MCCSA invited community leaders as participants from cultural groups including Bhutanese, Chinese, Eritrean, Fijian, Filiapino, Fullah, Indian, Ivorian, Serbian, Sierra Leone, Somalian and Spanish. Traditional Aboriginal land owners were also represented at the workshops held in Murray Bridge.

Table 5.5: Phase 1 & 2 Workshop Attendance

Location	Customer Segment	Phase 1 Workshop Attendance	Phase 2 Workshop Attendance	Return Rate (%)
Adelaide	Residential customers	20	15	75
Adelaide	Business customers	19	17	89
Adelaide	CALD customers	21	16	76
Port Pirie	Residential and business customers	16	14	88
Barossa	Residential and business customers	17	11	65
Murray Bridge	CALD customers	10	6	60
Mt Gambier	Residential and business customers	25	22	88
	TOTAL	**128**	**101**	**77**

Phase 1 Customer Workshops: Objectives, engagement activities and results

The objectives of Phase 1 customers workshops were to:-

- ✓ Understand customer values, service expectations and priorities to inform future investment plans

- ✓ Engage with, and listen to customers to understand issues of importance
- ✓ Educate customers about AGN and its role, to facilitate ongoing engagement at phase 2 and 3 workshops

Phase 1 workshops were 90 minutes in duration with participants working in groups at tables. AGN presenters and subject matter experts were available to respond to questions.

We asked customers a series of questions relating to reliability, public safety, customer service, affordability, the gas network and sustainability.

Key topics, information presented and insights from Phase 1 are illustrated in Figure 5.6.

In Phase 1 Customers told us that their top priorities are price/ affordability, reliability of supply, maintaining public safety, and the future of gas in a low carbon economy.

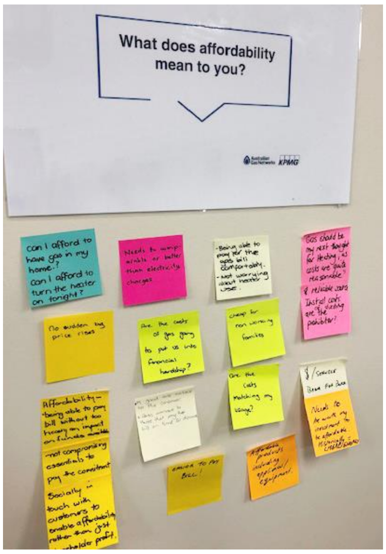
While the current price of gas does not appear to be of major concern, price and affordability is the top priority for customers in managing utility bills for their homes and businesses.

"With a young family, my first priority is always affordability"

Customers told us they highly value an uninterrupted supply of gas in their homes and business and are satisfied with current levels of reliability.

Customers told us it was important to receive timely customer service by knowledgeable staff who demonstrate empathy and understanding in responding to queries or resolving issues.

In terms of customer service, customers were satisfied with current service levels, with preferences for interacting with AGN through a variety of channels (e.g. website, email, web chat).

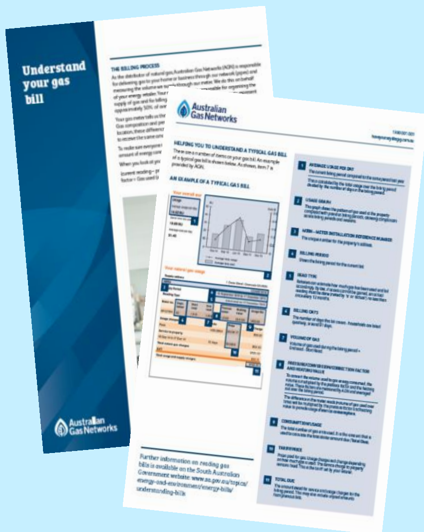


Sustainability was a key area of interest for customers. Customers were more aware of opportunities to lower carbon emissions from electricity and were very keen to understand innovation in gas and how AGN could play a role in decarbonisation.

Engaging with customers in the context of price and how this impacts customer bills

As part of engaging with customers to develop our Draft Plan we have provided customers with information about how prices are set. We have been clear where feedback or decisions they make may have a bill impact. Some of the ways we have done this include:-

- Price setting information presented at all customer workshops, including the regulatory building blocks
- Price setting information about how gas bills are made up, including the split between other costs in the supply chain
- Fact sheets provided to all customers "Understanding your gas Bill"
- A short video "Understanding how prices are set" available at sessions and online
- Open discussion forum on prices and how they are set at all customer workshops
- Presenting proposals with transparency around expenditure levels
- Providing an indication of bill impact where customers are invited to provide feedback/ and or indicate whether they support proposals



"Reliability is critical.... public safety is assumed...need to innovate and reduce carbon footprint"

A full report on the Phase 1 Workshops and results is available on Gas Matters (gasmatters.agig.com.au).

<u>Phase 2 Customer Workshops: Objectives, engagement activities and results</u>

In Phase 2 workshops we looked to further explore issues of importance, and gain customer input into the development of our plans.

The objectives of our Phase 2 workshops were to:

- ✓ Validate customer feedback from Phase 1
- ✓ Share information about AGN's activities
- ✓ Explain how prices are set
- ✓ Explore issues of importance to AGN and customers
- ✓ Test and seek feedback on costed proposals

Phase 2 workshops were 2.5 hours in duration and included opportunities for table discussion as well as digital voting. Participants were invited to vote and rank initiatives they were supportive of, using an online voting tool.

In Phase 2 we presented an early price forecast to reduce prices by an indicative 8%. In this context we presented our proposed approach for investment in reliability, safety and customer service. We explored areas for further development as identified by customers including digital customer service, sustainability and innovation. We also provided information in relation to the growth of our network.

Key topics, information presented and insights from Phase 2

workshops are provided in Table 5.6. A full report on the Phase 2 Workshops and results is available on Gas Matters (gasmatters.agig.com.au).

In our Phase 2 workshops customers told us they value our track record of performance in relation to safety and reliability, and expect this to continue. In all workshops there was a high level of customer support for our proposed approach to invest in our capital programs to maintain current safety and reliability service levels.

"I can see that there are some good measures to maintain the network reliability being taken"

We presented contextual information about natural gas and carbon emissions to enable further discussion around sustainability and the future of gas. Customers told us that lowering carbon emissions is very important to them with 51% of customers rating it as extremely important.

"Climate change needs to be addressed by all businesses but most importantly by a large network"

Customers expect us to pursue more opportunities to lower carbon emissions. Customers supported AGN presenting additional proposals to lower carbon along with the resultant bill impacts in our Draft Plan and Phase 3 workshops.

Customers told us they see value and are willing to accept a small price increase to enable AGN to invest in innovation projects.

"I am happy to support innovation projects because it may be of benefit to the consumer or the environment in the future"

In response to customer feedback in Phase 1, we explored opportunities with customers to introduce more digital customer services such as web chat, email etc. Customers told us they expect that digital communication channels will be increasingly available, but are sensitive to price. Feedback was that online services are considered a preferred investment than SMS communications.

Table 5.6: Stage 2 Customer Feedback Summary (Phase 1 & 2)

Topic	Engagement Activity	Key Insights and Results
Public Safety & Reliability	**Phase 1 Customer Workshops**	
	• We provided an overview of our role in the gas supply chain, our vision and values, and the context of regulation and business planning. Engagement Activity - *What does reliability mean for you in your home/business?* - *How satisfied are you with the reliability of your gas supply?* - *Prioritisation exercise* (see below)*	✓ Customers expect AGN to deliver a high level of public safety and feel that safety is well managed. ✓ 31% of participants ranked public safety as most important. ✓ 42% of participants ranked public safety as their first or second priority. ✓ Customers highly value an uninterrupted supply of gas in their homes and business and are satisfied with current service levels. ✓ 52% of participants ranked reliability first or second priority. ✓ Customers are satisfied or very satisfied with their current levels of reliability.
	Phase 2 Customer Workshops	
	• We presented on the approach we propose to take to maintain current levels of public safety and reliability, including our current reliability performance, network design, our control systems, maintaining security of supply in outages and mains integrity/protection. Engagement Activity: - *I am comfortable with the proposed approach to maintain current levels of public safety* - *I am comfortable with the proposed approach to maintain current levels of reliability. Why?*	✓ 92% support for our approach to maintaining current levels of public safety ✓ 96% support for our proposed approach to maintaining current levels of reliability
Sustainability & Innovation	**Phase 1 Customer Workshops**	
	• We provided an overview of our path to decarbonise gas through hydrogen and biomethane. Engagement Activity: - *Prioritisation exercise* (see below)*	✓ Customers are interested in environmental considerations and AGN's role in driving sustainable energy solutions in the future ✓ 25% of participants ranked 'Innovation and the future of gas' as first or second priority
	Phase 2 Customer Workshops	
	• We presented information about renewable gas and our role in considering ways to lower carbon emissions. We shared information on our current activities including how we are preparing our network for sustainable gas and our pilot project blending hydrogen into the existing natural gas network. Engagement Activity: - *How important is it to you that we consider ways to lower carbon emissions?* - *I would like AGN to pursue more opportunities to lower carbon emissions further?* - *I am prepared to pay more on my bill every year so that AGN can invest in innovation projects that benefit the energy industry. Why?*	✓ Customers expect AGN to pursue more opportunities to lower carbon emissions further in addition to existing plans. ✓ 87% felt that lowering carbon emissions is very/extremely important. ✓ 87% of participants indicated they are willing to accept a small price increase to enable AGN to invest in innovation projects. 54% indicated they would be prepared to pay a price of $2 per annum for this innovation fund.

Table 5.6: Stage 2 Customer Feedback Summary (Phase 1 & 2) continued

Topic	Engagement Activity	Key Insights and Results
Customer Experience	**Phase 1 Customer Workshops**	
	• We provided an overview of our role in the gas supply chain, and discussed examples of when customers interact with us. We presented our proposal to make smart meters available at a fee for service and we presented information on where network growth was planned in each of the local areas. Engagement Activity: - *What do you expect from a great interaction with AGN?* - *Participants were asked to complete a communications preference worksheet to indicate their preferred methods of communicating with us* - *We asked if we should be doing something different when it comes to meters and meter reading* - *Prioritisation exercise* (see below)*	✓ Customers would like to interact with AGN through a variety of channels. The most preferred channels for interacting were via phone, email, website and SMS/text. Customers have a strong preference to report a gas leak by phone. ✓ Customers expect timely customer service by knowledgeable staff who demonstrate empathy and understanding in responding to queries or resolving issues. ✓ Many customers are satisfied with current meter reading practices, with some customers interested in smart meters and access to real-time data on gas usage.
	Phase 2 Customer Workshops	
	• We presented on our customer satisfaction results and our proposed approach to maintain current levels of customer service and communication channels. We presented our proposal to make smart meters available as a choice for customers at a fee for service. Engagement Activity: - *I expect AGN to deliver more of its services using digital channels between now and 2026. Why?* - *I am prepared to pay $2.50 on my bill per annum so that AGN can invest in improved online services. Why?* - *I am prepared to pay $5.50 on my bill per annum so that AGN can invest in SMS communications. Why?*	✓ Customers expect that digital communication channels will be increasingly available but are sensitive to price. ✓ Customers consider online services to be a better investment than SMS communications. ✓ 80% of participants expect/strongly expect AGN to deliver more services using digital channels between now and 2026. ✓ 54% agreed with paying $2.50 on their bill so AGN can invest in improved online services. ✓ 63% disagreed with paying $5.50 on their bill per annum so that AGN can invest in SMS communications.
Price & Affordability	**Phase 1 Customer Workshops**	
	• We provided an overview of the residential and business customer billing process and the composition of residential/business gas bills. Engagement Activity: - *What does affordability mean to you?* - *Prioritisation exercise* (see below)*	✓ While the current price of gas does not appear to be a major concern, price and affordability is the top priority for customers. ✓ Participants told us affordability means fair and transparent prices, manageable prices and forward visibility to avoid 'bill shock'.
	Phase 2 Customer Workshops	
	• We presented on how we set prices and our forecast price reduction. We discussed how gas distribution prices are set in the context of a regulatory framework. Engagement Activity: - *Participants were invited to ask questions and participate in group discussion*	✓ Customers were interested in understanding how price reductions are passed through to consumers.

Stage 2: Co-design Workshops

We ran a series of co-design workshops as part of our Stage 2 engagement program to understand how we can better support vulnerable customers.

The co-design process was facilitated by KPMG, and brought together experts from the social service sector. Co-design is a process by which organisations collaborate with stakeholders and customers to inform decision making.

Participating organisations included: Financial Counsellors Association of SA; Energy and Water Ombudsman SA; City of Playford; National Disability Services; Anglicare SA; Uniting Communities; Council of the Ageing SA; Origin Energy; and Multicultural Communities Council of SA.

Three rounds of workshops were held where participants contributed to developing an understanding of who our vulnerable customers are, identifying opportunities and generating ideas for supporting vulnerable customers and examining shortlisted ideas and providing feedback for consideration by AGN.

The following key themes emerged as priorities from the co-design process for AGN to consider:

- Understanding customers better through customer relationship management, priority services and empathy in service delivery;
- Doing more in the community through engagement outreach and education programs;
- Being proactive in situations when customers are vulnerable;
- Being present in the affordability debate; and
- Ensuring clear accountability for vulnerable customers within AGN.

A full report on the Co-design workshops and results is available on Gas Matters (gasmatters.agig.com.au).

How we are responding to opportunities arising from the Co-design workshops in our Draft Plan is addressed in Table 5.7.

5.5 Summary Feedback and Our Response

We have undertaken a range of engagement activities to support the development of this Draft Plan.

All customer and stakeholder feedback and how we have responded in this Draft Plan is shown in Table 5.7.

5.6 Next steps

Consultation on this Draft Plan is open for 2 months.

A range of engagement activities are supporting the consultation period including a further phase of customer workshops and continued SARG and RRG Meetings. We are also offering one on one meetings and briefings with stakeholders.

A series of consultation questions are included in this Draft Plan. Submissions can be made online at Gas Matters (gasmatters.agig.com.au).

Gas Matters

All customer and stakeholder engagement resources relating to this Draft Plan are publicly available on our online engagement platform, Gas Matters at gasmatters.agig.com.au

Resources include

- ✓ Draft Engagement Strategy for consultation
- ✓ Stage 1 Stakeholder Engagement Report
- ✓ Information about our Four Staged Approach to Engagement
- ✓ All SARG and RRG Meeting agendas, presentation materials and minutes
- ✓ Stakeholder Information Sessions on Hydrogen Slide deck
- ✓ KPMG Phase 1 Customer Workshop Findings
- ✓ KPMG Phase 2 Customer Workshop Findings

Have your say

Gas Matters provides the opportunity to seek further information, and to provide feedback and submissions in relation to this Draft Plan.

Questions for consideration

1. Do you have any feedback on our customer and stakeholder engagement program?
2. Have we considered customer and stakeholder feedback and responded appropriately in this Draft Plan?

Figure 5.7: Customer and stakeholder feedback throughout the Draft Plan

Topic	Customer and stakeholder feedback	Our response

Pipeline services	• Our South Australian Reference Group and Retailer Reference Groups acknowledged that:
	  • the pipeline services (reference and non-reference services) offered in the current AA period met our customers' needs;
	  • the current reference services, which are a subset of pipeline services, are appropriate to continue in the next AA period; and
	• Stakeholders agreed that the current list of reference services is appropriate. They also noted two non-reference services (Out of Hours Special Meter Reading and Same Day Service) could become reference services in future AA periods if there is significant demand for those services.
	• On 27 June 2019 we provided our reference service proposal to the AER for the 2021/22 – 2025/26 AA period. The proposal was developed on the basis of feedback provided by our customers and stakeholders.
	• The AER consulted on this proposal with stakeholders and in November 2019 approved our proposal.
		• Based on the stakeholder feedback received to date, we propose to maintain the same set of reference and non-reference services in the next AA period.
		• Details of the price and other terms and conditions that will apply to the reference services will be consulted on as we develop our Final Plan.
		• Due to low demand, Out of Hours Special Meter Reading and Same Day Services will remain non-reference services.

Figure 5.7: Customer and stakeholder feedback throughout the Draft Plan

<table>
<tr><th>Topic</th><th>Customer and stakeholder feedback</th><th>Our response</th></tr>
<tr><td>Price & affordability</td><td>

Customers told us that price and affordability is their top priority.
Customers were keen to understand how gas distribution prices are included in their final bill – and how any savings might be passed on from their retailer.
Stakeholders supported AGN's proposal to consider opportunities to better support vulnerable customers for inclusion in this Draft Plan.
Stakeholders noted the complexities in the role of a gas distribution business – for example the business community notes that subsidies given to the residential sector may increase pressure on the business sector.
Stakeholders participating in the Co-design workshops identified a number of opportunities for AGN to consider in improving services for vulnerable customers.
</td><td>

We are proposing to reduce prices for customers by 8% the first year of the next period, followed by real increases of 1.2% consistent with the growth in our capital base. We note that this proposed price path means that customers will pay around 20% less (before the impact of inflation) in 2025/26, than they did in 2010/11.
We have had regard for the price impact of individual decisions as we developed the Draft Plan.
In Chapter 7 (operating expenditure) and Chapter 8 (capital expenditure) we have demonstrated that our expenditure proposals are cost efficient.
In our engagement activities we have ensured we gain feedback from customers on proposed investments in the context of potential bill impacts.
We will again engage with Retailers to encourage that they pass on of any savings to customers when our new prices take effect on 1 July 2021.
We are considering investing in a Vulnerable Customers Assistance Program to deliver service improvements for the most vulnerable in our community. We will further test and explore this in our Draft Plan consultation.
</td></tr>
</table>

Figure 5.7: Customer and stakeholder feedback throughout the Draft Plan

Topic	Customer and stakeholder feedback	Our response

Customer experience	• Stakeholders and customers have provided positive feedback on our current performance in terms of customer service, in particular that AGN tracks and sets targets for customer satisfaction levels.
	• Customers told us they expect timely customer service by knowledgeable staff who demonstrate empathy and understanding in responding to queries or resolving issues. It was noted that some customers and stakeholders expressed a preference for an Australian based contact centre.
	• Many customers are satisfied with current meter reading practices, with some customers interested in smart meters and access to real-time data on gas usage.
	• Customers expect that digital communication channels will become increasingly available but are sensitive to price. Customers consider online services to be a better investment than SMS communications.
	  • 54% agreed with paying $2.50 on their bill so AGN can invest in improved online services.
	  • 63% disagreed with paying $5.50 on their bill per annum so that AGN can invest in SMS communications.
		• We are proposing to maintain investment in customer service and achieve 8.2 out of 10 or above in our customer satisfaction survey.
		• Our capex proposal (chapter 8) includes investment of $32 million on projects and programs to continue to meet customer service expectations.
		• Our capex investment proposal includes improving online services via digital channels in response to feedback from customers. We will be further testing our revised proposal with customers as part of this Draft Plan consultation.
		• Based on customer feedback we are not investing in a smart meter roll out in our Draft Plan. We consider a potential option is to offer smart meters on a fee for service to customers, however this is not considered as part of this AA review.

Figure 5.7: Customer and stakeholder feedback throughout the Draft Plan

Topic	Customer and stakeholder feedback	Our response

Our capital and operating expenditure proposals	• Customers expect AGN to deliver a high level of public safety and feel that safety is well managed. 92% of customers support our approach to maintaining current levels of public safety
	• Customers highly value an uninterrupted supply of gas in their homes and business and are satisfied with current service levels. 96% of customers support for our proposed approach to maintaining current levels of reliability
	• Stakeholders noted an overall capex spend broadly in line with the previous regulatory period, with an ongoing focus on public safety, reliability, growing the network and customer service outcomes.
	• Stakeholders and customers noted key features of the proposed capex program, including:
	  ◦ mains replacement our largest expenditure item over the next period to maintain public safety;
	  ◦ IT expenditure forecast consistent with current levels of expenditure, with more investment in network monitoring and potentially digital services;
	  ◦ Augmenting the network to meet demand and maintain reliability; and
	  ◦ Net customer growth of 30,000 - a reduction on growth capex is largely due to the forecast drop-off in new dwellings.
	• Stakeholders highlighted the importance of converting to polyethylene pipes and replacing cast iron mains for safety, reliability, to minimise gas losses and to prepare for the future.
	• Stakeholders were comfortable with the preliminary expenditure proposals presented at SARG Meeting #5 in October. It was also acknowledged by SARG members that preliminary expenditure proposals were developed applying accepted regulatory methodologies and are in line with our current levels of expenditure and appear reasonable.
		• Our totex forecast (combined opex and capex) for the next AA period are consistent with the levels we expect to incur in the current AA period.
		• The level of totex enables us to maintain safety, reliability and the service levels expected from our customers.
		• Our opex forecast is discussed in Chapter 7 of this Draft Plan, and has been developed applying standard regulatory methodologies
		• Our capex forecast is discussed in Chapter 8 of this Draft Plan and is in line with current levels, responding to customer and stakeholders to maintain our safety, reliability and service performance.
		• We are proposing to complete the replacement of all remaining low-pressure cast iron, unprotected steel and other mains – a further 550 km in addition to the 345 km we will have replaced in the current AA period (Chapter 8).

Rate of return	• Stakeholders acknowledged our intention to adopt the AER's Rate of Return Guidelines, as well as determination of the tax allowance of zero, consistent with the approach taken in the recent AER tax review. Stakeholders noted this is consistent with submitting a plan that is capable of being accepted.	• We have accepted the AER's Rate of Return Guidelines, as described in Chapter 10 of this Draft Plan. • We have accepted the outcome of the AER's Tax Review. The forecast tax allowance for the next AA period is zero.

Figure 5.7: Customer and stakeholder feedback throughout the Draft Plan

Topic	Customer and stakeholder feedback	Our response
Capital Base	• Stakeholders acknowledged complexities around the future of the network given the ongoing decarbonisation of energy supply, particularly how this could affect the economic life of gas assets/networks and therefore depreciation. • Stakeholders acknowledged that AGN is proposing to determine depreciation in accordance with that approved by the AER for AGN's Victorian network, including in relation to the treatment of the residual asset value of mains and services that have been replaced as part of the mains replacement program.	• As outlined in chapter 9 of our Draft Plan we have continued to apply the asset lives that were approved by the AER for the current AA period. • While we recognize that there is some uncertainty around future energy models, we see a future for our gas distribution business through advances and investment in renewable gases, in particular hydrogen. Therefore at this time we do not consider any changes to the depreciation profile is required in order to transition to a low carbon economy. • We have applied the same approach to that approved by the AER for our Victorian network whereby mains that have been replaced or removed from the capital base.
Demand forecast	• Stakeholders noted AGN's approach to demand forecasting is based on historic trends with adjustments for projected energy prices, weather and dwelling starts. The approach h is consistent with our last South Australian and Victorian and Albury reviews. • Our forecasting approach is also consistent with the Australian Energy Market Operator (AEMO) for its Gas Statement of Opportunities. • Retailers acknowledged the trend shown in demand forecasts are consistent with their own observations and expectations of demand.	• As outlined in chapter 12 of this Draft Plan, our demand forecast applies methodologies accepted by the AER for our most recent South Australian and Victorian reviews. • The forecast are based on our historic trends but also take into account future projections of dwelling growth, energy prices and the impact of weather.

Figure 5.7: Customer and stakeholder feedback throughout the Draft Plan

Topic	Customer and stakeholder feedback	Our response
Incentives	• Stakeholders noted that AGN is considering a capital expenditure sharing scheme (CESS) to compliment the current opex incentive scheme and that consideration is also being given to customer service and innovation incentive schemes. • There was discussion around the incentive mechanism, noting that while they can work to deliver better outcomes for customers, they need to be appropriately specified to work as intended.	• We consider incentive mechanisms to be an important part of a regulatory framework that help deliver efficiencies to customers in a timely manner. • We are therefore proposing the continuation of the AER's opex incentive mechanism currently applying in South Australia, as well as a capex incentive mechanism consistent with that approved by the AER for our Victorian gas network • We are considering an innovation scheme and will further test customer support for this as we engage on our Draft Plan. Incentive schemes proposed are outlined in Chapter 11 of this Draft Plan.

Future focus	• Customers acknowledged the increasing mix of renewable electricity in the energy sector and the uncertainty around future gas deliver models.
	• Stakeholders mentioned that the Future of Gas as a topic should be broadened to recognize external factors that impact on the future such as supply and demand, and the impact on the wholesale gas market for business and industry.
	• Future of Gas as topic should also be considered in the context of innovation, and potential regional development opportunities.
	• Stakeholders were keen to understand how a transition would work over time to increase the percentage of blended renewable gas. Stakeholders were also keen to understand any additional considerations for increasing blended gas use including any impacts on the life of assets or gas appliances, and any broader safety considerations.
	• Some customers commented that further continuing education on the future of gas is warranted, likely leveraging Hydrogen Park SA.
	• Customers expect AGN to pursue more opportunities to lower carbon emissions further in addition to existing plans.
	  ◦ 87% felt that lowering carbon emissions is very/extremely important.
	  ◦ 87% of participants indicated they are willing to accept a small price increase to enable AGN to invest in innovation projects. 54% indicated they would be prepared to pay a price of $2 per annum for this innovation fund.
		• We have developed our proposals within this Draft Plan with regard to the long-term interests of customers.
		• Our demand forecast in Chapter X takes into account increasing renewable energy supplies in the market.
		• We are considering establishing an education centre and learning program at Hydrogen Park SA to showcase the future of gas in a low carbon economy.
		• We are considering an innovation scheme and will further test customer support for this as we engage on our Draft Plan. Incentive schemes proposed are outlined in Chapter 11 of this Draft Plan.
		• We are considering replace some of our UAFG with renewable gas as part of our operating expenditure in Chapter 7.

6 Pipeline and reference services

IN THIS CHAPTER:

We propose to maintain consistent reference and non-reference services in the next AA period.

Our proposed reference services include a range of haulage and complementary ancillary services.

Our proposed pipeline and reference services for the next AA period are consistent with those currently provided by the South Australian distribution network.

We offer a range of pipeline services to meet our customers' needs.

In the current AA period we have offered a number of different haulage and ancillary services.

The haulage services and most commonly used ancillary services have been classified as reference services. These services, which have accounted for 99.5% of the revenue earned in the current AA period, have been subject to the reference tariffs approved by the AER in 2016.

A small number of less commonly used ancillary services have been classified as non-reference services, with the price reflecting the cost of providing the services by AGN.

Based on the stakeholder feedback received to date, we propose to maintain the same set of reference and non-reference services in the next AA period.

The following sections provide further detail on the reference and non-reference services we propose to offer in the next AA period. Details of the price and other terms and conditions that will apply to the reference services are provided in subsequent chapters of this Draft Plan.

6.1 Regulatory framework

This Draft Plan describes all of the pipeline services that we can reasonably provide. It also specifies the reference services we intend to provide, which must be consistent with the AER's reference service proposal decision, unless there has been a material change in circumstances.

On 27 June 2019 we provided our reference service proposal to the AER for the next AA period. This proposal, which was developed on the basis of feedback provided by our customers and stakeholders and the reference service factors set out in the NGR, provided for a consistent set of reference and non-reference services in the next AA period.

The AER consulted on this proposal with stakeholders and in November 2019 approved our proposal.

6.2 Customer and stakeholder engagement

When developing our reference service proposal, we met with our SARG and RRG. Through this

Reference service factors

The reference service factors in the NGR require consideration to be given to:

- actual and forecast demand for the service and the number of prospective users of the service;
- the extent to which the service is substitutable with another reference service;
- the feasibility of allocating costs to the service;
- the usefulness of specifying a service as a reference service in supporting negotiations and dispute resolution for other services; and
- the likely regulatory cost.

engagement process, we asked whether:

- the services offered in the current AA period met our customers' needs;
- the current reference services are appropriate to continue in the next AA period; and
- there were any additional services that should be reference services.

Our reference groups supported the retention of the existing reference and non-reference services for the next AA.

Stakeholders considered the current services offered were appropriate for the next AA period. Some members of our Retailer Reference Group suggested two additional services (Out of Hours Special Meter Reading and Same Day Service) should be reconsidered for future AA periods, but given low demand should remain ancillary non-reference services at this point.

No additional services were considered necessary by reference group members.

After submitting our Reference Service Proposal, the AER provided stakeholders an opportunity to comment before making its final decision. The AER received two submissions which were consistent with the feedback we had received.

Engagement insights

✓ Customers support the continuation of our existing set of reference and non-reference services.

6.3 Pipeline services

Table 6.1 sets out the reference and non-reference services we propose to offer in the next AA period.

The classification of the services in this table as either reference or non-reference services is consistent with the classification that applies in the current AA period. It is also consistent with our July 2019 reference service proposal, which the AER approved in November 2019.

As Figure 6.1 shows, the proposed reference services have accounted for 99.5% of the revenue earned by the South Australian network in the current AA period, while non-reference services have accounted for just 0.5%.

6.3.1 Reference services

In the next AA period, we propose to offer three haulage services and six ancillary services as reference services.

Consistent with the reference services factors, these services:

- are the most sought after services by our customers;
- are not generally substitutable with other reference services;
- have largely predictable costs that can either be attributed to individual users or reasonably allocated across users of a particular service;
- can aid prospective users in access negotiations and dispute resolution for other pipeline services; and
- will minimise the regulatory cost for all parties.

6.3.2 Non-reference services

In the next AA period, we also propose to offer a number of non-reference services. These services have been classified as non-reference services because, in contrast to reference services:

- the demand for these services is relatively low and in most cases unpredictable; and/or
- the cost of providing most of these services varies markedly

depending on the specific customer requirements.[1]

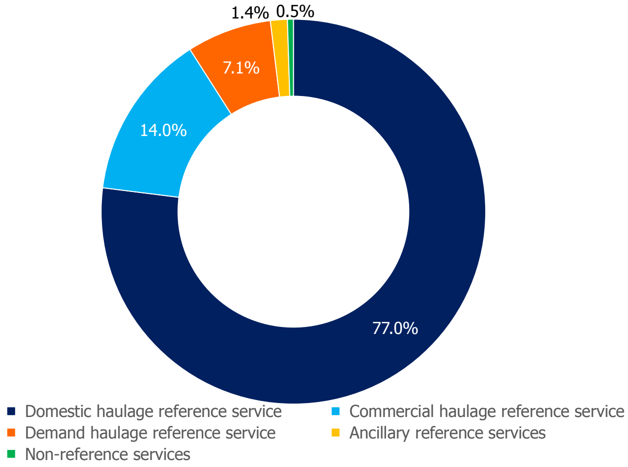
Two of the proposed non-reference services (i.e. the out of hours special meter reading and same day service) are also substitutes for reference services.[2]

While we are not proposing to define these services as reference services in the next AA period, we understand customer preferences are changing. We will therefore re-evaluate the classification of services for the subsequent AA period and consult with our stakeholders at the time.

6.4 Summary

We propose to maintain the current set of reference and non-reference services in the next AA period. Our customers support this approach, which is also consistent with our Reference Services Proposal approved by the AER in November 2019.

Figure 6.1: SA distribution network revenue share 1 July 2016 – 30 June 2019



Question for consideration

3. **Do you think the pipeline and reference services we have proposed are appropriate?**

[1] For example, the cost of moving or removing a meter can range from $100 to $77,000, depending on the customer's site and needs

[2] This means that if customers are dissatisfied with the terms of access to these services, they can have recourse to the reference service.

Table 6.1: Summary of pipeline services for the South Australian distribution network 2021/22-2025/26

Pipeline services	General description
Haulage reference services	
Domestic haulage service	A haulage reference service that comprises the delivery of gas through an existing domestic Delivery Point (DP).
Demand haulage service	A haulage reference service that comprises the delivery of gas through an existing demand DP. A DP is a demand DP at a given time if: (a) that DP is not a domestic DP at that time; and (b) the quantity of gas delivered through that DP during the then most recent metering year was equal to or greater than 10TJ in total.
Commercial haulage service	A haulage reference service that comprises the delivery of gas through a commercial DP.
Ancillary reference services	
Special meter reading	A meter reading for a DP and provision of the associated meter reading data, that is in addition to the scheduled meter readings that form part of the haulage reference services (Special Meter Reads will be charged in accordance with location as either metropolitan or non-metropolitan).
Disconnection	The use of locks or plugs at the metering installation of a domestic or commercial DP in order to prevent the withdrawal of gas at the DP.
Reconnection	Action to restore the ability to withdraw gas at a DP, following an earlier disconnection (that is, the removal of any locks or plugs used to isolate supply, performance of a safety check and, where necessary, the lighting of appliances).
Meter and Gas Installation Test	On-site testing to check the measurement accuracy and soundness of a metering installation and the gas installation downstream of the metering installation.
Meter Removal	Removal of a meter in order to prevent the withdrawal of natural gas at the DP.
Meter Reinstallation	Reinstallation of a meter, performance of a safety check and lighting of appliances where necessary.
Ancillary non-reference services	
Meter Alter Position /Removal	When a customer is requesting the relocation of an existing gas meter to a new position, or the removal of a second meter on the premises.
Out of Hours Special Meter Reading	Request for an appointment to read a meter (Special Meter Reads are charged in accordance with location as either metropolitan or non-metropolitan).
Same Day Service	Request for a service on the same day as the request is made (the service is charged in addition to the charge for the requested service).
Relocate/Remove Service Pipe	Relocate the service or "Inlet" pipework.
Cut-off Service in Street for Debt	Requested by retailer, or by distributor as a matter of safety, when disconnection of supply is intended to be longer term due to non-payment of outstanding account by customer.
Reconnect Service in Street After Cut-Off	Reconnection of gas supply, previously disconnected in the street, following satisfactory payment by customer (or other agreed arrangement).
Upgrade Service Request	Increased gas load requires a larger capacity of service line to be installed.
Other Negotiated Service	A network service that is different from the Reference Services, on terms and conditions that differ in from the general terms and conditions.

1. The haulage reference services include the provision of unaccounted for gas and all services that are necessary in order for AGN to comply with its obligations.

7 Operating expenditure

IN THIS CHAPTER:

Our opex forecasts have been developed using the base-step-trend methodology approved by the AER.

Opex in the current AA period is forecast to be 11% lower than our allowance due to our merger with AGIG in 2017, the benefits of which will be passed onto our customers in the next AA period.

Our opex forecast will ensure we continue to provide the safe, efficient, reliable and high-quality service our customers value.

Our operating expenditure has fallen in the current period and we will pass on the savings to our customers in the next AA period.

The operating expenditure (opex) we incur supports the safe, efficient and reliable delivery of gas to homes and businesses every day. It ensures we can meet the service expectations of our customers and the day-to-day needs of our workforce.

Consistent with our approach to forecasting opex, we have adopted the AER's base-step-trend methodology. This means for most opex items we look at the total costs we are incurring now and project those costs forward, but for some items we develop specific forecasts having consideration of the individual factors that drive those costs.

On an aggregate basis, our opex is forecast to be $354 million over the next AA period (see Table 7.1). Excluding the effect of our proposed change in capitalisation policy, this is around 3% ($10 million) higher than what we expect to incur in the current AA period (forecast to 30 June 2021). We achieved savings in the current period largely due to one-off integration benefits from our merger with AGIG in 2017.

This increase in opex can be attributed to the increased costs associated with unaccounted for gas (UAFG), which reflects the higher gas prices that we expect to pay. Across all other categories we have been able to keep costs for the next AA period at the same level we will incur in the current

Table 7.1 Total forecast opex ($million, 2020/21)

	Current AA period	Next AA period	Drivers for change	
Opex (ex UAFG)	281.5	281.3	✓	Embedded efficiencies made in the current period and the 'trend' component (real cost escalation and customer growth) of our opex forecast
Proposed change in capitalisation	-	23.4	✓	We are proposing to reduce the level of overheads that are capitalised into our asset base
UAFG	39.0	48.8	✓	Reflects the increase in the cost of gas
Total opex	**320.5**	**353.6**		

Note: Totals may not add due to rounding

AA period, even when taking into account real increases in labour costs and servicing an additional 30,000 customers.

Although a modest increase in opex is expected in the next AA period (as shown in Figure 7.1 and Figure 7.2), the incentives provided by the operation of the Efficiency Benefit Sharing Scheme (EBSS), coupled with our internal and external controls, will continue to ensure that the opex we incur is both prudent and efficient. This will also ensure that any cost savings are passed through to customers, in the same manner as the efficiencies achieved in this AA period will be.

The following sections provide further detail on the standard our forecasts must meet under the regulatory framework, the forecasting method we have used and our forecasts for the next AA period. Further detail is also provided on how we have performed in the current AA period and how we ensure the expenditure we incur is both prudent and efficient.

All numbers quoted in this section are expressed in 2020/21 dollars, unless otherwise stated.

7.1 Regulatory framework

Our AA proposal must include the forecast opex for the next AA period.

In keeping with the NGR, our forecast must reflect the expenditure that would be incurred by a prudent gas pipeline business, acting efficiently, in accordance with good industry practice, to achieve the lowest

Figure 7.1: Opex excluding UAFG

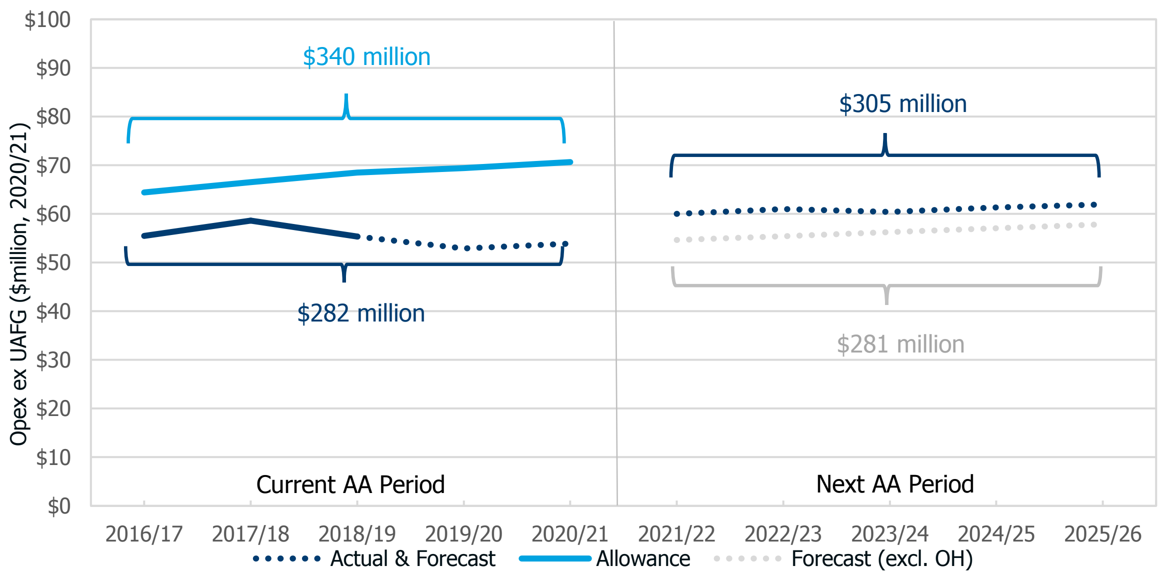
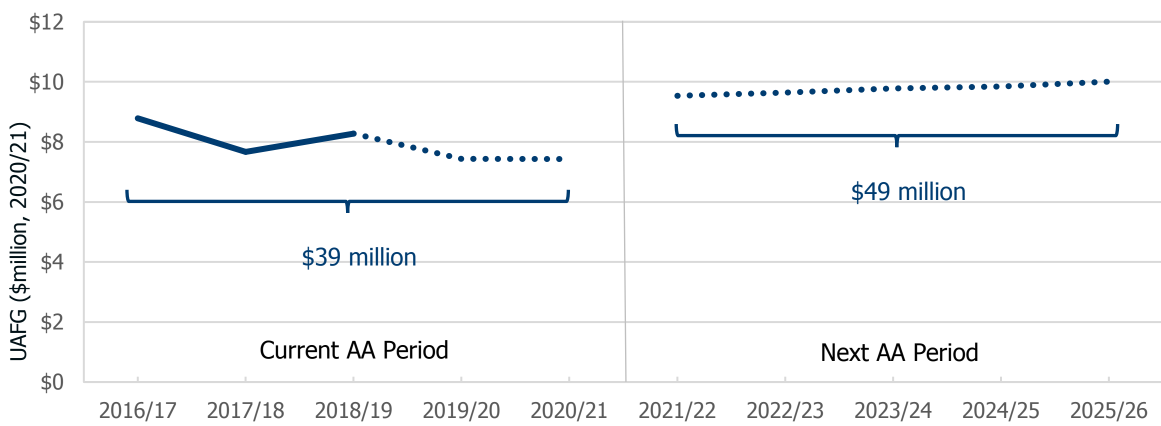


Figure 7.2: Actual and forecast UAFG



sustainable cost of providing services to our customers.

Our forecasts must also be arrived at on a reasonable basis and represent the best forecast or estimate possible in the circumstances.

7.2 Customer and stakeholder engagement

Customers told us their top priorities are price/ affordability, reliability of supply, and maintaining public safety. Customers highly value our track record of performance for both reliability and public safety, and expect this to continue. With this in mind, our opex proposal is based on maintaining current levels of reliability and safety.

Customers expect timely customer service by knowledgeable staff who demonstrate empathy and understanding in responding to queries or resolving issues. Customers and stakeholders are satisfied with our current customer service levels, however they would like to see more digital customer services be introduced over time. Our opex proposal supports maintaining our strong track record of customer service.

We have developed our opex proposal in consultation with stakeholders. We presented our draft opex proposal to both reference groups in October 2019 to seek feedback on our investment priorities and levels of expenditure. Stakeholders were supportive of how we have developed our proposal. They were also keen to understand that our costs are efficient. We have demonstrated this section 7.3 of this Chapter.

Engagement insights

- ✓ Customers expect a high level of public safety and feel that safety is currently well managed.
- ✓ Customers highly value an uninterrupted supply of gas in their homes and businesses and are satisfied with current levels
- ✓ Customers and stakeholders support a proposed approach to maintaining current levels of safety reliability.
- ✓ Customers and stakeholders are satisfied with current customer service levels, with preference for interacting with customers through a variety of digital channels.
- ✓ Stakeholders have supported our approach to preparing our operating expenditure proposals in the development of this Draft Plan.

7.3 How we develop our opex forecast

Our opex forecast for the next AA period has been developed using the base-step-trend approach for our opex excluding UAFG and debt raising costs. A bottom-up approach has been used to develop category specific forecasts for opex categories that cannot reasonably be estimated using the base-step-trend approach (i.e. debt raising and UAFG costs).

The use of this approach is consistent with the AER's preferred approach and the approach we have used in prior AA periods.

Figure 7.3 illustrates the key elements of this approach.

7.4 Our opex forecast for the next AA period

The following sections set out how each element of our opex forecast has been developed.

7.4.1 Base year opex

Under the base-step-trend approach, the actual costs incurred in the penultimate year of the current AA period are used as the base for forecasting costs in the next AA period. This year represents the most up to date actual cost information available at the time that the AER will make its decision.

The penultimate year of the current AA period is 2019/20. At this point in time we do not have the actual costs for this year. We have therefore had to develop a forecast of the 2019/20 costs for this Draft Plan. This forecast is based on the actual opex incurred to December 2019 and a forecast for the remaining six months of the financial year.

When we submit our Final Plan to the AER on 1 July 2020, more information on our actual opex in 2019/20 will be available. We intend therefore to update this forecast with nine months of actual data and three months of forecasts when we submit our Final Plan.

By the time the AER makes its Draft Decision towards the end of 2020, we will be able to provide a full year of actual opex for the 2019/20 base year.

Figure 7.3: Forecasting method used for opex

Step 1 Base

Determine the base year opex that will be used to forecast opex in the next AA period by:

(a) taking the opex from the penultimate year of the current AA (by virtue of the operation of the Efficiency Benefit Sharing Scheme, expenditure in this year represents a prudent and efficient base for forecasting opex);

(b) adjusting the base year opex determined in (a) to remove:

(i) the effect of one-off (or non-recurring) costs;

(ii) those opex categories where the base-step-trend method does not produce the best forecast (e.g. unaccounted for gas and debt raising costs); and

(iii) account for the effect of any reclassification of capex to opex and vice versa.

Step 2 Step

Account for any step changes in opex that are expected to occur over the next AA period (e.g. as a result of changes in legislative or regulatory obligations) that are not adequately compensated for in the base year or rate of change.

Step 3 Trend

Account for changes in input costs, output growth and productivity growth that is expected to occur in the next AA period through the application of a 'rate of change' to the base year opex and, where relevant, step change opex, where:

rate of change = input cost escalation + output growth – productivity growth

Step 4
Category specific forecasts for other opex categories

Add the expenditure that is expected to be incurred for other opex categories that can't be forecast using the base-step-trend approach (e.g. unaccounted for gas and debt raising costs)

Removal of non-recurrent opex

As noted in Figure 7.3, once the base year costs are determined, they must be adjusted to remove any non-recurrent costs.

The opex we have forecast to incur in 2019/20 reflects our expenditure on recurrent activities. It has not therefore been necessary to make an adjustment for non-recurrent costs.

Accounting for changes to capitalisation of overheads

The base year costs must also be adjusted to account for any changes in the treatment of costs.

Our capitalised overheads account for around $43 million of expenditure per year. These overheads relate to activities undertaken by our lead contractor APA, such as:

- cost of senior management involved in the management of capital projects;
- network analysis, design, mapping and costing support in relation to network extensions and modifications;
- costs associated with procurement of vehicles;
- technical assurance, which includes technical audits, employee training and competency assessment;
- costs of providing design and engineering services for high-pressure and non-standard distribution assets; and
- indirect costs to support the provision of the above activities such as human resources and HSE.

We are in the process of reviewing the types of activities included within our overhead costs which we have typically capitalised. At this time, we have identified a portion of these activities which are more akin to operating expenditure than capital expenditure. These activities are:

- costs of senior management involved in the management of capital projects;
- costs associated with procurement of vehicles; and
- indirect costs to support the provision of the above activities such as human resources and HSE.

To account for this capitalisation policy change in the opex forecast, 45% of the forecast capitalised overheads for 2019/20 have been included in the base year opex. This results in a $19 million increase in the 2019/20 base year expenditure. An offsetting change has also been made to our capex forecast for the next AA period, resulting in a capitalised overhead rate of 5.1% compared to 10.1% in the current AA period.

Given this, the reclassification of these costs will have no effect on our overall costs, because the increase in opex arising as a result of the reclassification will be offset by a reduction in capex.

Reclassifying these activities as opex will have the ancillary benefit of assisting to maintain the long-term competitiveness of gas by reducing the growth in our asset base.

Removal of opex categories to be forecast separately

The final adjustment that must be made to the base year costs is to remove those opex categories for which category specific forecasts are required to better estimate efficient costs.

As noted above, we have developed separate forecasts for the costs associated with UAFG and debt raising costs. We have therefore excluded $7 million from the 2019/20 forecast expenditure to remove the costs associated with UAFG, and $1 million for debt raising costs.

Base year opex used for forecasting

The base year opex that we have used for the purposes of the Draft Plan is $63 million. As noted above, this amount will need to be updated ahead of the Final Plan and following the AER's Draft Decision to reflect the actual costs incurred in 2019/20.

While some revisions may need to be made, the revised costs can be assumed to be both prudent and efficient given the operation of both:

- the EBSS (see Chapter 12), the objective of which is to provide a continuous incentive to pursue efficiencies and achieve the lowest sustainable cost of providing services in every year; and
- our internal and external controls on asset management, procurement and financial governance (see section 8.7), the objectives of which are to ensure we undertake opex in a prudent and efficient manner, in accordance with good industry practice.

To this end, the AER noted in its decision for the current period that:

"AGN has been subject to [an] incentive framework for a number of access arrangement periods, including the application of an efficiency carryover mechanism for opex. In theory, AGN as a profit maximising firm should reveal its efficient costs over time, and these can be used to forecast opex into the future. Unless we have evidence that the revealed

opex in a proposed base year is materially inefficient, we use the revealed costs of the service provider for our alternative opex forecast."[3]

The costs we incur in the base year will therefore provide a prudent and efficient basis for forecasting opex in the next AA period.

Table 7.2: Establishing the base year for forecasting opex in the next AA period

Category	2019/20 forecast
Total opex	62.4
Minus UAFG	9.5
Minus Debt raising costs	1.0
Base year for forecasting	**52.0**

7.4.2 Step changes

The next element of the base-step-trend approach requires any 'step changes' in costs in the next AA period to be identified. Step changes may arise as a result of changes to legislation, regulatory obligations or new activities.

While we have identified a number of potential step changes in opex over the next AA period, we don't intend to seek additional funding for these changes at this time. Instead we intend to absorb these step changes into our cost base.

Examples of positive step changes we expect in the next AA period are:

- recent increases in the regulatory requirements for preparing our regulatory information notices;
- higher IT opex driven by recent improvements to our cyber security framework, as well as the new platform that will support digital customer services; and
- increased asset operating costs associated with our capex program such as for the Mount Barker pipeline and new Gawler Gate Station.

7.4.3 Trend

The final element of the base-step-trend approach requires consideration to be given to the extent to which our costs are expected to change over the next AA period as a result of:

- input cost escalation;
- output growth; and
- productivity growth.

These three factors are accounted for through the application of the trend rate of change to the base year opex and, where relevant, any step changes.

While we are still having some work undertaken by independent experts on these factors, for the purposes of the Draft Plan we have assumed a trend rate of change of 1.4% per year.

Further detail on the key determinants of this rate of change is provided below.

Input cost escalation

The input cost escalator accounts for costs that are expected to increase at a different rate than inflation (real cost escalation).

To calculate the input cost escalation rate we have applied the AER benchmark weights as follows: [4]

- labour costs are assumed to account for 59.7% of our opex and are forecast to grow in real terms by an average annual rate of 0.8% per year over the next AA period; and
- materials costs are assumed to account for 40.3% of our opex and are assumed to grow in real terms by 0% per year over the next AA period.

The growth rate assumed for labour costs is based on the average of the Wage Price Index forecasts for Electricity, Gas, Water and Wastewater Services developed by BIS Oxford and Deloitte Access Economics (as shown in Table 7.3).

The materials cost growth rate is based on the growth rate assumed by the AER in recent regulatory decisions for AGN, which is zero.

The application of these assumptions results in a real (i.e. before inflation) average annual input cost escalator of 0.5% per year over the next AA period (see Table 7.4).

Output growth

The output growth factor accounts for the additional opex we will incur as a result of the forecast growth in output.

[3] AER 2015, "Attachment 7: Operating Expenditure | Draft Decision Australian Gas Networks 2016 to 2021", November 2015, pg. 7-14.

[4] These weights are based on the AER's benchmark weights.

Our proposed output growth factor is based on the most recent AER approved approach applied by Jemena for its New South Wales gas distribution network. It has therefore been calculated having regard to the forecast growth in:

- customer numbers over the next AA period; and
- kilometres of network over the next AA period.

These forecasts, which are set out in Chapters 8 and 13, have been weighted consistent with the AER benchmark rates, with customer numbers given a 51% weighting and kilometres a 49% weighting.

This is a change from our previous AA and is more reflective of the drivers of our costs.

The application of these assumptions results in an average annual output growth rate of 0.9% per year over the next AA period (see Table 7.5).

Productivity growth

In applying the 'base year roll-forward' approach, the AER considers whether there should be an adjustment to capture the benefits of any potential future efficiency gains made by the business.

We considered this issue in our recent AGN Victoria and Albury AA. We found the cost function analysis methodology relied upon by the AER to forecast productivity in the electricity industry produced a declining forecast of productivity growth for AGN Victoria and Albury over 2018-2022.

We applied a productivity growth estimate of 0% per year in our AGN Victorian and Albury AA, which was accepted by the AER, as a declining productivity growth factor would have resulted in an increase to our opex forecast for that period.

Similarly, we proposing to apply a productivity growth estimate of 0% per year in this Draft Plan and note we have again proposed to absorb projected increases to opex (as outlined earlier) rather than seeking an expanded opex forecast.

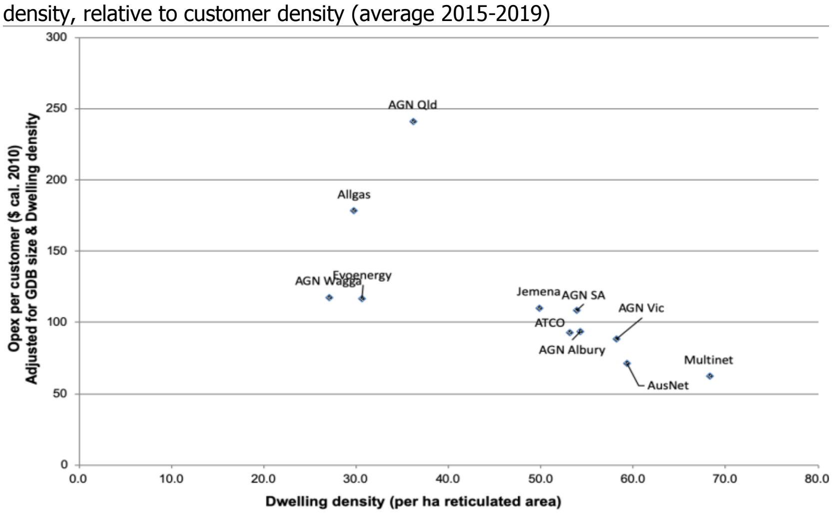
Figure 7.4 below shows our opex per customer relative to customer density, where customer density is the total number of customers per kilometre of mains.

The AER has expressed:

"... the most significant output of distributors is customer numbers. The numbers of customers on a distributor's network will drive the demand on that network. Also, the comparison of inputs per customer is an intuitive measure that reflects the relative efficiency of distributors."[5]

Our opex per customer is within the range of all gas distributors included in the sample. This provides further support that our base year opex reflects efficient costs.

Figure 7.4: Economic Insights opex per customer, adjusted for GDB size and dwelling density, relative to customer density (average 2015-2019)



[5] AER, "Electricity distribution network service providers annual benchmarking report", November 2014, pg. 23.

Table 7.3: Calculation of annual real labour cost escalation

Labour cost estimates	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
BIS Oxford (A)	1.13%	1.28%	1.44%	1.60%	1.33%	1.26%
Deloitte Access Economics (B)	-	0.40%	0.30%	0.50%	0.40%	0.40%
Annual labour cost escalation (average of A and B)	**1.13%**	**0.84%**	**0.87%**	**1.05%**	**0.87%**	**0.83%**

Table 7.4: Calculation of annual input cost escalation (weighted average of real cost escalation for labour and materials)

Category	Weight	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Labour	59.7%	1.13%	0.84%	0.87%	1.05%	0.87%	0.83%
Materials	40.3%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Annual input cost escalation		**0.67%**	**0.50%**	**0.52%**	**0.63%**	**0.52%**	**0.50%**

Table 7.5: Calculation of the output growth factor

Category	Weight	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26
Customer numbers	50.6%	1.34%	1.36%	1.35%	1.32%	1.27%	1.23%
Network length (km)	40.4%	0.96%	0.53%	0.53%	0.53%	0.51%	0.50%
Weighted output growth factor		**1.15%**	**0.94%**	**0.94%**	**0.92%**	**0.89%**	**0.86%**

7.4.4 Category specific forecasts

As noted above, separate forecasts have been developed for UAFG costs and debt-raising costs. The way in which these costs have been estimated is outlined below.

UAFG forecast

UAFG is the difference between the quantity of gas entering the network and the quantity of gas delivered to our customers. This difference may arise as a result of leaks, metering inaccuracies and/or gas theft.

While we have engaged an independent expert to estimate the volume of UAFG for the SA network over the next AA period, the results of this work are not yet available.

For the purposes of this Draft Plan we have therefore assumed the volume of UAFG is equal to the three-year average volume of UAFG our SA network has experienced in the last three years.

Our UAFG forecast has then been calculated by multiplying:

- the three-year average volume of UAFG in the last three years; *by*
- the forecast average price of gas, which is based on current market indications for securing firm gas to meet our UAFG quantity requirements in the next AA period.

This method produces a forecast of $49 million for the next AA period.

We are aware of an opportunity to purchase renewable/carbon neutral gas from a bioenergy project in the next AA period which could provide around 20% of our total UAFG requirements. We also understand sustainability is important to our customers. At 7.5 below we outline a potential future of gas initiative for UAFG that we are seeking customer and stakeholder feedback on to better understand if we should incorporate this as part of our plans.

In a similar manner to our current AA, we are proposing to deal with the uncertainty surrounding the forecast gas price through the inclusion of a 'true-up' adjustment in our tariff variation mechanism.

In effect, this means that if the actual price we are required to pay for gas is lower (higher) than forecast, then the lower (higher) price will be passed through to our customers.

Debt-raising cost forecast

Debt-raising costs are the costs businesses incur when raising or refinancing debt and the costs associated with maintaining a debt facility.

Our debt-raising cost forecast has been calculated using the AER's standard benchmark method.

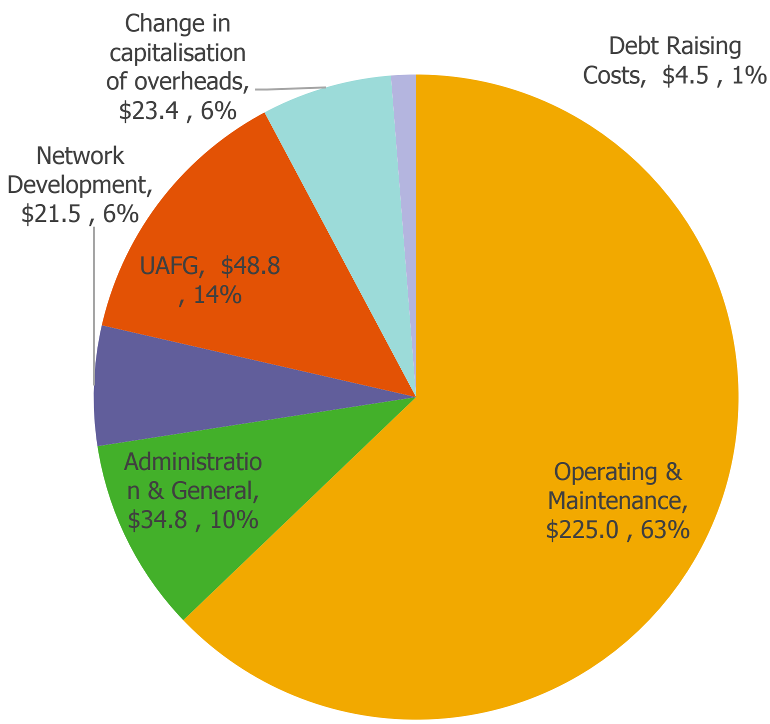
The application of this method produces a debt-raising cost forecast of $4 million for the next AA period.

7.4.5 Summary

Figure 7.5 and Table 7.6 set out our forecast opex for the next AA period.

As this table shows, we expect to incur $358 million in opex over the next AA period, inclusive of $4 million of debt raising costs. This is 10% higher than what we expect to incur in the current AA period (forecast to 30 June 2021).

Figure 7.5: Opex in the next AA period by category ($million, $2020/21)



The increase can largely be attributed to our proposal to expense rather than capitalise a portion of our overhead costs. While this has resulted in an increase in our forecast opex, it has also resulted in an offsetting reduction in our forecast capex. On a net basis therefore, our total expenditure is unchanged.

Excluding the effect of the changed capitalisation policy, our opex in the next AA period is around 3.0% ($9.6 million) higher than what we expect to incur in the current AA period.

As noted above, we will need to make some revisions to this opex forecast when submitting our Final Plan to the AER and in response to the AER's Draft Decision.

We will, for example, update our estimate of the 2019/20 base year costs with the actual costs incurred in that year, once the information is available.

We may also need to revise the UAFG forecast to reflect the outcome of the work currently being carried out by independent experts.

Our opex in the next AA period aligns with our vision by:

- delivering for customers – we will respond to leaks on our network (one of the most important activities we undertake to ensure public safety) and maintain our network assets as required by our asset management plans (AMPs), along with other operational activities to maintain our strong safety, reliability and customer service performance;
- being a good employer – we will undertake workplace health and safety programs, and employee and contractor training and development initiatives to maintain a

healthy, safe and skilled workforce; and

- being sustainably cost efficient – we will pass through opex savings made in the current period to our customers and incur similar levels of opex to that incurred in the current AA period (excluding the effect of the change in capitalisation policy), while facing upward cost pressures.

We want to ensure that the services we provide will deliver for all South Australians, including those in vulnerable circumstances. While we do already have some support measures in place, we are considering opportunities where we could do more to provide further support to those in need.

Given how important sustainability is to our customer and stakeholders, we have outlined further opportunities we could pursue over the next AA period. We are seeking customer feedback on these additional initiatives before incorporating them as part of our plans.

Table 7.6: Opex forecast summary ($ million, 2020/21)

	2021/22	2022/23	2023/24	2024/25	2025/26	Total
Base year opex forecast	52.9	52.9	52.9	52.9	52.9	264.5
Step changes	-	-	-	-	-	-
Change in capitalisation	5.4	5.6	4.1	4.3	4.1	23.4
Trend	1.7	2.5	3.4	4.2	5.0	16.8
UAFG	9.5	9.6	9.8	9.8	10.0	48.8
Total opex forecast (ex debt raising costs)	**69.6**	**70.7**	**70.2**	**71.2**	**72.0**	**353.6**
Debt raising costs	0.9	0.9	0.9	0.9	0.9	4.5
Total opex	**70.4**	**71.5**	**71.1**	**72.1**	**72.9**	**358.1**

7.5 Potential vulnerable customer initiatives

This section sets out potential new initiatives we could incorporate into our business plans over the next AA period as part of a program to improve services for vulnerable customers.

As discussed in Chapter 2, we are one of the founding businesses across the energy supply chain who have committed to the Energy Charter. The Energy Charter seeks to bring energy business together to deliver energy for a better future, which includes supporting customers facing a vulnerable circumstances as a key principle.

We know affordability and helping those in need is important to our customers and stakeholders. Customers in vulnerable circumstances can include people with a disability, those who are chronically sick, older Australians, and also those in financial hardship.

We have been actively engaging with experts in the social service sector to develop potential new ways in which we could support vulnerable customers.

We are seeking stakeholder and customer feedback on this proposed program, including on the types of support initiatives that should be considered and levels of support that should be provided.

Vulnerable customer assistance program

Some opportunities which we are considering include:

- A priority services register that allows us to proactively contact customers in circumstances such as outages
- Rebates or discounts for connection fees or plumbing assistance
- Policy advocacy for vulnerable customers
- Specialised training programs for customer facing service roles

Question for consideration

4. Do you support investment in a vulnerable customer assistance program? Do you have any feedback on the activities we have proposed?

7.6 Potential future of gas initiatives

The following sections set out potential future of gas initiatives we could incorporate into our operating expenditure over the next AA period.

Insights from our engagement program show our customers see lowering carbon emissions as very important and expect us to pursue more opportunities to lower carbon emissions further. With this in mind, we are considering two additional projects – outlined below and not currently included in the Draft Plan expenditure and price profile. These projects will help to drive the green gas sector further, with a view to delivering lowest cost decarbonisation to customers.

In addition to driving decarbonisation, these projects have the additional benefit of positioning South Australia as a leader in green gas, building on the first mover advantage delivered by the South Australian government when they were the first state to release a hydrogen roadmap in 2017.

As a leader in green gas, South Australia would be well placed to benefit from the associated jobs and economic growth that a new industry could deliver.

We are seeking stakeholder and customer feedback on these initiatives.

Green Unaccounted for Gas

There are currently no carbon neutral gases such as renewable hydrogen or biomethane injected into gas networks in Australia.

Australia's National Hydrogen Strategy specifically highlights the benefits of establishing a domestic market through the blending of renewable hydrogen into gas networks in growing the industry to increase scale and lower costs. We have seem similar cost reductions with industry growth in renewable solar and battery technology.

We could deliver emissions reductions by purchasing renewable or carbon neutral gas in place of natural gas to replace our UAFG (as described earlier, gas losses on our network). This would have the important benefit of commencing the transition to a renewable gas future.

We are currently aware of one renewable gas/carbon neutral gas (collectively referred to as green gas) production project in South Australia in addition to HyP SA, which could have the ability to provide part of our UAFG over the upcoming five-year planning period – being the Edinburgh Park bioenergy project. However, it is likely that more renewable gas projects will commence over the course of the next AA period.

Engagement to date indicates interest interest in pursuing projects to lower carbon emissions – UAFG is one means we can do this directly. Whilst we would negotiate to purchase renewable gas at the lowest cost, it could be at a premium to natural gas given the infancy of the market.

We are seeking guidance from our customers and stakeholders as to whether there is interest in AGN further pursuing this opportunity – sourcing renewable or carbon neutral gas to replace UAFG, with a view to lowering carbon emissions and supporting the emerging renewable gas industry.

We estimate the additional cost of sourcing 20% of our UAFG with carbon neutral gas would add around $1.50 to the annual gas bill of our customers. We are therefore seeking to understand whether our customers are supportive of this initiative.

It is noteworthy that because the price of our UAFG is a cost-pass-through, customers would only pay more if and when AGN was able to source and supply renewable gas supply.

Community Education Centre

The National Hydrogen Strategy supports the need for further community engagement, with an action to *"Support best practice for community engagement and its use to build community awareness and ensure community engagement for large or significant projects."*

We are committed to continuing to engage with stakeholders and the community on green gas. We currently do this through stakeholder meetings, conferences, community events and our website.

Our engagement activities and external studies indicate that there is relatively little knowledge of green gas and a desire from the community to know more. With this in mind, and leveraging off of our HyP SA facility, there is an opportunity to develop a green gas stakeholder and community centre.

Located at the Tonsley Innovation District, alongside our HyP SA facility, the Community Education Centre could include meeting and engagement spaces as well as information displays on hydrogen, biogas, natural gas, gas safety and gas appliances. It could also be the initiation point for tours of HyP SA.

The centre would be a place to hold stakeholder and government meetings. The centre will also be a place where the community could come to learn more about the future of gas and which would run education programs, including regional programs, for primary school aged children on renewable fuels and gas safety.

In the future the Community Education Centre could be expanded to include training facilities for plumbers and engineers.

We estimate the additional cost of developing and running a Community Education Centre would add around $1.50 to the annual gas bill of our customers. We are therefore seeking to understand whether our customers would be supportive of this initiative and, if so, what aspects of a Community Education Centre are most important to them.

Questions for consideration

6. Do you support investment in an education centre and learning program, to help position South Australia as a leader in hydrogen technology?

7. Do you have feedback on the activities that an education centre should perform? For example:
   - Staffed centre, open to the public, housing hydrogen appliances, information packs etc.
   - Primary school education program, including regional outreach
   - Stakeholder centre, open for Government and industry meetings – positioning SA as a leader in the renewable gas space

7.7 Summary

Our $354 million opex forecast for the next AA period is slightly higher than the opex we expect to incur in the current AA period, once the effects of our proposed change in capitalisation policy is removed. Our customers will therefore continue to benefit from the opex savings we have achieved over the last two AA periods.

Our opex forecast will also ensure that we:

- maintain our strong safety, reliability and service performance;
- have a healthy, engaged and skilled workforce; and
- are sustainably cost efficient into the future.

We are also seeking customer and stakeholder feedback on two future of gas initiatives which we could undertake in the next AA period.

Question for consideration

8. Do you support our approach to forecasting opex? Is there sufficient information to understand our proposals and the basis of the costs included in our forecast?

8 Capital expenditure

IN THIS CHAPTER:

Investing $579 million in the next AA period, which is 5% lower than current levels.

Replacing around 860 km of old cast iron, other low pressure and early generation plastic mains.

Growing our network by connecting around 43,000 new customers.

Our capex forecast is in line with current levels and will ensure we maintain our strong safety, reliability and service performance

The capex we incur is required to ensure gas is supplied in a safe and reliable manner and to support network growth and customer service

Consistent with prior AA reviews, our capex forecast has been determined using a bottom-up approach, with separate forecasts developed for our proposed expenditure on activities that will maintain:

- public safety and service reliability;
- network growth; and
- customer service.

The application of the bottom-up approach has been informed by our Asset Management Plan (AMP), risk management framework, regulatory obligations and projected network growth.

Our capex is forecast to be around $579 million in the next AA period, which is 5% ($30 million) lower than what we expect to incur in the current AA period (see Table 8.1).

More specifically, our expenditure on growth and customer service are both expected to decrease, driven by our extension to Mount Barker in the current period, and a smaller meter replacement program.

The following sections provide further detail on the regulatory requirements, the forecasting method we have used and our capex forecasts for the next AA period. This chapter also provides an overview of how we have performed in the current AA period and how we ensure the capex we incur is both prudent and efficient.

All numbers quoted in this section are expressed in 2020/21 dollars including overheads and escalation, unless otherwise stated.

Table 8.1: Actual and forecast capex by priority ($million, 2020/21)

Priority	Current AA period	Next AA period	Drivers for change
Safety and reliability	375.5	387.4	✓ Start modification of transmission pipelines to allow inline inspection (ILI) ✓ Lower mains replacement program
Growing the network	194.1	159.9	✓ Proposed Mount Barker extension in 2020/21
Customer service	40.3	32.1	✓ Reduction in the number of periodic meter changes required
	609.8	**579.4**	

8.1 Regulatory framework

Our AA proposal must include:

- the forecast capex for the next AA period; and
- the capex incurred (or forecast to be incurred) in the current AA period.

Our forecast capex must reflect that required by a prudent gas distributor, acting efficiently and in accordance with good industry practice to achieve the lowest sustainable cost of providing Reference Services to our customers.

Forecast capex must also satisfy various additional criteria, including to:

- maintain and improve safety;
- maintain integrity;
- comply with our obligations;
- meet demand on the networks;
- result in an overall economic benefit; or
- where additional revenue generated exceeds the associated costs.

Any forecast or estimate we provide must also be arrived at on a reasonable basis and represent the best forecast or estimate possible in the circumstances.

8.2 Customer and stakeholder engagement

Customers told us their top priorities are price/affordability, reliability of supply, and maintaining public safety. Customers highly value our track record of performance for both reliability and public safety and expect this to continue.

We shared our proposed mains replacement program with participants in customer workshops. Customers were supportive of our investment approach to maintain current levels of reliability and safety.

Customers expect timely customer service by knowledgeable staff who demonstrate empathy and understanding in responding to queries or resolving issues. Customers and stakeholders are satisfied with our current customer service levels, but expect that digital communication channels will become increasingly available. We are proposing to invest in IT projects to improve online services for customers. This has been prepared in consultation with customers with a focus on web based services to keep costs low.

We have developed our capex proposal in consultation with stakeholders. We presented our draft capex proposal to both reference groups in August and October 2019 and included our mains replacement program, our IT expenditure forecast, network augmentation and customer growth.

Stakeholders were supportive of how we have developed our capex proposal. They were also keen to understand that our costs are efficient. We have demonstrated this in section 8.7 of this Chapter.

Engagement insights

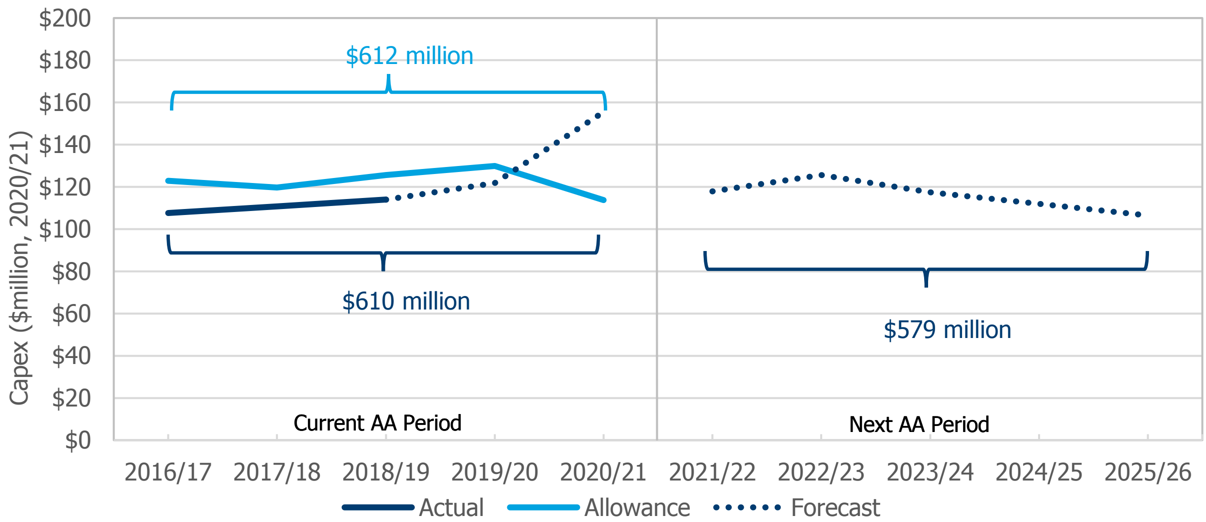
- ✓ Customers expect a high level of public safety and feel that safety is currently well managed.
- ✓ Customers highly value an uninterrupted supply of gas in their homes and businesses and are satisfied with current levels
- ✓ Customers and stakeholders support a proposed approach to maintaining current levels of safety reliability.
- ✓ Customers and stakeholders are satisfied with current customer service levels, with preference for interacting with customers through a variety of digital channels.
- ✓ Stakeholders have supported our approach to preparing our operating expenditure proposals in the development of this Draft Plan.

8.3 Our capex over time

Our capex is driven by our safety and environmental obligations, the requirements and expectations of our customers and the age, performance and condition of our assets.

Figure 8.1 shows our actual and forecast capex over the current and next AA period. In particular our mains replacement program continues into the next AA period where we are forecasting a marginal decline in capex compared to what we are currently spending. The spike in the last year of the current period (2020/21) is due to the proposed extension to Mount Barker (8.9.6) and delays in two IT projects (GIS and mobility, 8.9.5)

Figure 8.1: 10-year capex



8.4 How we develop our capex forecast

Our capex forecast for the next AA period has been developed using a bottom-up approach, with the cost of undertaking each project estimated separately. This section describes how we develop the key elements of our capex forecast, being the proposed activities and forecast costs, in more detail.

8.4.1 Determining our investment priorities

Some of our forecast reflects the continuation of existing programs of work, such as our mains and meter replacement programs. Others are new projects, such as the modification of some of our transmission pipelines to allow for ILI and digital customer service projects.

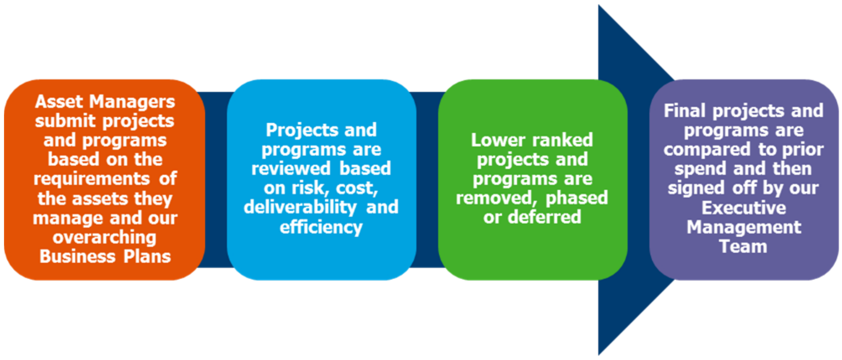
The process we use to identify the projects to be carried out is shown in Figure 8.2.

As this figure shows, potential projects and program activities are identified by asset managers having regard to our overarching Business Plans such as our AMP, risk management framework, regulatory obligations, projected network growth and the full lifecycle cost of distributing natural gas.

The proposed projects are then subject to review, risk ranking and phasing based on lifecycle cost, deliverability and efficiency.

Full business cases are then developed for the higher ranked projects that are proposed to be delivered within the regulatory period. This allows a more detailed assessment to be undertaken of the options to address the identified problems, the costs of the options and the consistency of the selected option with the relevant provisions in the NGR. Lower ranked projects, on the other hand, are deferred.

Figure 8.2: Summary of capex planning process



8.4.2 Forecasting efficient costs

Our forecast costs must be efficient, reasonable and represent the best possible forecast or estimate in the circumstances.

We have two categories for forecasting efficient capex costs to ensure these requirements are met. They are:

- Unit rate categories, for high volume work with limited variation in scope (e.g. new connections) where the forecast cost is based on a unit rate price multiplied by the volume of activity to be undertaken in the period; and
- Non-unit rate categories - low volume, discrete projects - where the forecast cost is built up based on the scope of work outlined within the project or program.

The unit rate categories include:

- Growth capex:
  - Mains – new estates, existing homes and industrial and commercial (I&C) customers;
  - Services – new homes, multi-user sites, existing homes and I&C customers; and
  - Meters – new domestic and I&C customers' meter connections;
- Meter Replacement – periodic meter change (PMC) (domestic and I&C meters); and
- Mains Replacement – general block replacement of cast iron, unprotected steel and other materials (normal and high-density areas), High-Density Polyethylene (HDPE) replacement (by class), multi-user service renewals, piecemeal mains replacement and inline camera inspections.

Unit rate prices are based on a range of information sources including:

- tender or contract information which has been tested through a competitive market process;
- current actual rates or a historical average rate (i.e. over the last three years of the current AA period) achieved for similar work; and
- both internal and external specialist engineering estimates.

The non-unit rate categories include augmentation, IT, growth to new areas, regulators and valves, telemetry, other distribution and other non-distribution projects and programs. Each project or activity is supported by a business case.

Forecast costs for these works may be based on tender or contract information, current actual or historical costs for similar works or specialist engineering estimates.

8.5 Our capex priorities in the next AA period

The key capex priorities in the next AA period are:

- Safety and Reliability;
- Growing the Network; and
- Customer Service.

As Figure 8.3 shows, 67% of our forecast capex is focused on maintaining safety and reliability, which are both top priorities for our customers.

8.5.1 Safety and reliability

In the next AA period, we propose to invest $387 million on projects and programs that will maintain our strong public safety and reliability performance. The largest of these is our mains replacement program where we will replace a further 860 km of old cast iron, unprotected steel and first-generation plastic pipes which are more susceptible to leaks, cracks and breaks.

By the end of the period we will have removed all remaining low pressure cast iron from our network. This achieves a very significant safety milestone and follows completion of the Adelaide CBD in the current period.

We will continue integrity dig-ups and surveys, and start modifying our higher-pressure transmission mains to allow ILI. We will replace end of life regulators, valves, telemetry and cathodic protection equipment, and continue to eliminate high risk meters located in buildings and carports. We will also invest in the ongoing maintenance and upgrades of our core business systems to ensure they are current, fit-for-purpose, resilient to cyber threats and continue to support the requirements of our business efficiently.

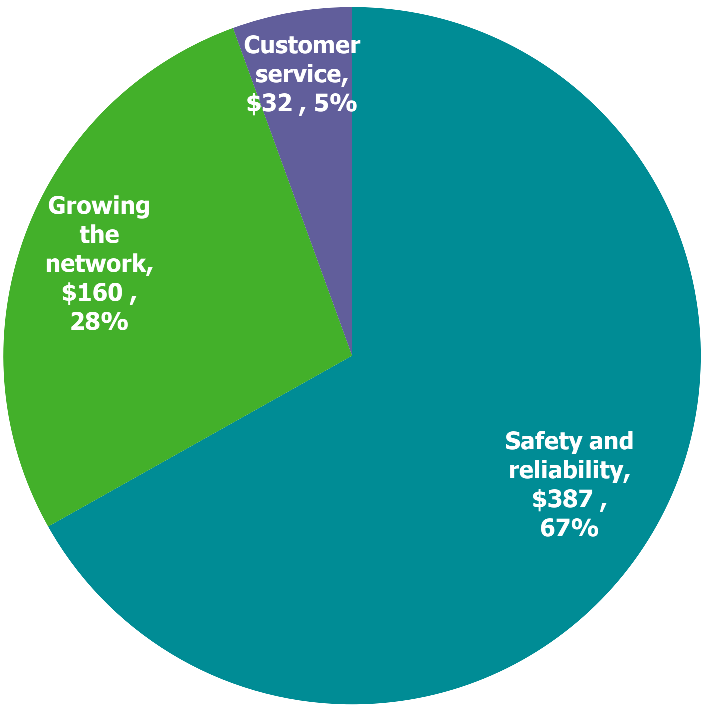
8.5.2 Growing the network

We propose to invest $160 million in the next AA period on projects and programs that will grow our network. This includes laying reticulation mains and services, and installing meters, to connect around 43,000 new residential and industrial customers to our network. We will also augment our network in both the north and the south extremities to support the continued growth we have seen in these areas and ensure service levels are maintained for existing and new customers in these growing areas.

8.5.3 Customer service

In the next AA period we propose to invest $32 million on projects and programs to continue to meet the service expectations of our customers. This includes our meter replacement program, which will replace ageing meters to ensure accuracy of customer billing is maintained, and investment in our IT systems that support our customer service functions. We also plan to provide more digital services and a greater variety of communication channels to bring us in line with industry

Figure 8.3: Forecast capex by priority ($million, 2020/21)



standards and improve the service experience for our customers.

8.6 Capex drivers in the next AA period

The following sections provide further detail on the capex drivers and activities we propose to undertake in the next AA period.

The activities under each of these areas are supported by our business plans and individual business cases. These business plans and business cases assess the options considered to address the identified issue, the estimated cost of each option, the untreated and residual risk each option would result in and alignment with the capex requirements of the NGR and our vision.

Individual business cases will form part of our Final Plan submitted to the AER in July 2020.

8.6.1 Mains replacement

Our mains replacement program remains a key focus in the next AA period. It is the single most important activity we undertake to ensure public safety.

We will invest $292 million to:

- complete the replacement of all remaining low-pressure cast iron, unprotected steel and other mains – a further 551 km in addition to the 345 km we will have replaced in the current AA period. All low and medium pressure cast iron and unprotected steel mains will be removed from the network by the end of the next AA period which represents a significant safety milestone;
- complete the replacement of all remaining high-risk early generation plastic piping (HDPE 250) – a further 13.5 km in addition to the 280 km we will have replaced in the current AA period;
- undertake inline camera inspections and reinforcement on 336 km of high-risk early generation plastic piping (HDPE 575) where possible, and replace 295 km of high-risk early generation plastic piping (HDPE 575) where inline camera inspection and reinforcement cannot be completed.

This totals 860 km of mains replacement forecast for the next AA period.

While this is a lower volume than the 1,052 km we will complete in the current AA period, we are forecasting a higher average cost across the program. This is due to:

- new external requirements (such as the requirements of other utilities when undertaking work near their assets) which have introduced additional costs to our mains replacement activities; and
- the fact we are replacing a larger proportion of smaller diameter HDPE mains, which requires direct laying of the new pipe, compared to the lower cost technique of pipe insertion used more consistently in the past. This is because we are able to insert a smaller diameter poly pipe into our larger cast iron and unprotected steel mains without reducing capacity (i.e. by increasing pressure). However, this is not possible with smaller diameter HDPE as these already run at higher pressures.

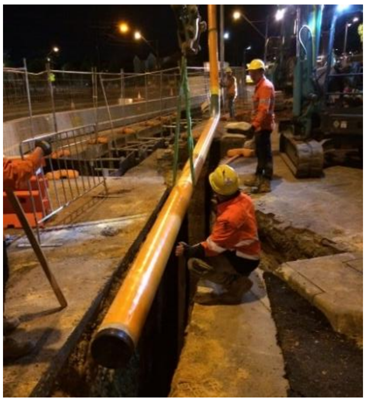
8.6.2 Meter Replacement

Customer meters measure the amount of gas delivered, which forms a key component of each gas bill. We undertake periodic meter changes to replace old meters and ensure meter accuracy is maintained. Based on the age and performance of our current fleet of meters, and the metering accuracy requirements we must achieve, we forecast to replace over 93,000 meters over the next AA period at a total cost of $19 million. This is slightly below what we are spending on periodic meter changes in the current AA period. We have used a consistent forecasting approach to determine the number of periodic meter changes required.

8.6.3 Augmentation

We are always monitoring the pressure and performance of our network. As the number of connections to our network grows, we can see a deterioration in pressure and performance. We use this information to determine areas where our network is becoming constrained and requires augmentation. Augmentation supports the continued growth of the network and ensures service levels are

Figure 8.4: Installation of transmission steel pipeline, Morphett Rd, Oaklands Park, December 2018



maintained for existing customers in growing areas.

We are seeing continuing strong growth in the north and south of our network and forecast two augmentation projects will be required in the next AA period.

In the north we will invest $8 million to build a new high-pressure main and gate station in Gawler. This will provide a new connection into the SEA Gas transmission pipeline increasing the capacity of the northern network to support continued growth in the area.

In the south we will invest $3 million to duplicate our high-pressure main between Seaford and Aldinga providing increased capacity for the growing southern metro network. This follows on from supply to McLaren Vale in 2016, a high-pressure extension in 2017 and a transmission extension and new regulator in 2018.

8.6.4 Telemetry

Telemetry allows for the monitoring and control of our network remotely through information captured from and transferred to equipment in the field. In the next AA period we will invest $2 million to replace end of life Supervisory Control and Data Acquisition (SCADA) equipment and install additional pressure monitoring points to ensure we can continue to collect appropriate pressure information from the network as it grows and changes.

8.6.5 IT System

Our IT systems support several core functions including billing, finance, asset management, asset operations, regulatory reporting and customer service. In the next AA period we will invest:

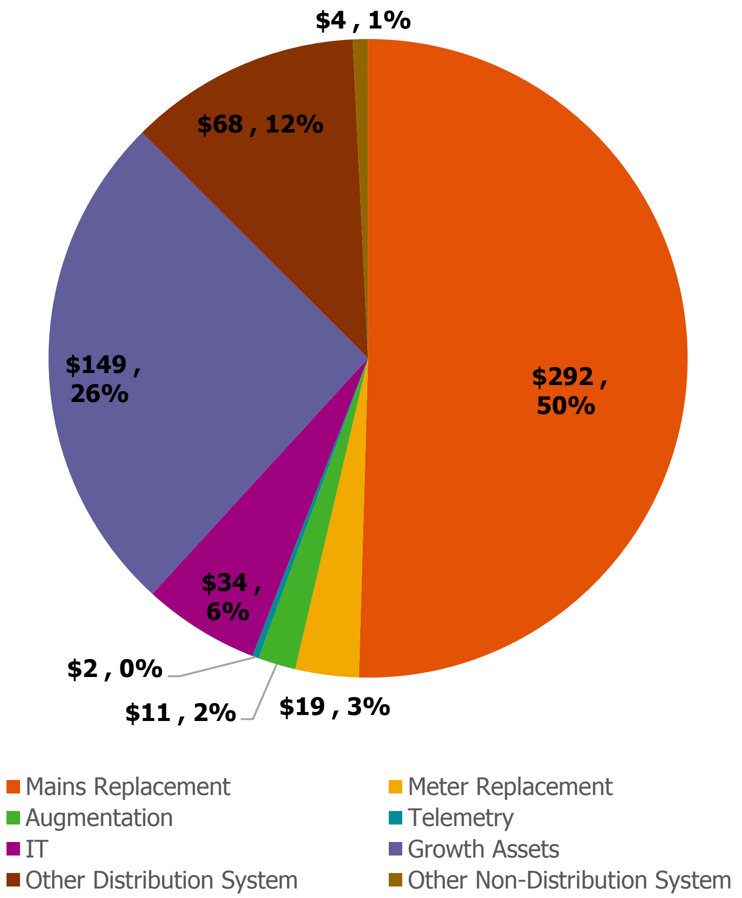
- $18 million in maintaining and upgrading our current applications to ensure they remain current, fit-for-purpose and resilient to cyber threats;
- $8 million in rationalising our IT applications and infrastructure across AGIG;
- $2 million on an Asset Investment Planning Tool which will allow us to incorporate a broader range of information sources into scenario planning and investment decision making; and
- $5 million to deliver more customer services digitally in line with those provided by other businesses and the expectations of our customers.

8.6.6 Growth

We extend our network and lay new reticulation mains, services and install meters to connect new customers to our network where it is economically and commercially viable.

We will invest $149 million to connect around 43,000 new residential and business customers over the next AA period. This includes new homes and businesses in greenfield and in-fill developments (including extension of our network to Concordia residential estate and Kingsford Smith industrial estate in outer northern Adelaide), as well as existing homes and businesses connecting to our network for the first time. This includes connecting customers for the first time in Mount Barker.

Figure 8.5: Capex by driver over the next AA period ($million, 2020/21)



8.6.7 Other distribution system assets

We will invest $68 million on other distribution system assets. The largest project for the next AA period is $35 million to start modifying our higher-pressure transmission mains to allow inline inspection in accordance with accepted good industry practice. We will also continue integrity dig-ups and surveys, replace end-of-life regulators, valves, telemetry and cathodic protection equipment, and continue to eliminate high-risk meters located in buildings and carports.

8.6.8 Other non-distribution system assets

We will invest $4 million on other non-distribution system assets in the next AA period. This includes replacement of small plant and equipment based on the age and condition of these assets, as well as any changing business requirements.

8.6.9 Summary of our capex forecast by driver

Figure 8.5 provides a breakdown of our forecast capex by driver. As noted above, a significant proportion of our capex in the next AA period is accounted for by our mains replacement program (50%) and the investment required to support the projected growth in the network (26%).

The remainder is accounted for by projects and programs that will ensure we continue to maintain our strong safety, reliability and service performance.

8.7 How we deliver capex efficiently

We operate within a framework of external and internal controls which govern the way we plan, assess, procure and deliver capital works. This framework ensures we are making sound investment decisions for our customers, our stakeholders and our business. Our operating context is summarised in Figure 8.6 below.

8.7.1 Key Business Plans

We have a number of key business plans that govern the scope, timing and approach to undertaking investment/upgrade of critical business information systems, asset replacement and augmentation works that are necessary to ensure ongoing network safety, that our regulatory obligations are met and that our service performance is maintained in line with our vision. Many of these are approved by the Office of the Technical Regulator (OTR) and the Essential Services Commission of South Australia (ESCOSA).

Our Safety, Reliability, Maintenance and Technical Management Plan (Safety Plan) is part of our overall approach to system management. It follows a continuous improvement cycle of Commit, Plan, Do, Check and Act, with the objectives of:

- maintaining a strong focus on safety and reliability in relation to the operation and management of our distribution network;
- ensuring suitable safety management systems are in place and operating to effectively manage and keep risks associated with the operation of our network to as low as reasonably practicable; and
- communicating relevant information related to the safe and reliable operation of our distribution network with our regulators.

Our Asset Management Strategy (AMS) and annual AMP are key

Figure 8.6: Summary of our operating context

Legislation & Frameworks

- National Gas Law
- National Energy Retail Rules
- Gas Act 1997
- Gas Regulations 2012
- Distribution Licence
- Gas Distribution Code
- Gas Metering Code
- Safety, Reliability, Maintenance & Technical Management Plan
- Industry Standards

Authorities

- Essential Services Commission of South Australia (ESCOSA)
- Australian Energy Regulator (AER)
- Office of the Technical Regulator (OTR)

Key Business Plans

- Vision
- Asset Management Plan
- IT Investment Plan
- Gas Measurement Management Plan
- Distribution Mains and Services Integrity Plan
- Leak Management Plan

parts of our Asset Management Framework. They outline our asset management strategies which are consistent with good industry practice.

Subordinate to the AMS and AMP are:

- the Distribution Mains and Services Integrity Plan (DMSIP) which outlines our approach to managing the integrity of our mains and services and provides the basis for the forecast replacement of mains over the next AA period; and
- the Meter Replacement Plan (also known as the Gas Measurement Management Plan in South Australia) which details our compliance obligations and how this drives the forecast volume of meters to be replaced over the next AA period.

These business plans outline how we continually monitor, evaluate, plan and undertake asset integrity assessments to extend the remaining life, improve, replace, or where necessary, retire assets. This ensures efficient, reliable and safe operations of the network are maintained.

8.7.2 Financial governance

Our business planning doesn't stop with each AA period. We continually update our capex plans to respond to changing business needs.

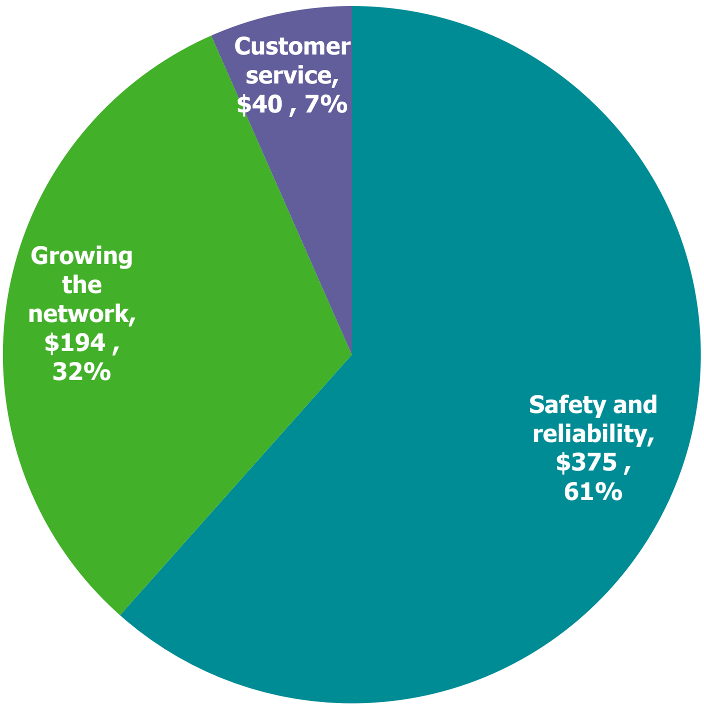
A key part of our planning is the approval of the capex budget by the Board each year.

Once approved, projects are then managed and monitored through our capital delivery processes, this includes Executive Management Team review of key contracts before they are awarded.

We regularly report our expenditure performance against prior year spend and approved regulatory allowances. We also regularly review network performance, including through a series of key performance measures as an input into our planning process.

Our Delegation of Financial Authority covers all financial transactions within our organisation. It outlines the level of financial authority at each level within our organisation. Only the CEO has financial delegation to approve funds for unbudgeted initiatives, and only where it fits within the overall approved budget. This provides strong financial controls and governance in the delivery of capex.

Figure 8.7: Current AA period capex by priority ($million, 2020/21)



8.8 Our capex priorities in the current AA period

In total, we expect to invest $610 million by the end of this AA period.

Like our capex proposal for the next AA period, our capex in this AA period aligns with our customers' priorities of:

- safety and reliability;
- growing the network; and
- customer service.

Figure 8.7 provides a breakdown of the amount of capex we expect to incur against each of these priorities. As this figure shows, 61% of our capex in the current AA period is focused on safety and reliability, which together with price/affordability reflect the top priorities of our customers.

8.8.1 Safety and Reliability

At the end of the current AA period we will have invested $376 million (forecast to the end of the period) on projects and programs that will enable us to maintain our strong safety and reliability performance.

We have replaced over 751 km of old cast iron, unprotected steel and first-generation plastic pipes, with a further 307 km planned for the next 18 months. We will complete our mains replacement program in the Adelaide CBD, removing the extreme risk associated with these mains as agreed with the OTR.

Completing the mains replacement program in the Adelaide CBD represents a significant safety milestone for our business. We are on track to deliver the full volume of mains replacement approved by the AER for the current AA period.

We have undertaken integrity dig ups and surveys, replaced end of life regulators, valves, telemetry and cathodic protection equipment, and started to eliminate high risk meters located in buildings and carports. We have also undertaken maintenance and upgrades of our core business systems to ensure they are current, fit-for-purpose, resilient to cyber threats and continue to support the requirements of our business efficiently.

8.8.2 Growing our network

We have invested $194 million (forecast by the end of the period) on connecting almost 26,000 new residential and industrial customers to our network at the end of June 2019, with a further 12,000 expected for the last two years of the period.

We have completed the first stage of planned augmentations in the southern metro network to support residential growth in Seaford, Aldinga and McLaren Vale, as well as network augmentation to support development in Bowden just north west of the Adelaide CBD. Furthermore, we have extended our network to new residential developments in Two Wells in Adelaide's north.

8.8.3 Customer service

We have invested $40 million (forecast by the end of the period) on projects and programs to deliver a service experience that continues to meet the expectations of our customers. This includes the replacement of almost 150,000 meters under our meter replacement program.

8.9 Capex drivers in the current AA period

The following sections provide further detail on the capex drivers and activities we have undertaken in the current AA period.

8.9.1 Mains replacement

Our mains replacement program is the largest driver of our capex in the current AA period, and as outlined above will remain a key focus in the next AA period. It is the single most important activity we can undertake to ensure public safety.

In the current period, we will replace 345 km of old low-pressure cast-iron, unprotected steel and other mains, including all 53 km remaining within the Adelaide CBD. These low-pressure mains were identified as representing a high and extreme (in the case of the CBD) risk to public safety. As agreed with our technical regulator, the OTR, we are on track to complete the replacement of 345 km of low pressure cast iron, unprotected steel and other mains, including all old CBD mains by the end of June 2021. This volume of activity is also aligned with our commitment to the AER in our last AA submission to replace a total of 351 km of these materials.

We are also replacing early generation plastic pipes which have a history of cracks and breaks. In the current period, we will replace 280 km of HDPE 250 and 369 km of HDPE 575 mains,

Figure 8.8: Direct bury of new gas mains, Wakefield Street, Adelaide, August 2016

by the end of June 2021. This aligns with our commitment to replace a total of 664 km of these materials which was made to our technical regulator, the OTR, and the AER in our last AA submission.

Further, we will complete inline camera inspections and reinforcements on 250 km of HDPE 575 mains which have a diameter which supports this treatment. This will extend the life of these mains for an estimated additional further ten years.

8.9.2 Meter Replacement

We undertake periodic meter changes to replace older meters and ensure meter accuracy is maintained. Based on the age and performance of our current fleet of meters, and the metering accuracy requirements we must achieve, we have replaced around 107,000 meters to June 2019 and forecast we will have replaced a further 43,000 meters by the end of June 2021 at a total cost of $31 million over the five years. This is above our allowance of $24 million due to:

- a slightly higher number of replacements being required; and
- a higher actual unit rate cost incurred for domestic meter replacements driven by a greater proportion of new compared to refurbished meters required to be installed (where new meters are more expensive than refurbished meters).

8.9.3 Augmentation

We augment our network to ensure we can support continued growth while also maintaining current service levels for existing customers in growing areas.

In the current AA period we have invested $7 million, including the first stage of planned augmentations in the southern metro network to support residential growth in Seaford, Aldinga and McLaren Vale and upgrades to the Adelaide CBD eastern network.

8.9.4 Telemetry

In the current AA period we will invest a little under $1 million to replace end of life SCADA and pressure monitoring equipment to ensure we can continue to effectively control and monitor our network remotely through information captured from and transferred to our assets in the field.

8.9.5 IT System

Our IT systems support a number of core business functions including billing, finance, asset management, asset operations, regulatory reporting and customer service.

In the current AA period we have invested a total of $38 million, which has been focused on nationalising and consolidating our major IT applications, leveraging the capability of these systems through our application renewal program and building our digital capability. This is below our approved allowance for the period as we:

- have been able to achieve a "current minus one" version methodology for our applications with less frequent upgrades than what we had initially planned; and
- were able to leverage the Business Intelligence platform implemented by APA which means the infrastructure costs are spread over a larger base.

While expenditure in relation to the GIS and Mobility projects has been delayed, we are planning to complete the full scope of works, at a lower cost than was approved, by the end of June 2021.

8.9.6 Growth

In line with our vision of delivering profitable growth, we will invest $187 million to connect around 40,000 new residential and business customers to our distribution network over the current AA period. This includes new homes and businesses in greenfield developments close to our network, new homes and businesses within our network (infill), existing homes and businesses which are connecting to the gas network for the first time, and extensions of our network to:

- McLaren Vale to the south of Adelaide;
- Two Wells to the north of Adelaide; and
- Mount Barker to the east of Adelaide.

8.9.7 Other distribution system assets

We will invest $21 million on other distribution system assets in the current AA period. This includes completing integrity dig ups and surveys, replacing end-of-life regulators, valves, telemetry and cathodic protection equipment, and eliminating a number of high-risk meters located in buildings and carports.

8.9.8 Other non-distribution system assets

We will invest $3 million on other non-distribution system assets in the current AA period. This includes replacement of small plant and equipment based on the age and condition of these assets, as well as any changing business requirements.

8.9.9 Summary of our capex in the current AA period by driver

Figure 8.9 provides a breakdown of our capex in this AA period by driver. As noted above, a significant proportion of our capex in the next AA period is accounted for by our mains replacement program (53%), the investment required to support network growth (31%), our meter replacement program (5%) and investment in IT (6%).

The remainder is accounted for by projects and programs that are designed to ensure we continue to maintain our strong safety, reliability and service performance.

Figure 8.9: Capex in the current AA period by driver ($million, 2020/21)

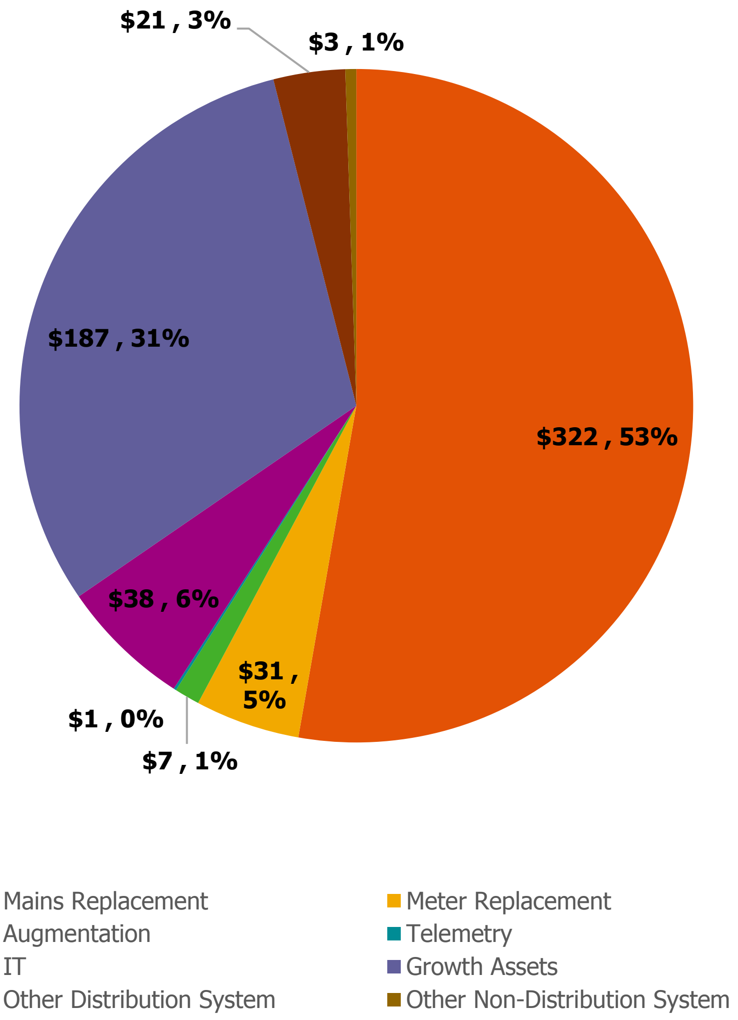


Figure 8.10: (from left) Isolation and bypass on a live steel gas main, South Road, Hindmarsh, April 2017; Mains renewal isolation and cutting activities; Cut and capping low pressure cast iron main, Grote Street, Adelaide CBD, October 2016

Table 8.2 below compares our capex in the current AA period with what we propose to incur in the next AA period by capex driver. It shows that our proposed level of expenditure is consistent with what we expect to incur this period.

For our largest single program – mains replacement – we are expecting lower expenditure in the next period reflecting lower volume of mains replaced. We are also projecting a decline in growth capex reflecting the timing of the Mount Barker extension occurring this period as well as lower meter replacement expenditure related to lower volumes of meters required to be replaced. These declines are offset by an increase in other distribution system capex, driven by our transmission modifications for ILI project, as well as increases in our augmentation, telemetry and other non-distribution system capex.

Table 8.2: Forecast capex by driver ($ million, 2020/21)

Driver	Current AA period	Next AA period	Key activities
Mains Replacement	321.7	292.4	• Complete replacement of all low-pressure mains • Complete camera inspections and reinforcement of first-generation polymer mains where possible and replace high risk mains which cannot be inspected by camera
Meter Replacement	30.7	18.6	• Periodic replacement of end of life customer meters
Augmentation	7.4	11.0	• Upgrades to the eastern Adelaide CBD network • High pressure mains extension and then duplication in the southern metro network • New gate station and high pressure main in the northern metro network
Telemetry	0.7	1.9	• Replacement of end of life telemetry equipment • Install small number of additional pressure monitoring
IT System	38.4	34.2	• Maintain existing core business systems • Deliver an enhanced digital customer service
Growth	186.7	148.9	• Connect new residential and business customers to our network • Extend the distribution network to new areas where it is commercially and economically viable to do so
Other distribution system	21.0	68.0	• Undertake integrity dig ups and repairs • Replace end of life valves, regulators and cathodic protection equipment • Address high risk meters in building and carports • Undertake overpressure risk reduction measures for I&C customers • Start to modify transmission mains for inline inspection
Other non-distribution system assets	3.2	4.4	• Replacement and repairs of small plant and equipment
Total	**609.8**	**579.4**	

8.10 Summary

Our capex in the next AA period will ensure we:

- maintain our high levels of public safety and reliability as expected by our customers;
- connect new customers to our network where it is commercially and economically viable to do so; and
- continue to provide the level of customer service that our customers require and expect.

The projects and programs we intend to deliver are described below.

- Continuing our mains replacement program, specifically we will;
  - complete the replacement of old cast iron, unprotected steel and other low-pressure pipes (551 km, $165 million), representing another significant safety milestone for our customers and our business;
  - continue replacing the highest risk, smaller diameter first generation plastic pipes (309 km, $107 million);
  - complete inline camera inspections across larger first generation plastic pipes (336 km, $9 million); and
  - renew 570 multi-user services ($7 million).
- Continuing our meter replacement program ($19 million) to ensure accurate gas measurement and billing for our customers.
- Augmenting the southern and northern metropolitan networks ($11 million) to support the continued growth in those areas and maintain reliability for existing customers.
- Replacing end-of-life telemetry equipment ($2 million) which is critical to operating and monitoring our network.
- Ensuring our IT systems are current and fit-for-purpose by maintaining and undertaking regular upgrades of our current applications ($18 million), rationalising our applications and infrastructure across AGIG ($8 million), and implementing new technologies for our business and our customers where there is an overall benefit or service improvement ($7 million).
- Growing the network to new areas ($14 million) where it is commercially and economically viable to do so, and connecting over 43,000 new residential and industrial customers to our network over the five years to June 2026 ($135 million).
- Modifying our ageing transmission pipelines to allow for inline inspections ($35 million) and other distribution system works such as replacement of valves, over pressure risk reduction, cathodic protection and dig up repairs ($33 million).
- Replacing and refurbishing of small plant and equipment ($4 million).

These projects and programs are broadly aligned to our track record over the current period with our forecast capex for the next AA period being $31 million below the actual forecast for this period.

While mains replacement costs are lower because of a reduction in the kilometres to be replaced, and growth to new areas is lower (related to our proposed Mount Barker extension in 2020/21), we are investing more in other distribution system capex to deliver our new transmission pipeline modification for the ILI initiative which will enable conformance with accepted good industry practice integrity assessment for transmission pressure pipelines.

The projects and programs outlined will deliver the high levels of public safety and reliability valued by our customers, grow our network (ultimately leading to lower prices for all of our customers) and ensure we continue to provide customer service that meets the expectations of our customers.

Questions for consideration

9. Do you support our approach to forecasting capex, including our approach to mains replacement in the next AA period?

10. Is there sufficient information to understand our proposals and the basis of the costs included in our capex forecast? Is there any other specific information that would assist in the assessment of our proposal?

9 Capital Base

IN THIS CHAPTER:

Our capital base reflects the value of past investments that we have made in the network, but not yet recovered from our customers.

This chapter discusses the movements in our capital base in the current and next AA periods.

We are required to adjust our capital base for capex, depreciation and inflation using actual information over the current AA period and forecast information over the next AA period. We estimate that the value of our capital base at the end of the current period will be around $1.8 billion.

9.1 Regulatory Framework

We are required to adjust our capital base to reflect capex (net of any amounts contributed by our customers), inflation and depreciation. We are also required to remove the value of any assets that we have sold and reflect the reuse of redundant assets in the current AA period.

Our forecast of depreciation is required to be set:

- so that our prices vary over time in a way that promotes the efficient growth of the services provided by our business (which services were explained in Chapter 6);
- so that our assets are depreciated over their economic life;
- to allow for changes in the expected economic life of a particular asset;
- so that an asset is depreciated only once; and
- to allow for our reasonable needs for cash flow to cover our costs.

9.2 Customer and stakeholder engagement

We discussed our approach to setting our capital base with our reference group members at our meetings in December 2019. Members were keen to understand how we are responding to the uncertainty around the future of the network given the ongoing decarbonisation of electricity supply alongside the South Australian Government target to be carbon neutral by 2050. Members were interested to understand how the uncertain role of gas networks (and gas more generally) in a low carbon economy could affect their economic life (and hence depreciation).

We recognise that there is some uncertainty around future energy delivery models, however we believe that it is too early to advance depreciation (or similar proposals) particularly given feasibility work currently underway into renewable gases being injected into gas networks. Given this, we are applying the methodology previously approved by the AER for our Victorian and Albury networks. This methodology takes into account the impact on depreciation of our mains replacement program. Our stakeholders have indicated support for this approach.

9.3 Capital Base as at 1 July 2021

We have adjusted (or rolled-forward) our capital base as at 1 July 2016 with actual capex and inflation and forecast depreciation over the current AA period. We have used forecast information for 2019/20 and 2020/21 as actual information is not yet available.

Table 9.1 shows the adjustments we have made to our capital base over the current AA period. The "funding adjustment" reflects an adjustment for the difference between the forecast and actual capex in the last year of the previous AA period (i.e. 2015/16). Consistent with AER practice, the adjustment reflects the return recovered by AGN that otherwise would have occurred if actual information for 2015/16 were available.

The closing value of the capital base forms the opening capital base for the next AA period.

9.4 Capital Base as at 30 June 2026

This section discusses the forecast adjustments made to the capital base over the next AA period.

9.4.1 Capital Expenditure

Our forecast capex was discussed in Chapter 8 of this Draft Plan and is reproduced in Table 9.2, with the capex allocated to the same

Table 9.1: Roll Forward of the Capital Base 2016/17 to 2020/21 ($nominal, million)

	2016/17	2017/18	2018/19	2019/20	2020/21
Opening Capital Base	1,374.2	1,449.3	1,520.3	1,602.5	1,686.6
Less Depreciation	44.0	49.3	56.4	63.4	65.0
Plus Conforming Capex	95.8	99.0	109.6	118.9	156.1
Plus Actual Inflation	23.2	21.4	29.0	28.6	31.0
Less 2015/16 Capex Adjustments	0.0	0.0	0.0	0.0	11.6
Less Funding Adjustment	0.0	0.0	0.0	0.0	3.5
Closing Value	**1,449.3**	**1,520.3**	**1,602.5**	**1,686.6**	**1,793.7**

Note: Totals may not add due to rounding.

Table 9.2: Forecast Capex 2021/22 to 2025/26 ($nominal, million)

	2021/22	2022/23	2023/24	2024/25	2025/26
Mains	77.0	81.7	73.2	66.6	65.4
Inlets	14.4	14.5	14.5	14.4	14.3
Meters	6.2	6.2	7.6	7.0	7.7
Telemetry	0.4	0.5	0.3	0.3	0.3
IT system	5.6	6.9	7.2	9.2	5.2
Other distribution system equipment	13.0	14.8	13.8	13.7	12.8
Other	0.9	0.9	0.9	0.9	0.9
Closing Value	**117.5**	**125.6**	**117.5**	**112.1**	**106.6**

Table 9.3: Summary of Lives Used to Calculate Depreciation

Asset Category	Standard Useful Life (years)
Mains	60
Inlets	60
Meters	15
Telemetry	20
IT system	5
Other distribution system equipment	40
Other	10

Table 9.4: Forecast Straight-line Depreciation, 2021/22 to 2025/26 ($nominal, million)

	2021/22	2022/23	2023/24	2024/25	2025/26
Straight-line Depreciation	93.6	100.2	108.2	106.2	113.4

asset categories used to adjust our capital base. We note that the capex rolled into the capital base includes an amount equal to half a year of return in the year the capex is incurred (and is therefore not the same as our capex forecast in Chapter 8). The AER makes this adjustment to account for the fact that we do not earn a return on the capex within the year it was spent.

9.4.2 Forecast Depreciation

We have continued to apply the asset lives that were approved by the AER for the current AA period (as shown in Table 9.3).

In determining forecast depreciation for the next AA period, we have applied the 'year-by-year' tracking approach. This approach is consistent with that used by the AER for other networks, including our AGN Victoria and Albury networks.

We are also seeking to ensure that the value of the assets removed from our network as part of the mains replacement program are fully depreciated by the end of the next AA period (see Section 9.3). This will ensure intergenerational equity as future customers will not pay for assets that are no longer in use. This is consistent with the approach used by the AER in the Victorian gas reviews, and results in bringing forward $215 million of depreciation over the next AA period.

Table 9.4 shows our forecast straight-line depreciation, which includes the adjusted depreciation.

9.4.3 Inflation

Forecast inflation is a critical element in determining our total revenue and pricing. As explained earlier, forecast inflation is used to adjust the capital base over the next AA period. This forecast is later updated for actual inflation when adjusting the capital base for the previous AA period.

Forecast inflation is also used in determining the total revenue that we can recover (and hence the prices we can charge). This is reflected in the methodology that the AER uses to determine our total revenue, which relies on inflation to determine the following two costs:

- Return on capital – which is calculated by multiplying a nominal rate of return (see Chapter 10) by the nominal capital base determined in this section (where a nominal value includes the impact of inflation); and
- Regulatory Depreciation – which is calculated by deducting from forecast straight-line depreciation (see Table 9.5) the forecast inflation adjustment applied to the capital base.

Table 9.5: Forecast Regulatory Depreciation, 2021/22 to 2025/26 ($nominal, million)

	2021/22	2022/23	2023/24	2024/25	2025/26
Straight-line Depreciation	93.6	100.2	108.2	106.2	113.4
Less Inflation	42.0	43.6	45.3	46.8	48.3
Regulatory Depreciation	**51.7**	**56.6**	**62.8**	**59.4**	**65.1**

Table 9.6: Forecast Capital Base, 2021/22 to 2025/26 ($nominal, million)

	2021/22	2022/23	2023/24	2024/25	2025/26
Opening Capital Base	1,793.7	1,862.8	1,937.8	2,001.6	2,065.6
Less Depreciation	93.6	100.2	108.2	106.2	113.4
Plus Conforming Capex	120.8	131.6	126.6	123.4	120.2
Plus Actual Inflation	42.0	43.6	45.3	46.8	48.3
Closing Value	**1,862.8**	**1,937.8**	**2,001.6**	**2,065.6**	**2,120.7**

Note: Totals may not add due to rounding.

The AER removes inflation in determining regulatory depreciation to essentially remove the additional compensation for inflation in determining the return on capital, which arises from multiplying a nominal rate of return by a nominal capital base (referred to as a double count of inflation).

As a result, an issue arises if there is a significant divergence between forecast and actual inflation. If forecast inflation is over-estimated relative to actual inflation, it has the effect of decreasing rates of return below that determined by the AER (as the adjustment to depreciation is greater than it should be). This in-turn means benchmark revenue is below efficient levels (see Section 9.3.4)

We understand that the AER is currently considering whether it should review its approach to estimating inflation. This is due to concerns raised by several businesses of the ongoing difference between forecast and actual inflation.

A potential alternative approach is to use a market-based approach to forecasting inflation. This approach would rely on market data using the difference between yields on nominal and indexed Commonwealth Government Bonds (referred to as the Bond Breakeven approach), as opposed to the current approach which uses the mid-point of the RBA's target 2% to 3% band.

Figure 9.1 shows actual inflation compared to both inflation as per the Bond Breakeven approach and the estimate of inflation in the AER's recent decisions with respect to our South Australian network. The Bond Breakeven approach, which relies on the same market data to set the allowed rate of return (see Chapter 10), has closely followed actual inflation over the current AA period.

The use of market data is currently used by the Economic Regulation Authority (ERA) in Western Australia, the Office of Gas and Electricity Markets (Ofgem) in the UK, and was used by the AER prior to 2008. While we believe a change is warranted, in keeping with delivering a plan capable of being accepted we will apply the AER's current approach to forecast inflation up until the AER decides otherwise.

9.4.4 Forecast Regulatory Depreciation

Forecast regulatory depreciation is used to determine the total revenue that we can recover over the next AA period. This is calculated as forecast straight-line depreciation that is used to adjust the capital base less the inflation adjustment that is applied to the capital base. Table 9.5 shows forecast regulatory depreciation that is used to determine assumed total revenue for the next AA period, which as explained has been determined using the AER's preferred approaches to calculating both depreciation and inflation.

9.4.5 Forecast Capital Base

The forecast capital base over the next AA period, taking into account forecast depreciation, capex and inflation, is set out in Table 9.6.

This shows a closing capital base of $2,121 million as at 30 June 2026 in nominal dollar terms.

9.5 Summary

We have adjusted our capital base over the current and next AA periods to reflect actual/forecast capex, depreciation and inflation.

We have adjusted depreciation to reflect the completion of our mains replacement program over the next AA period. This adjustment is consistent with our obligations and previous decisions made by the AER. We have also applied the AER's approach to forecast inflation, although we remain concerned that this approach will continue to materially overstate actual inflation.

Questions for consideration

11. Do you have any comments on our proposed approach to adjust our capital base over the current and next AA periods, including how we have taken into account our mains replacement program?

12. Do you consider that the RBA-based approach will produce better forecasts of inflation relative to the Bond Breakeven approach? Are there any other approaches to forecasting inflation that should be used/considered?


Australian Gas Networks
operated by
apa

10 Financing costs

IN THIS CHAPTER:

We have followed the AER's Rate of Return Guidelines to estimate the rate of return.

Based on forward market estimates, the rate of return is 4.72% (compared to 6.14% at the start of the current period).

We are expecting lower financing costs in the next AA period, with the return on our investment falling by $72 million.

Our single largest cost relates to the cost of financing our $1.8 billion investment in the South Australian natural gas distribution network.

In this Draft Plan, the allowed rate of return and the cost of tax have been calculated according to the AER's Rate of Return Guideline and the recent Tax Review.

Achieving a reasonable rate of return is essential in order to attract the necessary funding from shareholders (through equity) and debt providers to continue to invest in our networks. We are also required to estimate the cost of tax the business will incur over the next AA period.

The transition underway in the energy sector is not without risks for gas networks – risks over and above those being faced by electricity networks.

Yet gas and electricity networks receive effectively the same rate of return. In this light, the prices we propose represent exceptional value for our customers and the South Australian economy.

10.1 Regulatory Framework

The NGR provides a framework for calculating the return on the projected capital base (rate of return). The AER's Rate of Return Guideline details the approach we are required to follow for calculating the rate of return under the NGR.

The instrument also outlines the AER's methodology for calculating the value of imputation credits (gamma) to equity holders, which is used to calculate the cost of tax building block. Further guidance in respect of the cost of tax is also provided in the AER's December 2018 Tax Review.

We have followed the AER's approach in respect of all aspects of our financing costs and tax allowances.

10.2 Financing Costs

Our financing costs are determined based on an estimate of the return on equity and the return on debt over the next AA period, which are together referred to as our rate of return and are discussed in this section.

10.2.1 Return on Equity

The return on equity reflects the return required by shareholders to invest in the network. Unlike the return on debt, it is not possible to observe the return on equity required by shareholders in the market. This means that we are required to use financial models and other market evidence to inform an estimate of the return on equity required by shareholders.

The AER estimates the return on equity using a "foundation model"[6], which requires the following three parameters to be estimated:

- *The risk free rate* – which measures the return an investor would expect from an asset with no risk. It is estimated based on the interest rate on Australian Commonwealth government bonds with a 10-year term, measured over a 20-day averaging period prior to the commencement of the AA period;
- *Market risk premium (MRP)* – which reflects the expected return over the risk-free rate that investors require to invest in a well-diversified portfolio of risky assets (also assumed to be a 10-year term); and
- *Equity beta* – which measures the sensitivity of a business' returns relative to movements in the overall market returns (systematic or market risk).

We have applied the AER's foundation model from the 2018 Rate of Return Guideline, which results in a return on equity of 4.69% over the next AA period (see Table 10.1).

These values are indicative and were measured using January 2020 information, which is the most recent actual information available prior to the release of this Draft Plan. We intend to use updated information in preparing our Final Plan.

Table 10.1: Indicative return on equity

Parameters	
Equity risk-free rate	1.03%
Beta	0.6
Market Risk Premium	6.10%
Return on equity	**4.69%**

10.2.2 Return on Debt

The return on debt reflects the interest rate required by debt holders on issued debt (or the interest rate on our loans). Much like the return on equity, the return on debt can be thought to comprise a base interest rate and a risk premium, in this case referred to as the debt risk premium (DRP).

The return on debt is measured as a 10 year trailing average, with each "tranche" (equal to one-tenth of the debt portion of our RAB) being updated annually.

The return on debt for each tranche is formed as a weighted average of A-rated debt indices (two-thirds weight) and BBB-rated debt indices (one third weight). The third-party indices that are used to provide the required debt information are provided by the Reserve Bank of Australia, Bloomberg and Thomson Reuters.

Unlike the return on equity, the return on debt is updated annually and, once calculated, the cost of debt for a given tranche remains in place for ten years. This assumes that we refinance our debt equally over a 10-year period.

Applying the AER's Rate of Return Guideline yields a return on debt of 4.72%, which we have applied in this Draft Plan.

10.2.3 Rate of Return

The AER assumes that 60% of our total financing costs relate to debt with the remaining 40% relating to equity. Applying these percentages to the return on equity (4.69%) and return on debt (4.73%) results in an overall rate of return of 4.72% in the first year of the next AA period. This rate of return declines each year in the next AA period due to our application of the trailing average cost of debt approach.

10.3 Cost of Tax

We have reflected the outcomes of the AER's December 2018 Tax Review in this Draft Plan. Our cost of tax building block is based on an assessment of our taxable income, the applicable corporate

[6] The AER foundation model approach is based solely on the application of the Sharpe-Lintner Capital Asset Pricing Model (SL CAPM).

tax rate and the value of imputation credits (gamma) to equity holders. These matters are discussed in this section.

The result of following the AER's approach to tax is that our tax building block is zero for each year of the next AA period.

10.3.1 Calculating the Cost of Tax

We have determined the cost of tax as total revenue less opex, tax depreciation and interest expense; where:

- *Total revenue* – which is the sum of all of our costs (or building blocks) (see Chapter 12);
- *Opex* – which is a specific building block that is used to determine total revenue (see Chapters 7 and 12);
- *Tax depreciation* – which is based on the calculation of the tax asset base in any particular year; and
- *Interest expense* – which is determined by multiplying the cost of debt by 60% of our capital base in each year, reflecting the debt funded proportion of the total capital base.

The corporate income tax rate is set at 30% consistent with the prevailing corporate tax rate applying in Australia. The value of imputation credits (or gamma), like tax depreciation, is a specific input that is required to determine the cost of tax.

10.3.2 Value of Imputation Credits

The value of imputation credits (or gamma) is determined by calculating the product of:

- the proportion of imputation credits distributed (the distribution rate); and
- the value of the distributed credits to investors (theta).

The value of imputation credits (or gamma) is 0.585 as determined in the AER's 2018 Rate of Return Guideline.

The effect of gamma is to reduce any tax allowance by 58.5%. However gamma has no effect on this Draft Plan because the AER's tax depreciation approach results in a Net Tax Allowance of zero.

10.3.3 Tax Depreciation

Our approach to determining tax depreciation in this Plan has changed compared to our previous AAs.

This change is a result of the AER's Tax Review, in which the AER gave effect to three key changes:

- the use of maximum 20-year tax asset lives;
- the use of a diminishing value method (rather than a straight-line method) to calculate tax depreciation over those 20 years; and
- introducing the 'actuals informed approach' to the expensing of some forms of capex. The AER Tax Review recommended that networks reflect the approach they adopt in their financial tax asset base for regulatory purposes.

These changes, to the extent that they were not previously used by AGN, apply to new assets only, as tax law does not allow for retrospective changes to the approach to calculating tax depreciation.

10.3.4 Tax Asset Base

The opening TAB of $886 million ($nominal) as at 1 July 2021 has been adjusted for the same forecast information used to adjust our capital base over the next AA period (see Table 10.2).

Table 10.2: Roll forward of the tax asset base ($million, nominal)

	2021/22	2022/23	2023/24	2024/25	2025/26
Opening tax asset base	939.6	961.1	982.1	986.3	981.9
Plus gross capex	120.2	131.5	125.9	123.0	119.6
Less tax depreciation	98.8	110.5	121.7	127.4	135.4
Closing tax asset base	**961.1**	**982.1**	**986.3**	**981.9**	**966.2**

Note: totals may not add due to rounding

10.4 Summary

Our financing and tax costs collectively account for around 40% of our total costs. For the purposes of this Draft Plan, we have applied the AER's Rate of Return Guideline and the AER's Tax Review in determining our financing and tax costs.

This results in a rate of return of 4.72% (see Table 10.3) and a Net Tax Allowance of zero.

Table 10.3: Indicative AER Rate of Return and Gamma

Parameters	AGN Draft Plan
Return on Equity	4.69%
Return on Debt	4.73%
Overall Rate of Return	4.72%
Gamma	0.585

Question for consideration

13. Do you have any comments on our approach to setting the financing and tax costs in this Draft Plan?

11 Incentives

IN THIS CHAPTER:

We propose to strengthen our incentives through the introduction of a CESS.

We are also considering the introduction of a network innovation scheme which we consider would deliver benefits to our customers.

Our incentive to seek out efficiencies and other performance improvements will be strengthened in the next AA period through the addition of two new incentive schemes.

We support the use of effective, outcome-based incentive schemes that promote the long-term interests of our customers.

Incentive schemes are often used by regulators to:

- strengthen a service provider's incentive to continuously seek out efficiency and performance improvements and share the benefits with customers;
- provide balanced incentives between opex and capex so that the most efficient expenditure mix is chosen;
- balance the incentives to pursue efficiencies and to improve or maintain service quality; and
- provide an incentive to invest in innovation in areas that can provide longer-term benefits to customers.

To date, the only incentive scheme that has applied to our South Australian network is the opex efficiency benefit sharing scheme (EBSS). We are proposing to maintain this scheme in the next AA period.

We are also proposing to supplement the opex EBSS with a capex efficiency sharing scheme (CESS). The CESS will strengthen our incentive to seek out capex related efficiencies, while also maintaining service standards and the health of our network.

To further strengthen our incentives over the next AA period, we are also considering the introduction of a network innovation scheme. While we consider there is merit in the introduction of a customer service incentive scheme we have chosen not to pursue this on the basis that our customer satisfaction scores are improving without such a scheme.

The following sections provide further detail on regulatory requirements for the incentive schemes, the feedback our customers and stakeholders have provided and our proposed incentive schemes.

11.1 Regulatory framework

A key objective of the regulatory framework is to promote efficient investment in, operation and use of, gas distribution networks.

In keeping with this objective, the NGR provides for gas networks to have one or more incentive schemes apply to encourage the efficient provision of services.

The NGR also requires any incentive mechanism to be consistent with the revenue and pricing principles, the most relevant of which is the principle that a service provider should be provided with effective incentives to promote:

- efficient investment in (or in connection with) the network;
- the efficient provision of services; and
- the efficient use of the network.

11.2 Customer and stakeholder engagement

Price and affordability are the top priorities for our customers and stakeholders. Customers expect that we keep prices low today, but also invest in a sustainable future.

In workshops 87% of customers told as that lowering carbon emissions was very important to them. Further, there was support for investment in innovation projects, in particular initiatives which lower carbon emissions.

We discussed incentives and presented our proposed approach to our reference groups in December 2019. There was broad support for our proposed approach for a CESS and an Innovation Allowance generally. Customers expressed a desire to consider an innovation incentive in more detail before we submit our Final Plan.

Engagement insights

- ✓ Customers expect us to pursue more opportunities to lower carbon emissions further in addition to existing plans.
- ✓ Customers support investment in innovation projects and are willing to accept a small price increase
- ✓ Stakeholders are keen to ensure that our investments are sustainably cost efficient.

11.3 Opex EBSS

Our South Australian network is currently subject to an opex EBSS and we are proposing to continue to employ this incentive scheme in the next AA period.

Further detail on how the EBSS works, where it applies and the benefits it has delivered our customers is provided below.

11.3.1 How the opex EBSS works

The opex EBSS, which is a key element of our opex forecasting approach (see section 7.3),[7] is designed to provide us with a continuous incentive to pursue opex efficiency improvements in any particular year of an AA period and to share any efficiency gains (or losses) with our customers.

The EBSS operates in a symmetric manner, which means that we are rewarded if there is an incremental efficiency gain, and penalised if there is an incremental efficiency loss.

To ensure that we have an incentive to pursue efficiency gains evenly throughout the AA period, we are able to retain the benefit of any efficiency gain (or incur the cost of any efficiency loss) for five years. After the relevant AA period, the benefit (cost) is passed through to our customers in the following AA period.

In effect, this scheme provides for 70% of the efficiency gains (or losses) to be passed through to our customers in the form of lower (higher) prices and we retain the remaining 30%.

11.3.2 Where it is used

In South Australia, we have had an opex EBSS in place for three AA periods. Over these periods, we have achieved over $22 million in ongoing efficiency improvements, the benefits of which have been (or will be in the next AA period) passed through to our customers. In fact we calculate the scheme has delivered $282 million in benefits to our customers since its introduction.

An opex EBSS is also in place on all other gas and electricity distribution and transmission networks regulated by the AER. In July 2019 Energy Networks Australia published *Rewarding Performance: How customers benefit from incentive-based regulation* which calculated customer benefits in the order of $3 billion delivered through the operation of EBSS schemes applied to electricity and gas service providers in Australia between 2006 and 2018.

11.4 Capex CESS

While we have had an opex EBSS in place for a long period of time, we have not had an equivalent capex incentive scheme in place. We are therefore proposing to strengthen and balance our incentives by introducing a CESS.

The form of our proposed CESS mirrors the 'Contingent CESS' that was recently approved by the AER for our Victorian and Albury networks. The AER has more recently approved a CESS to apply to Jemena Gas networks in New South Wales for the 2020-2025 AA period.

The 'Contingent CESS' was introduced in Victoria following an extensive industry engagement program that included stakeholder

[7] Our opex forecasting approach relies on actual incurred opex in the penultimate year of an AA period being efficient.

representatives and gas distributors at a national level, not just Victoria. Further detail on how this CESS works and where it currently applies is provided below.

11.4.1 How the CESS works

In a similar manner to the EBSS, the CESS would provide us with a continuous incentive to pursue capex related efficiency improvements over the AA period and to share any efficiency gains (or losses) with our customers.

The CESS would also:

- reduce inefficient growth in our capital base by providing a greater incentive to incur efficient capex; and
- address the imbalance in incentives that currently apply to decisions regarding whether opex or capex should be undertaken.

Under the Contingent CESS, 70% of any incremental capex[8] efficiency gains (or losses)[9] we achieve would be passed on to our customers, subject to the following:

- our ability to retain 30% of the efficiency gain would be contingent on us maintaining service standards and the health of the network, which would be measured using an Asset Performance Index (API) (see Box 11.1); and
- if we defer capex from one AA period to the next, the efficiency gain would be reduced.

These elements of the CESS are designed to ensure that cost savings are achieved through efficiency improvements, not reduced service levels, or an inefficient deferral of capex.

> Box 11.1: Asset Performance Index
>
> The API is used in the contingent CESS to determine how much of the efficiency gain we are able to retain. This metric reflects both:
>
> - service performance, as measured by the unplanned system average interruption frequency index (SAIFI) and unplanned system average interruption duration index (SAIDI); and
> - the health of the network, as measured by number of reported leaks in gas mains, services and meters.
>
> In our Victorian networks, the AER set targets for each of these measures based on the five-year historical performance of each network. If we meet or exceed these targets, we can retain 30% of the efficiency benefit. If, however, we do not meet these targets, the benefit can be reduced on a sliding scale, potentially to zero (i.e. if we fall below 80% of the target).

11.4.2 Where it is used

As noted above, the AER has recently allowed a 'Contingent CESS' to be applied to all gas distribution networks in Victoria and Jemena's NSW gas distribution network although some of the API measures differ reflecting specific network characteristics. A form of the CESS also applies to the electricity distribution and transmission networks regulated by the AER.

11.5 Network innovation scheme

The current regulatory framework makes it difficult to invest in innovation, even where it would:

- promote the efficient provision of services over the longer term; and/or
- enable other customer objectives to be met (e.g. to meet emissions targets and/or to support renewable energy technologies).

This is because, as explained above, the EBSS and CESS provide incentives to reduce costs. In the absence of an innovation scheme, this reduces the incentive to spend on innovation, particularly where the payback period on the investment is five or more years. We are therefore considering whether or not to introduce a network innovation scheme in the next AA period. Noting that there is a need for a whole of industry approach to innovation, we intend to work through the scope of this scheme, including whether it should be introduced at all, with our customers and stakeholders prior to commencing industry wide engagement.

11.5.1 How an innovation scheme could work

Network innovation schemes have been used by regulators to counter the lower incentive service providers have to invest in

[8] The CESS applies to capex, net of contributions and disposals, and adjusts for material deferrals, the effect of ex post capex reviews and cost pass throughs.
[9] These benefits and costs must be adjusted for any financing benefits or costs.

innovation, relative to businesses operating in competitive markets.

The lower incentive stems from the resetting of costs and prices at five-yearly intervals, which means a service provider may be unable to retain the innovation benefits for a sufficiently long period to recover the investment. This is particularly the case where:

- the payback period for an investment is longer than the AA period; and
- an allowance for the investment is not included in the opex and/or capex allowance and an EBSS and/or CESS applies.

To address this issue, some regulators have provided service providers funding to undertake eligible innovation based projects.

An example of such a scheme is the Demand Management Innovation Allowance Mechanism (DMIAM) that applies to electricity networks regulated by the AER. This scheme provides funding for research, development and implementation of eligible projects that have the potential to reduce the long-term cost of service provision.

If we were to propose such a scheme for the next AA period, it would likely take a similar form to the DMIAM. However, rather than focusing on demand, it would focus on eligible projects that are designed to promote the efficient provision of services over the longer term by supporting:

- the decarbonisation of energy supply; and
- the movement to smarter gas networks.

To be an eligible project, the proposed project would have to:

- involve the research, development, or demonstration of a new or original concept, technology or technique, not previously implemented that has the potential to reduce the carbon footprint of gas distributed by our network; and/or
- have the potential to deliver net financial benefits and/or improvements in our services to gas customers.

While we intend to consult further with our customers and stakeholders on the form this scheme could take, we are currently considering a scheme that would allow up to $2.5 million per year to be dedicated in the next AA period to innovation. To put this into perspective, $2.5 million translates to around $1 per year on our average customer's bill.

If such a scheme is introduced we will match any funding provided through the scheme, so that we bear the same risk as our customers if the project fails. We will also ensure that the findings are shared, to help the socialisation of benefits.

11.5.2 Where it is used

A form of the network innovation scheme, the Demand Management Innovation Allowance Mechanism, currently applies to electricity distribution networks regulated by the AER. A network innovation scheme also applies to electricity, gas and water businesses in the UK.

11.6 Customer service incentive scheme

We had considered proposing the introduction of a Customer Service Incentive Scheme (CSIS) for the next AA period. However, we note that our customer satisfaction scores – measured for nearly five years – continue to improve, reflecting our ongoing focus on our customers. Our conclusion is therefore that a CSIS is not required to be applied for the next AA period.

11.7 Summary

In the next AA period we are proposing to strengthen our incentives to pursue efficiencies and to share the benefits with our customers. We are proposing to supplement the existing opex EBSS with a CESS. We will also seek feedback from customers and stakeholders on a potential network innovation scheme before undertaking further and more detailed engagement on its design.

Questions for consideration

14. Do you support our proposal to maintain the opex efficiency benefit sharing scheme EBSS?

15. Do you support our proposal to introduce a contingent capital expenditure efficiency scheme (CESS)? If so, are there any other matters you think should be incorporated into the CESS?

16. Do you think a network innovation scheme should be implemented? If so, what level of funding do you think should be allowed under this scheme; for example $1 per year ($2.5 million), $2 per year ($5 million) and so on? What type of projects should be in scope?

17. Do you think a customer service incentive scheme (CSIS) should be implemented?

12 Demand Forecasts

IN THIS CHAPTER:

Our demand forecasts have been independently determined applying methodologies consistent with those approved previously by the AER consistent with past trends.

Overall demand for gas in the residential, commercial and industrial sectors is expected to fall consistent with past trends.

Our customers' overall demand for gas is expected to fall in the next AA period, in response to a range of external factors.

The demand for our services drives our operations and is a key determinant of our prices.

Our forecasts of natural gas demand and customer numbers are key inputs to our growth capex and opex forecasts. They are also used to determine our prices (reference tariffs), which are calculated by dividing our forecast revenue requirement by forecast demand.

Reflecting the differences in the nature of demand for our services, separate demand and customer connection forecasts have been developed by independent expert Core Energy & Resources ('Core Energy'), for our:

- Residential customers;
- Commercial customers (business customers who use less than 10 terajoules of gas each year); and
- Industrial customers (our largest business customers).

These customer groups are consistent with our proposed Haulage Reference Services to be provided over the next AA period.

In the next AA period, Core Energy forecasts the total demand for natural gas for our:

- residential customers to fall by 1.0% per year, in response to a range of external factors, such as higher wholesale gas prices, increasing penetration of solar energy, improved appliance and dwelling efficiency and lower new dwellings growth;
- commercial customers to rise by 0.2% per year, largely in response to higher projected levels of economic activity in South Australia; and
- industrial customers to fall by 1.3% per year, in response to higher wholesale gas prices.

Overall, Core Energy projects that the demand for gas by our customers will fall by 0.9% per year in the next AA period.

The following sections provide more detail on the relevant regulatory framework, the forecasting method and the demand forecasts themselves.

12.1 Regulatory framework

Our AA proposal must include the forecast demand for reference services. In keeping with the NGR, these forecasts must:

- be arrived at on a reasonable basis; and
- represent the best forecast possible in the circumstances.

The AER also identified a number of principles of best practice for demand forecasting in its 2013 Better Regulation program. The AER concluded that forecasts should:

- be accurate and unbiased;
- be transparent and repeatable;
- incorporate key drivers;
- incorporate a suitable method of weather normalisation; and

- be subject to statistical model validation and testing.

In previous AA reviews, the AER's consultants have assessed Core Energy's forecasts against these principles and concluded that the Core Energy forecasts were consistent with the above principles.

12.2 Customer and stakeholder engagement

We engaged with stakeholders (including retailers and our customers) in respect of our demand forecasts. At our SA Reference Group meetings, Retailer Reference Group meetings, at one-on-one meetings with customers and through our large user survey we discussed the approach and the importance of understanding key drivers of future demand.

Stakeholders indicated they understood our approach to forecasting residential, commercial and industrial demand and noted that the approach is consistent with that adopted for our recent reviews, including our last SA review. Stakeholders were comfortable with the approach to forecasting demand. In particular, retailers indicated that trends shown in demand forecasts are consistent with their own observations and expectations of demand.

12.3 Residential and Commercial Demand

The method that Core Energy has used to forecast demand and connections for the residential and commercial sectors is broadly the same, reflecting the fact they share the common key drivers of weather and gas price. The forecasting method that Core Energy has employed for our residential and commercial customers therefore discussed jointly below.

12.3.1 How our forecasts were developed

The method Core Energy has used to forecast our residential and commercial customers' demand is summarised in Figure 12.1.

The method depicted in Figure 12.1 is consistent with the approach that was used to develop the demand forecasts for the current AA period for both our South Australian, and Victorian and Albury networks, which were approved by the AER. It is also consistent with the principles employed by the Australian Energy Market Operator (AEMO), when forecasting residential and small commercial demand for its Gas Statement of Opportunities.

Further detail on some of the key elements of this method is provided below.

Weather adjustment

Our residential and commercial customers' demand for gas is strongly affected by weather, with customers using more gas when it is colder to heat their homes and businesses and vice versa in warmer weather. An adjustment for weather must therefore be made to historic residential and commercial demand to ensure the starting point and historic trends used to forecast gas demand are not unduly affected by abnormal weather conditions (see Step 1(a)) in Figure 12.1.

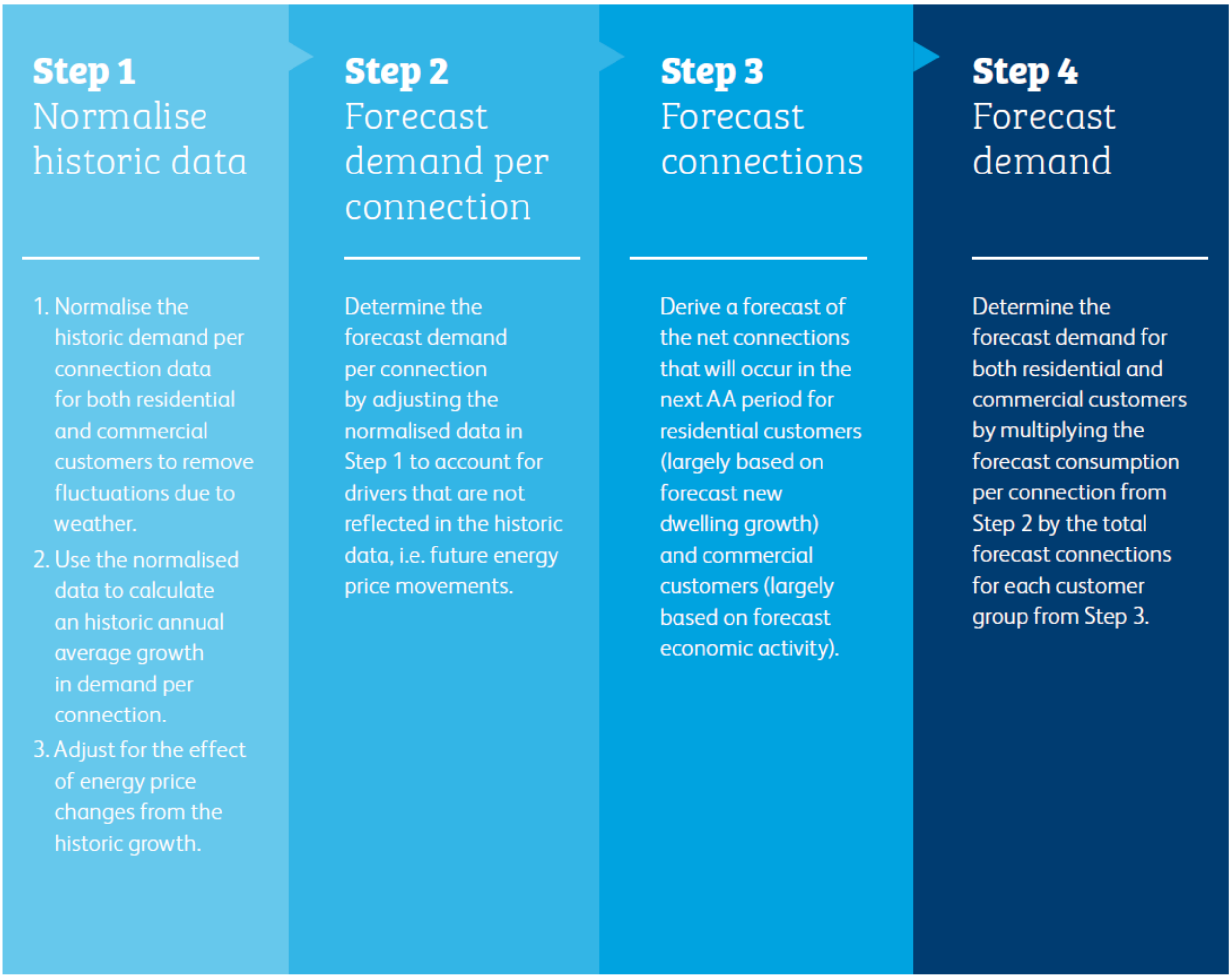
The adjustment Core Energy has made is based on the same approach that is used by AEMO, which is referred to as the Effective Degree Day (EDD312) weather standard. This approach enables us to determine the volume impact attributable to annual variances to weather relative to the EDD baseline.

This volume impact is then removed from the historic consumption per connection trend to derive a weather normalised trend that can be used for forecasting purposes.

Energy prices

In addition to weather, our residential and commercial customers' demand for gas is

Figure 12.1: Forecasting method used for residential and commercial customers



affected by changes in retail gas and electricity prices. An adjustment must therefore be made to the historic growth in consumption per connection to remove these effects (see Step 1(c)) in Figure 12.1.

An adjustment must then be made to the forecast demand per connection to reflect the forecast movement in retail gas and electricity prices.

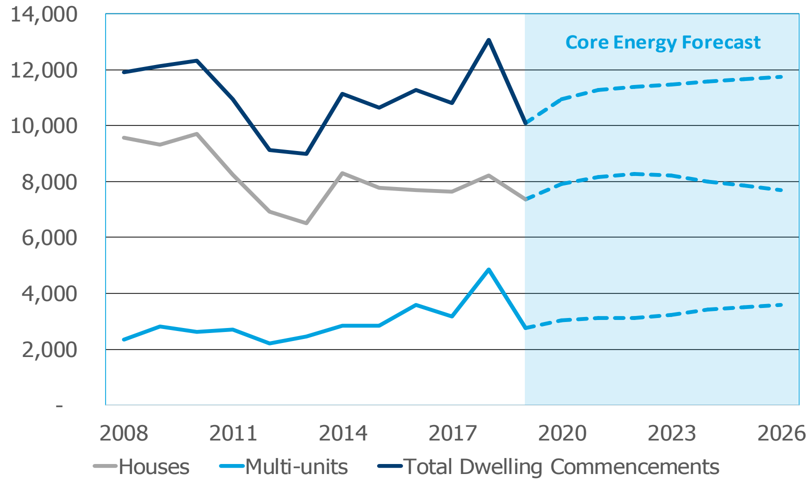
To incorporate the effect of these prices on both the historic data and forecast demand for gas, estimates are required of:

- the responsiveness of gas demand to a change in retail gas prices (referred to as 'own price elasticity'); and
- the responsiveness of gas demand to retail electricity prices (referred to as 'cross price elasticity').

The elasticity values Core Energy has assumed are the same as those used in our last AA, which are as follows:

- Own-price elasticity: a lagged long-term-own-price elasticity estimate of -0.30 for residential and -0.35 for commercial customers has been assumed. This implies that a 1% increase in retail gas prices will result in a 0.30% and 0.35% reduction in consumption per connection for residential and commercial customers, respectively.
- Cross-price elasticity: a long-term-cross-price elasticity of 0.10 has been assumed (this implies that a 1% increase in retail electricity prices will result in a 0.10% increase in consumption per connection).

Figure 12.2: HIA actual and forecast dwelling commencements in South Australia



Forecast new dwelling growth

The number of new residential connections expected over the next AA period is directly related to the forecast number of new dwellings in South Australia.

This aspect of Core Energy's forecast is based on an independent forecast of new dwelling commencements by the Housing Industry Association (HIA) (see Figure 12.2).

As Figure 12.2 shows, HIA has projected a decline in new dwelling commencements, particularly multi-unit dwellings, in 2018-19, and while it expects a small recovery in 2019/20, the number of new dwellings in 2021/22 is still expected to be below the peak observed in 2017/18.

12.3.2 Residential demand forecast

Using the methodology set out above, Core Energy has developed its forecast of residential demand in the next AA period by multiplying the forecast number of residential connections by forecast consumption per connection.

Residential connections

Core Energy is projecting that our residential connections (net of forecast disconnections)[10] will grow by 1.3% per year in the next AA period, reaching 484,822 by the end of the period (see Figure 12.3).

The forecast growth in residential connections is slightly lower than the 10-year historic average growth rate of 1.6% per year. This is due in large part to:

- lower forecast growth in new dwellings (see Figure 12.2);
- a reduction in the number of projected electricity to gas connections; and
- a small increase in the number of disconnections.

This lower forecast growth is largely driven by lower forecast economic activity and population growth in South Australia over the next AA period.

[10] The forecast number of disconnections is based on the application of the 10-year historic disconnection rate to total connections.

Consumption per connection

Core Energy is also projecting that consumption per residential connection will fall by around 2.3% over the next AA period, from 15.9 GJ in 2020/21 to 14.1 GJ in 2025/26.

As Figure 12.4 shows, this fall is consistent with the long-term decline in average residential consumption per connection that has occurred in the last two AA periods. It is also consistent with what has occurred across our other distribution networks.

The key drivers of this decline include improved appliance and dwelling efficiency and the substitution of gas appliances for their electric equivalent (for example, substituting gas heating for electric reverse cycle air-conditioning). It also reflects the expected increase in wholesale gas prices over the period.

Total residential demand

Overall, the demand for gas by our residential customers in the next AA period is expected to fall by 1.0% per year from 7,208TJ in 2021/22 to 6,849TJ in 2025/26 (see Figure 12.5 and Table 12.1).

This fall reflects the effect of the forecast decline in consumption per residential connection which is partially offset by growth in residential connections.

Figure 12.3: Residential connections forecast (no.)

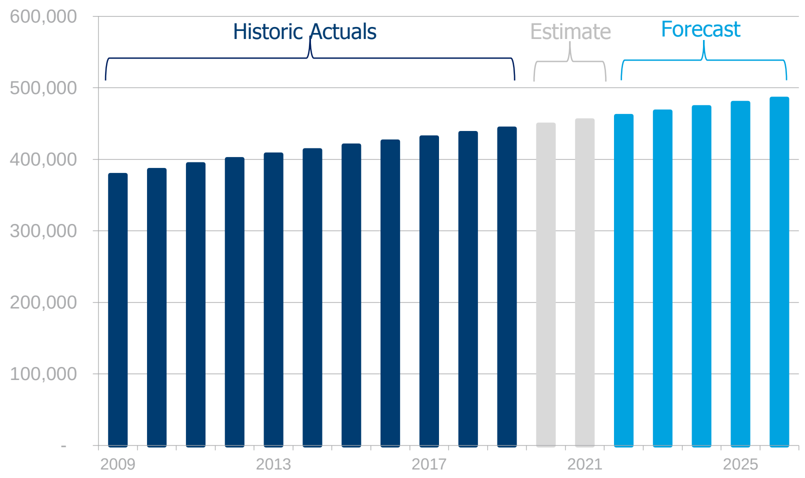


Figure 12.4: Residential consumption per connection forecast (GJ)

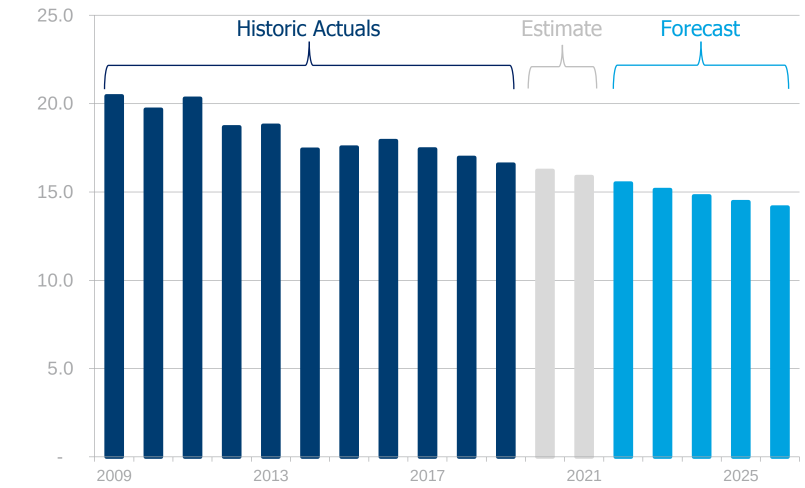
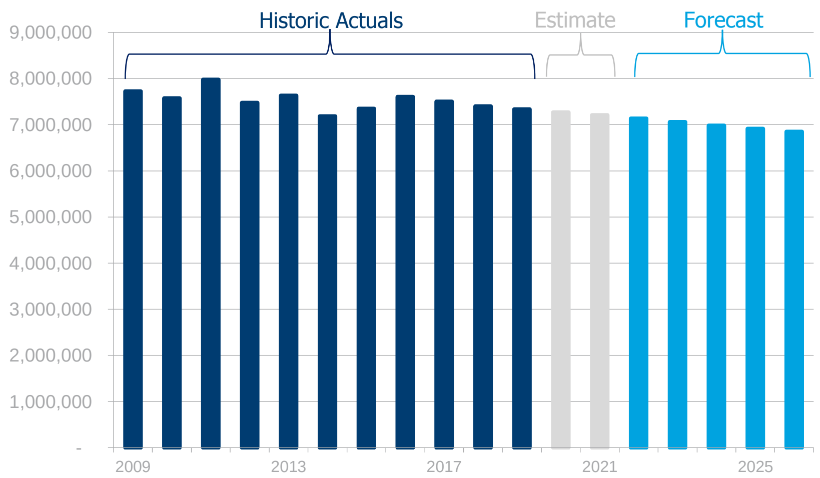


Figure 12.5: Total residential demand forecast (GJ)



12.3.3 Commercial demand forecast

Like residential demand, Core Energy's commercial demand forecast is calculated by multiplying the forecast number of commercial connections by the forecast consumption per commercial connection.

Commercial connections

In the next AA period, Core Energy is projecting the number of commercial connections (net of disconnections) will grow by 1.1% per year - lower than the historic trend due to slower forecast growth in GSP.

Consumption per connection

In a similar manner to our residential customers, the average consumption per commercial connection is expected to decline in the next AA period, primarily as a result of higher wholesale gas prices (see Figure 12.7).

The decline is not, however, expected to be as pronounced as it is for our residential customers due to the slower historic trend decline in consumption per connection, with consumption per commercial customer forecast to fall by 0.9% per year over the next AA period from 289 GJ in 2020/21 to 276 GJ in 2025/26.

Total Commercial demand

The total demand for gas from commercial customers is expected to grow by 0.2% per year over the next AA period, from 3,328TJ in 2021/22 to 3,359TJ in 2025/26 (see Figure 12.8 and Table 12.1).

Figure 12.6: Commercial connections forecast (no.)

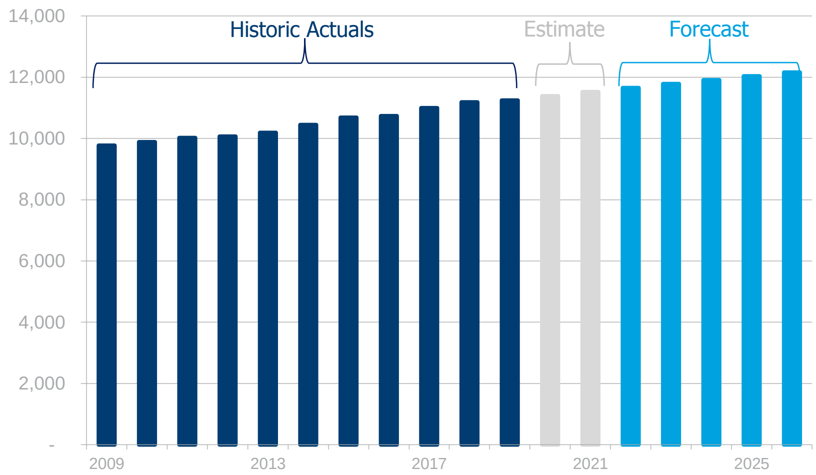


Figure 12.7: Commercial consumption per connection forecast (GJ)

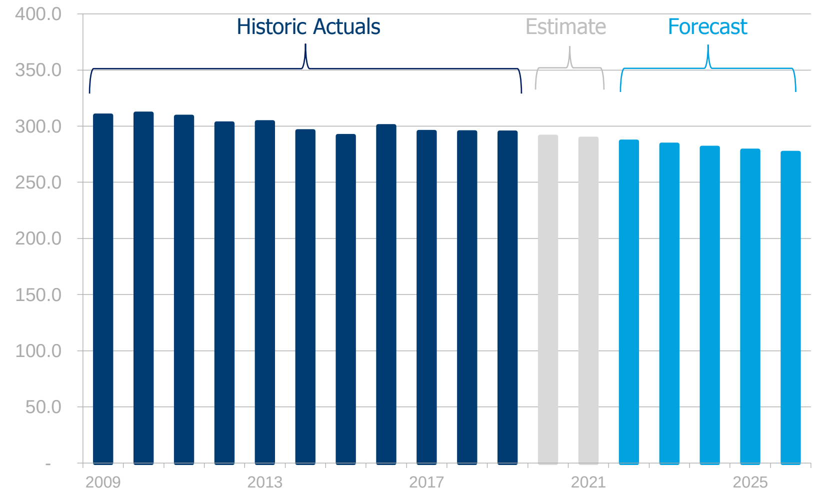
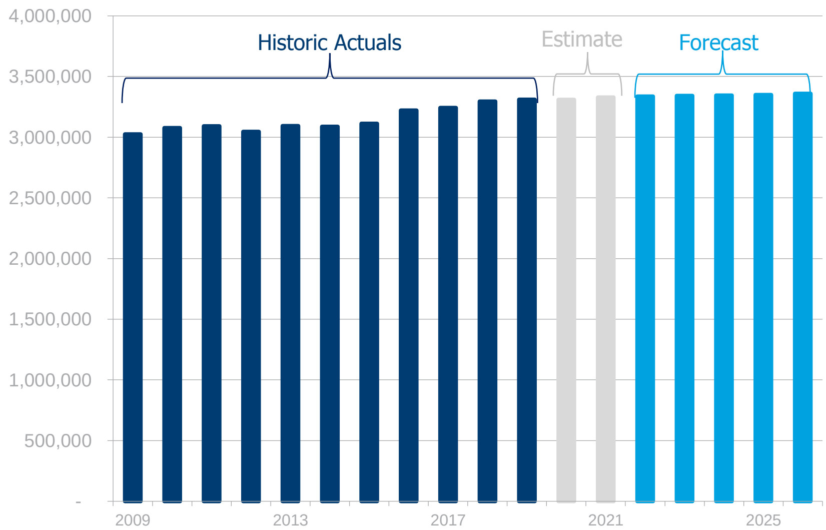


Figure 12.8: Total commercial demand forecast (GJ)



12.4 Industrial demand

12.4.1 How our forecast was developed

In contrast to residential and commercial customers, our industrial customers are charged on the basis of the capacity they are expected to require on a day. The forecast demand for this group is therefore based on both:

- the maximum amount of capacity that our industrial customers are expected to require on a day (referred to as Maximum Daily Quantity (MDQ)); and
- the total amount of gas that are our industrial customers are expected to consume in a year (referred to as Annual Contract Quantities (ACQ)).

To help inform this forecast, Core Energy conducted a survey of our top 25 industrial customers, the objective of which was to better understand their future MDQ and ACQ requirements, including any planned connections or disconnections over the next AA period. In total 10 customers responded to the survey.

For those customers that did not respond to the survey, Core Energy examined the relationship between each customer's historic demand and economic activity. In those cases where there was a statistically significant relationship, the MDQ and ACQ was forecast by applying an adjustment to the historic demand based on forecast economic growth.

In those cases where there was not a statistically significant relationship, the MDQ and ACQ were forecast by applying an adjustment based on the historic trend.

The connections forecast for industrial customers has been developed having regard to historic growth estimates and information on known new connections and disconnections.

Figure 12.9: Industrial Connections Forecast (no.)

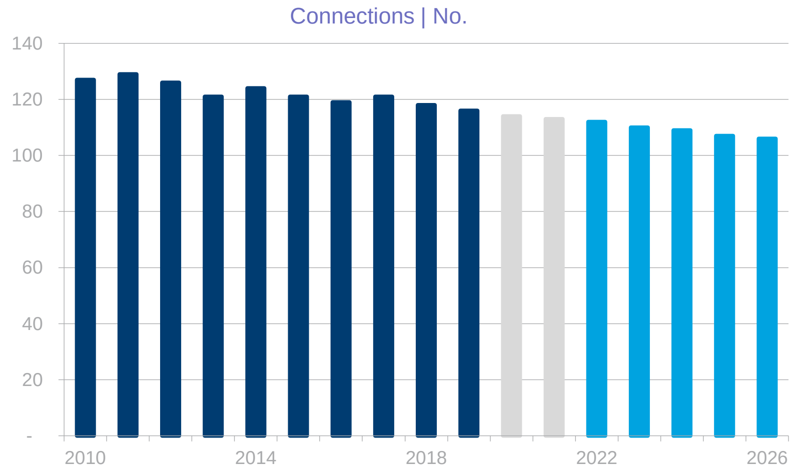
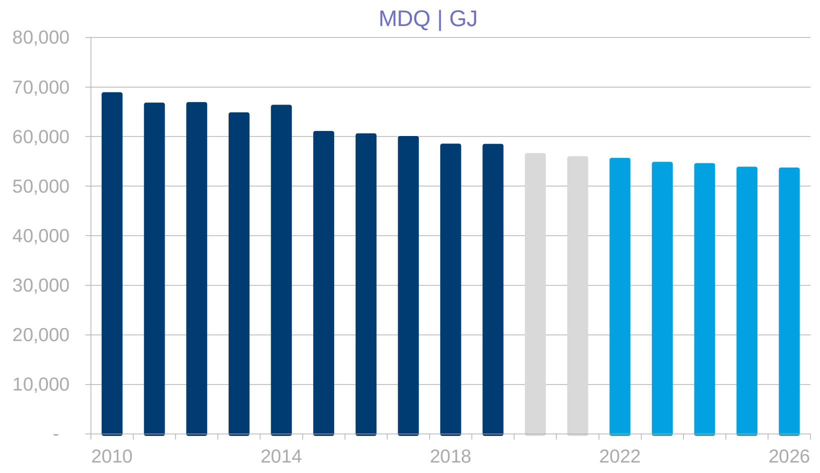


Figure 12.10: Industrial demand – MDQ (GJ)



12.4.2 Industrial demand forecast

Industrial MDQ is forecast to decline by 0.84% per annum to 53,361 GJ MDQ over the next AA period (see Figure 12.10). Industrial connections are also forecast to decline to 106 connections, from 113 at the start of the AA period.

12.5 Summary

Table 12.1 provides a summary of our demand forecasts for the next AA period.

As this table shows, residential and industrial demand is forecast to decline over the next AA period whilst commercial demand is forecast to rise.

Our demand forecasts are based on the methodology accepted by the AER in the current AA period for both our South Australian, Victorian & Albury networks.

Table 12.1: Summary of demand forecast

	2021/22	2022/23	2023/24	2024/25	2025/26
Residential demand					
Connections (no.)	460,754	466,945	473,063	479,005	484,822
Consumption per connection (GJ)	15.5	15.1	14.8	14.4	14.1
Demand (TJ)	7,134	7,059	6,981	6,913	6,849
Commercial demand					
Connections (no.)	11,653	11,783	11,911	12,036	12,159
Consumption per connection (GJ)	286.3	283.6	280.8	278.3	276.3
Demand (TJ)	3,336	3,341	3,344	3,349	3,359
Industrial demand					
Connections (no.)	112	110	109	107	106
MDQ (TJ)	55,315	54,515	54,248	53,530	53,361
ACQ (TJ)	10,761	10,571	10,483	10,304	10,227

Questions for consideration

18. Do you consider our approach to forecasting demand to be reasonable?

19. Are there other factors we should consider in developing our demand forecast? For example, are you aware of any potential future energy policy changes that will effect gas demand over the next AA period?

20. The South Australian government has legislated to reduce carbon emissions by at least 60 % below 1990 levels. Do you think this target will impact gas demand over the next AA period, and if so, how should this be factored into our demand forecasts?

13 Revenue and Pricing

IN THIS CHAPTER:

We have proposed to cut South Australian network prices by 7.9% on 1 July 2021 followed by increases of 1.2% each year thereafter.

This will save the average residential customer $30 per year, commercial customer $270 per year and industrial customer $15,000 per year.

Our proposed price path reflects the forecast growth of our capital base which will enable revenue growth commensurate with changes in our underlying costs.

This section sets out the total revenue and the proposed prices to apply over the next AA period.

Our costs are referred to as 'building blocks' and are summed to determine total allowed revenue in each year of the next AA period.

We recover our costs through the prices (or tariffs) that we charge retailers for providing reference services.

13.1 Regulatory Framework

We are required to determine total revenue for each year of the next AA period as the sum of our forecast opex, return on our capital base, depreciation of the capital base and a forecast of the cost of tax.

Our total revenue can also increase or decrease depending on our performance in relation to incentive mechanisms applying in the current AA period, such as the opex incentive mechanism (Efficiency Benefit Sharing Scheme – EBSS) which applies to our South Australian gas network.

Our prices are required to reflect, to the extent possible, the underlying cost of providing services to our customers.

13.2 Customer and Stakeholder Engagement

Customers and stakeholders told us that affordability is their highest priority. In developing this Draft Plan we have had regard for the impact individual aspects of the plan will have on price.

As part of our engagement on this Draft Plan, we will also seek feedback on our proposed pricing structure, specifically in relation to the mix of fixed and variable components of our prices and our proposed price path. This feedback will be reflected in our Final Plan submitted to the AER by 1 July 2020.

13.3 Revenue

This Draft Plan outlines the basis of all the relevant building blocks that are used to determine building block total revenue. The building block total revenue with and without the cost of providing Ancillary Reference Services (ARS) is provided in Table 13.1.

Our building block revenue is recovered through the prices we charge retailers for providing domestic, commercial and

Table 13.1: Building Block Total Revenue, 2021/22 to 2025/26 ($nominal, million)

	2021/22	2022/23	2023/24	2024/25	2025/26
Return on Capital	84.6	87.8	91.4	94.4	97.4
Return of Capital	51.7	56.6	62.8	59.4	65.1
Opex	72.1	74.9	76.2	79.1	81.8
Incentive Mechanism	10.4	9.6	11.0	6.6	1.8
Cost of Tax	0.0	0.0	0.0	0.0	0.0
Building Block Total Revenue (including ARS)	**218.8**	**229.0**	**241.4**	**239.4**	**246.1**
Less ARS	2.4	2.5	2.5	2.6	2.7
Building Block Total Revenue (excluding ARS)	**216.3**	**226.6**	**238.8**	**236.8**	**243.4**

Note: Totals may not add due to rounding

demand haulage services and ARS. We are required to set our prices such that the total revenue we recover equals the building block total revenue. The AER's Final Decision will provide for a series of price changes (or X-factors) to ensure this objective is achieved.

The building block total revenue, smoothed revenue and percentage changes in prices are set out in Table 13.2. We have developed our price path in order to:

- provide for revenue growth that approximates the growth in the capital base over the next AA period to ensure the growth in our revenue is commensurate with changes in our underlying costs; and
- to equate revenue (or building block revenue) with our underlying costs recovered through the prices we charge retailers in 2025-26 (the last year of the next AA period) to ensure that there is no one-off adjustment to prices (either positive or negative) required from 1 July 2026 to equate smoothed revenue with costs.

By aligning our price path to the growth in our capital base we are more likely to sustain stable credit metrics at levels assumed by the AER in setting the return on debt. This is because our revenue will more closely match our underlying costs over time (see Section 13.3.1).

Table 13.2: Proposed Price Path, 2021/22 to 2025/26 ($nominal, million)

	2021/22	2022/23	2023/24	2024/25	2025/26
Building Block Total Revenue (excluding ARS)	216.3	226.6	238.8	236.8	243.4
Smoothed Revenue	217.8	224.8	232.1	239.7	247.9
Real Price Path	-7.9%	1.2%	1.2%	1.2%	1.2%

13.3.2 Financeability

The AER assumes a weighted average of credit ratings between A- and BBB+ when it sets the return on debt (as the assumed credit rating directly impacts borrowing costs). We therefore consider it is good regulatory practice to consider whether our proposal meets the credit metrics required of A-/BBB+ rated business.

The ratings agencies focus on the following two key credit metrics in determining a credit rating for a business:

- Funds from Operations (FFO) to debt – which is defined as FFO divided by debt (and which measures the availability of cash flow to repay the balance of outstanding debt); and
- FFO to interest – which is defined as FFO plus interest divided by interest (and which measures the availability of cash flow to pay interest costs).

FFO is calculated as total smoothed revenue less interest, opex and tax. Our conservative view is that the ratings agencies require a sustained FFO to debt ratio of at least 9% and a FFO to interest ratio above 2.5 to determine a weighted average credit rating of between A- and BBB+. We also consider that the key focus of the credit rating agencies is on the FFO to debt ratio given the prevailing very low interest rate environment (making interest coverage a far easier constraint to achieve).

We have assessed the key credit ratios delivered by our Draft Plan (see Table 13.3). Our Draft Plan delivers an average FFO to debt of 8.9% and FFO to interest of 2.9 over the next AA period, which partially satisfies the thresholds required for a weighted average A-/BBB+ rating. This reflects and supports our proposed price path shown in Table 13.2 above.

If key aspects of this Draft Plan are not accepted and these thresholds are not met, our view is that an adjustment to our cash flow would be required over the next AA period to maintain the credit rating assumed by the AER in setting the return on debt (thereby ensuring that the plan for the next AA period is internally consistent). Such an adjustment could include:

- varying the inflation adjustment that is used to calculate regulatory depreciation, with the lower inflation adjustment having the effect of increasing revenue (and hence cash flow) in the next AA period; or
- shifting the classification of capex to opex, which again increases the cash flow given that opex is recovered in the year it is incurred while capex is recovered over the longer term (up to 60 years).

Importantly, any such adjustment alters the timing of cash flow rather than the total amount of cash flow recovered by our business (that is, consumers are no better or worse off as a result of the adjustment over the medium to longer term).

Table 13.3: Draft Plan Key Credit Ratios, 2021/22 to 2025/26

	2021/22	2022/23	2023/24	2024/25	2025/26	Average
FFO to Debt	9.5%	9.1%	8.9%	8.6%	8.4%	8.9%
FFO to Interest Cover	3.0	2.9	2.9	2.8	2.8	2.9

Table 13.4: Charging Parameters by Customer Type

Residential (Tariff R)	Commercial (Tariff C)	Industrial (Tariff D)
Fixed Charge	Fixed Charge	0 – 50 GJ MDQ
0-10 GJ	0-360 GJ	50-100 GJ MDQ
10-18 GJ	360-1,920 GJ	100-1000 GJ MDQ
>18 GJ	1,920-6,000 GJ	Additional GJ MDQ
	>6,000 GJ	

13.5 Prices

As already noted, we recover our revenue through the prices that we charge retailers for providing reference services. This section outlines our current and proposed pricing structures.

13.5.1 Current Pricing Structure

Our current pricing structure includes two zones, South Australia (excluding Tanunda) and Tanunda.

The South Australia (excluding Tanunda) zone includes residential, commercial and industrial customers whilst the Tanunda zone includes only residential and commercial customers.

We are expecting to extend our network to Mount Barker in the next AA period. The tariff we will use will mirror the tariff applied in the Tanunda zone. We may rename the Tanunda zone to reflect the fact that there will be two residential pricing zones outside of the Adelaide metropolitan area included in the Tanunda zone.

Prices for residential and commercial customers consist of a number of volumetric (or consumption) based charging parameters (in dollars per GJ per day) and a fixed supply charge (in dollars per day).

We currently recover approximately 75% of our revenue in the residential and commercial segments in the variable (volumetric) components of our tariffs and 25% through the fixed components. This reflects previous stakeholder feedback supporting a high or very high degree of variability in their gas bill is preferred as it more closely reflects user based pricing.

Prices for our industrial customers are capacity based and consist of a number of banded charging parameters (in dollars per GJ of MDQ) (see Table 13.4). All prices decline as usage increases to promote better network utilisation.

13.5.3 Declining Block Tariff Structure

Both the residential and commercial pricing bands (or components) decrease as customer usage increases (often referred to as declining block tariffs). This pricing structure:

- reflects the relatively low marginal cost associated with increasing the supply of gas to a customer; and
- encourages greater network utilisation by promoting connection of more gas appliances, which is part of the package of measures that we use to address the observed long-term decline in demand per connection (see Section 12).

For instance, our first residential pricing band broadly captures a customer using a gas cooker and solar hot water system, the second step captures a customer with a non-solar gas hot water system while the final step captures customers utilising gas for space heating.

Given declining average gas consumption, our tariff structure is designed to encourage greater network utilisation. We consider our pricing structures align with our obligations that require AGN to promote the efficient use of the network.

We therefore consider there is strong merit in retaining the existing declining pricing structure and propose that it be retained.

13.6 Summary

We recover our costs, or building block revenue, through the prices that we charge for providing network services. We have proposed to cut our network prices in South Australia by 7.9% (before inflation) on 1 July 2021 and increase prices thereafter by 1.2% per annum in line with the growth in our capital base. This price path materially improves our ability to maintain stable credit metrics at levels assumed by the AER in setting our cost of debt allowance.

We consider that it is good regulatory practice for the AER to deliver a decision which delivers sufficient cash flows to maintain the A- to BBB+ credit rating assumed by the AER in setting the return on debt to ensure the decision is internally consistent.

We have performed this analysis and have concluded that the cash flows under this Draft Plan are sufficient to maintain the assumed credit rating, should it be largely accepted.

Questions for consideration

21. Do you support our objectives of maintaining stable credit metrics and aligning revenue with underlying costs in setting our proposed price path? Would you prefer an alternate price path, and if so, on what basis?

22. Do you consider that explicit consideration should be given as to whether a pricing proposal provides sufficient cash flow to maintain the credit rating assumed by the AER in setting the cost of debt? If so, how do you think this assessment should be done – for example, by considering the credit metrics against levels assumed by ratings agencies? If an adjustment to prices is required, how should this be undertaken – for example, through changes in capitalisation or depreciation?


Australian
Gas Networks

14 Network Access

IN THIS CHAPTER:

We propose to maintain the process of standardising our terms and conditions across our networks.

Our AA Document will remain consistent with the current period AA Document.

We are continuing the process of standardising our proposed terms and conditions.

Our reference service terms and conditions set the contractual arrangements between AGN and network users.

A key part of our relationship with network users is a contractual agreement between the parties that governs the conditions (or terms) of access to our networks, commonly referred to as a 'Haulage Agreement'.[11] The terms and conditions of the Haulage Agreement typically reflect the AER approved terms that are set out in our AA Document, unless otherwise agreed by the parties.

The following sections outline the processes followed to develop our proposed terms of access to our South Australian gas distribution network over the next (2021/22 to 2025/26) AA period.

We also describe the changes we are proposing to the terms and conditions from those in place during the current (2015/16 to 2021/22) AA period. The terms and conditions are set out in our AA Document, which will be provided alongside the Final Plan to be submitted to the AER by 1 July 2021.

14.1 Regulatory Framework

We are required under the NGR[12] to specify the terms and conditions on which each reference service will be provided in our Final Plan.

14.2 Customer and stakeholder engagement

Our terms and conditions have been subject to considerable stakeholder engagement through a number of successive AA review processes, and consequently, have been amended over time to take into account feedback we have received from stakeholders and decisions made by the AER. We have continued to apply previous AER decisions as a base for setting the proposed terms to apply to our network over the next AA period.

We have engaged further with retailers on the proposed terms to apply to our South Australian network leading into developing our Draft Plan. This engagement has occurred primarily through our Retailer Reference Group (RRG), which comprises representatives from retailers that operate in South Australia.

> *AGN continues to set the benchmark standard of consultation with industry in its AA reviews. Furthermore, we support AGN's efforts to try and align the terms and conditions of access for their SA AA with Victoria to the extent possible.*
>
> Red Energy and Lumo Energy Submission to our Proposed General Terms and Conditions

14.3 Approach

We commenced a process of standardising our terms across all jurisdictions where we have networks in 2012. Our five step

[11] Network users are primarily gas retailers or self-contracting users of our networks.

[12] NGR 48(d)(ii))

approach to engaging on our proposed terms and conditions is illustrated below in Figure 14.1.

We believe there are a number of benefits to our customers from standardising terms of access as it promotes greater efficiency across the industry and reduces transaction costs.

Our approach to developing the proposed Terms and Conditions includes:

- harmonising the proposed terms with the Victorian and Albury Terms and Conditions taking into consideration any jurisdictional differences requiring variation (being the most recent network terms approved by the AER);
- incorporating common amendments recently incorporated into South Australian Haulage Agreements which will improve alignment and efficiency in the terms and conditions;
- proposing a clause to share customer details. This is consistent with a clause in both the AusNet Services and Multinet Gas Access Arrangement Part C Terms and Conditions, which requires the User (Retailer) to provide telephone numbers and email addresses for each customer;
- correcting typographical errors and anomalies;
- incorporating feedback from our RRG on the three drafts of our proposed Terms and Conditions; and
- incorporating feedback from the Draft Plan on the proposed Terms and Conditions in preparing our Final Plan.

14.4 Summary of the AA Document

As noted earlier, the AA Document sets out the proposed prices and terms and conditions under which we offer access to our networks. The format of the proposed AA Document remains largely unchanged from the current AA Document.

We are proposing the following changes to the AA Document:

- Network Extensions and Expansions, Capacity Trading, Queuing and Changing Receipt and Delivery Points – changes to align with recent changes to the NGR[13]; and
- Speculative Capital Expenditure – addition of clause to align with our Victorian and Albury AA Document.

[13] NGR 112

Figure 14.1: Our engagement approach on Terms and Conditions

First Draft Terms and Conditions

July 2019

Step 01 ✔

We sent the first draft on 30 July 2019 to eight retailers. The proposed changes:

- harmonised with the AER approved Victorian and Albury terms and conditions;
- incorporated recent "standard amendments" from signed SA haulage agreements; and
- incorporated customer information clause from other gas businesses' terms and conditions

Step 02 ✔

We received feedback from three retailers on the first draft terms and conditions

Second Draft Terms and Conditions

December 2019

Step 03 ✔

We have listened to feedback on our terms and conditions and incorporated changes.

We have continued to discuss with retailers the need for the customer information clause.

We sent the second draft on 18 December 2019 to eight retailers, with responses due by 7 February 2020.

Step 04

We will respond to feedback and prepare our third draft terms and conditions

Third Draft Terms and Conditions

April 2020

Step 05

We will share our third draft terms and conditions

14.5 Summary

The terms and conditions are a key part of our relationship with network users. The proposed terms are the basis that users gain access to our networks and generally form the basis for the contractual agreement entered into between the parties. Our proposed terms have gone through considerable consultation with stakeholders over the past seven years.

We consider that the process of standardising our terms across our networks is consistent with achieving lowest sustainable costs for our customers.

Question for consideration

23. Do you support AGN continuing to standardise terms and conditions across its networks?

Glossary			
AA	Access Arrangement	HSE	Health Safety Environment
ACQ	Annual Contract Quantities	HyP SA	Hydrogen Park South Australia
AER	Australian Energy Regulator	I&C	Industrial and Commercial (customers)
AGIG	Australian Gas Infrastructure Group	ILI	In Line Inspection
AGN	Australian Gas Networks	KPI	Key Performance Indicator
AHC	Australian Hydrogen Centre	LPG	Liquid Petroleum Gas
AMP	Asset Management Plan	MDQ	Maximum Daily Quantity
AMS	Asset Management Strategy	MFP	Multifactor Productivity
ARENA	Australian Renewable Energy Agency	MGN	Multinet Gas Networks
ARS	Ancillary Reference Service	MRP	Market Risk Premium
capex	Capital Expenditure	Next AA period	2021/22 to 2025/26
CBD	Central Business District	NGL	National Gas Law
CSIRO	Commonwealth Scientific and Industrial Research Organisation	NGR	National Gas Rules
Current AA period	2016/17 to 2020/21	opex	Operating Expenditure
DBP	Dampier Bunbury Pipeline	OTR	Office of the Technical Regulator
DCVG	Direct Current Voltage Gradient	PMC	Periodic Meter Change
DP	Delivery Point	RBA	Reserve Bank of Australia
DRP	Debt Risk Premium	RRG	Retailer Reference Group
EBSS	Efficiency Benefit Sharing Scheme	SARG	South Australian Reference Group
EDD	Effective Degree Day	SCADA	Supervisory Control and Data Acquisition
ESCOSA	Essential Services Commission of South Australia	SL CAPM	Sharpe-Lintner Capital Asset Pricing Model
FFO	Funds from operations	TAB	Tax Asset Base
GDB	Gas Distribution Business	TFP	Total Factor Productivity
GJ	Gigajoule/s	TJ	Terajoule/s
GSP	Gross State Product	TRIFR	Total Recordable Injury Frequency Rate (the number of total recordable injuries per million hours worked)
HDPE	High-Density Polyethylene	UAFG	Unaccounted for Gas
HIA	Housing Industry Association	WPI	Wage Price Index

Australian Gas Infrastructure Group

Dampier Bunbury Pipeline

Multinet Gas Networks

Australian Gas Networks