

Safe. Affordable. Efficient.





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From the Managing Director

I am pleased to share this summary of our gas network's five-year plan, commencing 1 January 2018.

Our full plan has been submitted as AusNet Services' Gas Access Arrangement Review (GAAR) proposal, for approval by the Australian Energy Regulator (AER). The proposal focuses on keeping the services you value safe and affordable, and outlines our gas network expenditure and revenue requirements for doing so over the 2018–2022 regulatory period. You can access the proposal on our website (www.ausnetservices.com.au).

The significant changes happening within the natural gas market in Australia have implications for how we operate and invest in our gas business. For instance, technology advances have led to a change in the way customers are sourcing and using energy. Also, customers are consuming considerably less gas than they have in the past, a trend which is expected to continue in the next five years.

In formulating our plan, we engaged with more than 700 of our customers and stakeholders. We want to better understand their needs and wants when it comes to natural gas and the services we provide, because matching our service offerings to customer preferences is beneficial to all concerned. The insights we gained during the engagement process were invaluable, and we thank all of the customers and stakeholders who took the time to talk with us.

By implementing our five-year plan we will continue to deliver a safe and affordable gas service to our Victorian customers and stakeholders. We will also continue to be one of the most efficient businesses when compared to our peers, which is good news for our customers who receive greater value for every dollar that we spend compared to other gas distribution businesses in Australia.

As always, we remain committed to safety. The large scale low pressure mains replacement program launched in 2003 will continue, replacing more than 460 kilometres of gas pipelines nearing the end of their useful lives over the next five years. A program designed to proactively identify and replace deteriorating meters has also been proposed in the upcoming regulatory period. These programs are critical to



ensuring ongoing public safety and network reliability.

We are conscious of increasing customer concern over energy prices. As gas distribution services represent around 30% of a residential customer's gas bill, our aim is to keep gas affordable for our customers. As such, we are proposing a 5% price reduction in gas distribution charges effective from 1 January 2018.

I hope this summary document provides the background you need to understand our full plan and is useful in building your understanding of AusNet Services' gas business.

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Mr Nino Ficca Managing Director AusNet Services

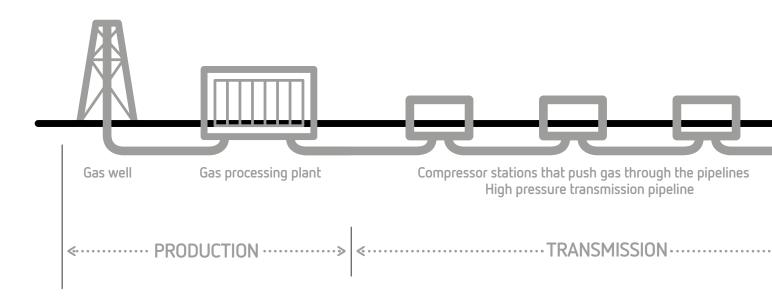
Who we are

AusNet Services is Victoria's largest energy delivery service business. We own and operate \$11 billion worth of gas distribution, and electricity transmission and distribution assets across Victoria.

Our gas network distributes natural gas to approximately 665,000 customers across central and western Victoria. In fact, the origins of our network date back over 160 years to when the Gas and Fuel Corporation of Victoria was formed in 1851. This document sets out our business plans for our gas distribution network over the coming regulatory period (from 1 January 2018 to 31 December 2022).

Gas distribution plays an important role in ensuring all homes and businesses have access to safe and reliable supplies of natural gas. The diagram below shows how the gas distribution network forms part of the overall gas supply chain. In simple terms, gas moves from supply sources through the high pressure transmission pipelines, into the low pressure distribution network, then via a meter into homes and businesses. Our core business is the safe and secure transportation of gas across our network throughout central and western Victoria. This involves connecting new customers, maintaining and replacing gas pipework, and responding to gas emergencies.

Figure 1: The Gas Supply Chain





Our network operates as a 'natural monopoly', meaning that it is not economically efficient or practical to have competing networks. For this reason, the Australian Energy Regulator (AER) decides (or regulates) how much revenue we should earn from providing gas distribution services. This determines the price of using our network that is charged to customers as a part of their gas bills.

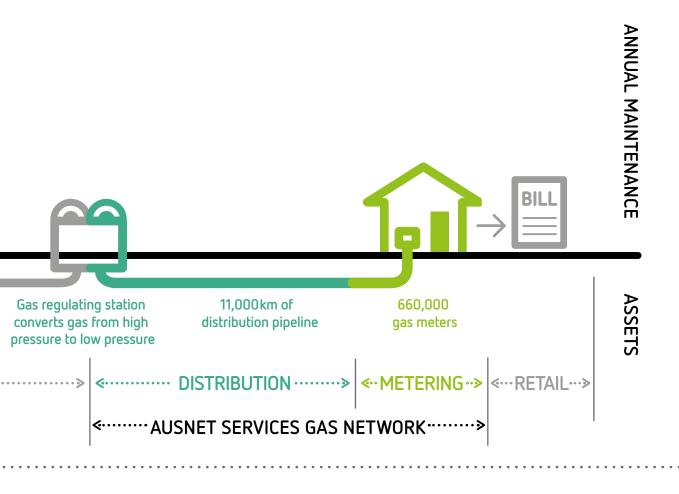
The cost of using the distribution network to transport gas represents around 30% of a residential customer's total bill. The rest of the bill is made up of production, transmission and retail charges.

Setting our revenue

The process for setting our revenue is typically undertaken every five years through a process called an access arrangement review.

The access arrangement review begins with AusNet Services submitting a proposal to the AER. This proposal includes details of our expenditure plans, which are designed to maintain the reliability and safety of our network in an efficient manner. The AER then considers this proposal, and determines the total amount of revenue we can recover from our customers, and sets a unit price to reflect this, for the next five year period.

The AER's decision, often referred to as a *regulatory determination*, establishes how much we can charge customers for our gas distribution services. AusNet Services will continue to offer one of the lowest network charges in Australia in the coming regulatory period (see the 'revenue and price' section of this document for more information).



Our vision for the gas network

Working with a range of stakeholders to develop sustainable, innovative and affordable gas services, our role is to contribute positively to the quality of life and wellbeing of our customers and communities we serve. That's why we work around the clock and invest prudently in our gas network, so we can continue to successfully deliver gas to homes and businesses, offering the valued services to our customers, both now and for generations to come.

Our ambition is to deliver outstanding levels of gas safety, reliability and customer service so that we are trusted and valued by the people we serve every day. Whilst much of our gas network is underground and out of sight, our services and people play a central role in the daily lives of all our customers. Whether it's a safe and reliable gas supply for heating your home, making the family dinner or for a nice hot bath, we understand how important it is for our services to be there when our customers need them.



Figure 2: Our vision, priorities and values

What we do

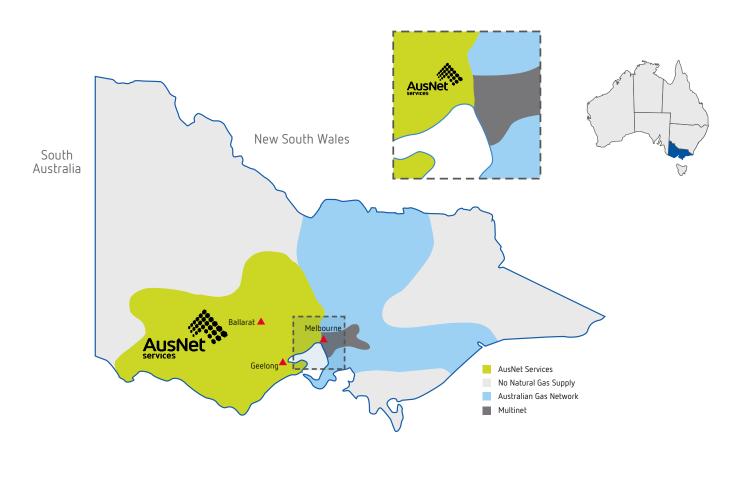


Our network carries gas to approximately 665,000 customers across western and central Victoria, including the outer northern and north-west metropolitan areas of Melbourne. This large network consists of approximately 11,000 kilometres of gas pipelines spanning a geographically diverse area of 60,000 square kilometres. Maintaining a network of this scale requires considerable expertise and investment.

The figure below highlights the geographic footprint of our gas network. The gas network extends from the Hume Highway towards the South Australian border, and north of Bendigo and Horsham. A key distinguishing characteristic of our network is that it contains some of the fastest growing urban and regional locations in Victoria. In the Melbourne metropolitan area, for instance, the number of dwellings in Wyndham and Melton has grown by 30% and 23% respectively over the past five years and are expected to continue growing.

Regional parts of our network also cover major (and growing) population centres such as Geelong, Ballarat and Bendigo. Other regional areas showing strong population growth such as Moorabool, Golden Plains, Macedon Ranges and the Surf Coast are all located in our network. It is expected that customer numbers will grow by 2% per year over the period to 2022.

Figure 3: Victorian gas distribution networks



Drivers shaping our 5-year plan

There are four significant drivers that have influenced our plans over the coming regulatory period:

- 1. Our commitment to safety
- 2. Growth on our network
- 3. Changing customer behaviour
- 4. Customer and stakeholder engagement

Driver 1

Our commitment to safety

As outlined earlier, our network consists of 11,000 kilometres of pipelines spanning 60,000 square kilometres. Over 7% of our network consists of deteriorated low pressure mains which pose a safety risk to customers and the community. We will continue to remove these deteriorated and unsafe assets from the network, with the target of replacing all low pressure mains by 2025.

Despite gas usage per customer decreasing, customers have told us that they value the network and rely on our services. As such, there is a continued need for investment and maintenance activities on the network which are driving our expenditure efforts in the upcoming regulatory period (see pages 11-13).



Driver 2

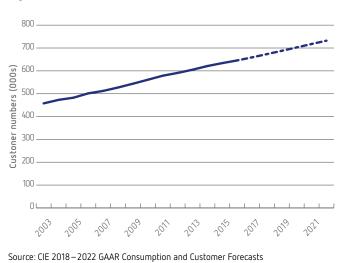
Connecting more than 83,000 new customers over five years

The number of customers connected to our network is forecast to grow by 2% per annum from 2018 to 2022. This is driven, in part, by the fact that our network contains some of the fastest growing metropolitan and regional locations in Victoria.

While customer numbers are expected to grow, it is at a rate lower than the last five years, where customer growth has been 2.5% per annum. To some extent, this is due to an increasing tendency of customers to use electricity rather than gas for heating and hot water, often referred to as 'fuel switching'.

The figure below shows the total number of actual and forecast customer numbers since 2003. These forecast customer numbers must be factored into our demand forecasts which play a critical role in informing out expenditure plans over the coming regulatory period. You can read more about our expenditure plans on pages 11–13.

Figure 4: Actual and forecast customer numbers 2003–2022.





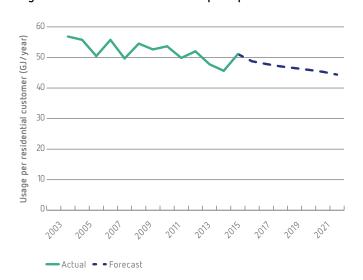


Driver 3

Changing customer behaviour

Data suggests that our customers and stakeholders are consuming less gas than in the past. Forecasts suggest that the average consumption of residential customers will fall by 1.5% over 2018–2022, compared to the 0.9% increase which took place between 2010 and 2015.

Figure 5: Annual residential consumption per customer



Source: CIE 2018–2022 GAAR Consumption and Customer Forecasts

The key drivers of reduced gas consumption include:

- > Improved energy efficiency. Many customers are installing more energy efficient appliances in their homes, an effort that is supported by government energy efficiency policies.
- > The types of dwellings on our network. The increasing number of apartments and units on our network are using significantly less gas than free-standing dwellings.
- > Retail prices. Increasing upward pressure on the retail price of gas is causing customers to use less gas.
- > **Fuel switching.** As gas is a fuel of choice, it is easy for customers to switch their gas appliances to electric appliances.
- > Warmer Victorian climate. Given that heating is the largest driver of residential consumption, the warmer climate in Victoria in recent years means that customers are using less energy.

In response to this changing environment, we are proposing:

- > a gas marketing program to try and mitigate the effect of the projected decline in residential consumption over the next five years and encourage greater take-up of gas in regional areas, and
- > to implement a range of incentives (see page 14) to ensure that we continue to improve our efficiency and provide sustainable services to customers.

Driver 4

Listening to our customers and stakeholders

In light of a rapidly changing energy environment, we recognise that a sustainable and successful business must engage with its customers and stakeholders.

We designed and conducted a comprehensive Customer and Stakeholder Engagement Program to understand the gas related needs, wants and preferences of our customers and stakeholders. This Program generated feedback on key aspects of our proposal. Where appropriate, we have reflected this feedback in our business plans. Where we have chosen to depart from customer and stakeholder views, we explain why.

The customer and stakeholder engagement activities undertaken to inform the revenue proposal and the stakeholder views we heard, are described on pages 16-17.

Proposed revenues and prices

Gas distribution is highly capital intensive, requiring significant long-term investment. The operation and maintenance of this infrastructure requires ongoing investment. As a regulated business, our revenue is calculated using the 'building block' approach. Each block represents different kinds of costs in calculating the total revenue we require. These building blocks include:

- > Assets: the total value of the networks regulated assets used to provide services.
- > Return on Investment: the ongoing cost of financing these assets.
- > Depreciation: the value of the regulated asset that is written down each year.
- > Operational expenditure: business operating costs to manage and maintain the assets.
- > Tax: the amount of corporate tax we need to pay.
- > Incentive payments: the performance rewards in the AER's incentive schemes.

This section summarises our proposed revenue and prices for the coming regulatory period, from 1 January 2018. Specifically, we are planning to keep our revenues and prices as low as possible for Victorian customers over the next five years.

Our total revenue requirement is 1,086 million (real 2017\$) for the 2018–2022 revenue period, which equates to an average of \$217 million per year.

When it comes to price, our proposal seeks to constrain price growth and deliver network services that are sustainable in the long term. Our proposal delivers an initial 5% reduction on 1 January 2018. Following this immediate price reduction, prices for the following years will increase at 2% per annum, as shown below.

Figure 6: AusNet Services' proposed price path (real 2017\$)





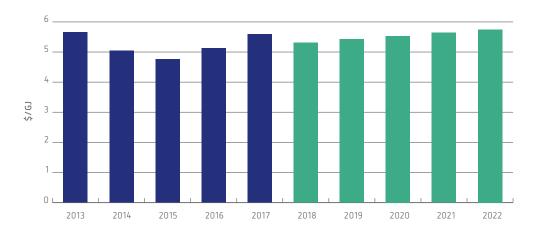
Figure 7: Estimated annual average gas network charges in 2018



Source: AusNet Services, estimated 2018 network tariffs based on 2016 published tarriffs¹ 1. Average customer assumptions: Annual usage of 46 GJ per in central zone split between peak/off peak rates and fixed component. Based on published 2016 gas tariffs.

Our pricing proposal enables us to meet the needs of customers while continuing to offer one of the lowest gas network changes in Australia (see Figure 7 above).

Delivering value for money – our proposal delivers an initial 5% reduction on 1 January 2018. We are committed to keeping our prices low for customers over the next five years.



Capital expenditure



Capital expenditure (capex) funds the buying, building and installing of plant and equipment such as distribution pipelines, meters and regulators that make up our gas distribution network.

For the 2018–2022 period, we are forecasting a total gross capex of \$513.7 million, which is 0.4% lower than expenditure during the current period (see Figure 8). Actual total gross capex in the current period is projected to be 10% under the approved allowance. Between 2013 and 2017, AusNet Services will have removed over 500 kilometres of mains replacement of its most deteriorated low and medium pressure network. Over the coming five year period, AusNet Services will also deliver savings via lower opex costs and capex unit rates. This demonstrates efficient management of a network with the characteristics and requirements of AusNet Services' gas network.

As outlined in Figure 9, the largest proportion of our forecast capex is for connecting new customers to our network. As noted earlier, we are expecting customer numbers to grow by 2% per annum over the coming regulatory period. This means that we will connect around 83,000 new customers over five years.

Growth in customer numbers helps to lower prices to existing customers by spreading the largely fixed costs of operating our network across a larger customer base. Over 40% of the investment on our network over the next 5 years is related to connecting customers to our network.

The safety-driven mains replacement program makes up the next largest component of our capex. The mains replacement program is designed to proactively remove and replace mains at the end of their useful lives. In fact, we are planning to replace 465 kilometres of deteriorating and poor performing gas mains over the regulatory period. This program manages the leakage incident rate on the network and delivers both public safety and reliability benefits.

AusNet Services' replacement program for low pressure mains commenced in 2003. By 31 December 2017 we will have replaced 1,200 kilometres of these most deteriorated and unsafe assets on our network.

A smaller proportion of forecast capex is for network augmentation to ensure the safe and reliable supply of natural gas to our newly connected customers.

We are committed to removing the low pressure mains from our network by 2025.

Figure 9: Breakdown of capex

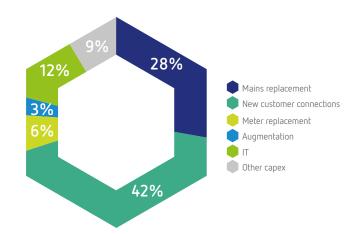
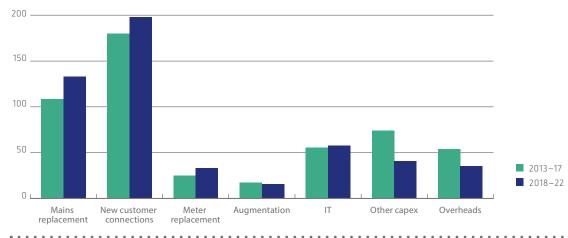


Figure 8: Total capex 2013-17 and 2018-22 periods (\$m, real 2017)

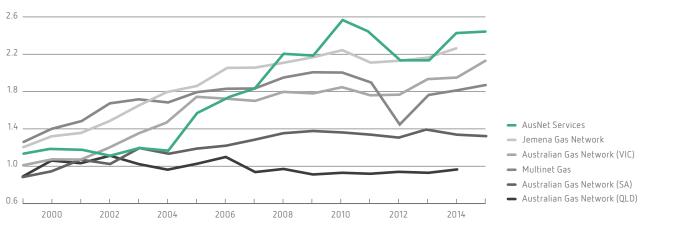


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Operating expenditure

Operational expenditure, otherwise known as opex, delivers critical activities to support the operation and maintenance of our network, and the continued efficient management of our network. This includes activities such as repairing gas leaks, relocating gas meters to safer locations, and providing a free dial-before-you dig service to protect third parties working on our network.

Consistent with our capex, external benchmarking analysis indicates that our opex is one of the most efficient across gas businesses in Australia (see Figure 10). AusNet Services has continued to respond to operating efficiency incentives with benchmarking analysis indicating that AusNet Services is one of the most efficient gas distributors in Australia.



In recent years, we have improved our productivity compared to other gas distribution businesses in Australia. As shown in Figure 10 above, since 2009 our overall productivity has typically improved at a rate faster than other gas businesses. This means that AusNet Services' customers get better value for every dollar of opex we spend.

We have forecast \$304.7 million in opex for the 2018–2022 regulatory period (including debt raising costs). While the current level of opex is expected to remain relatively stable over the coming regulatory period, our opex forecast includes new plans for marketing expenditure. The purpose of these marketing efforts is to increase gas usage and deliver lower network prices for all customers in the future. This initiative is expected to deliver benefits to AusNet Services' customers and is consistent with the marketing activities currently undertaken by gas distributors across Australia.

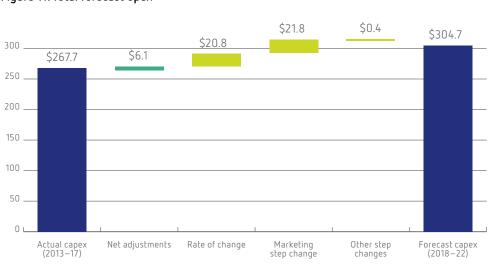


Figure 10: Opex productivity (opex partial factor productivity index)



We will undertake marketing activities aimed at increasing gas usage and delivering lower network prices for all customers. This initiative is expected to have a positive return on investment that will be in the long term interests of our customers. Maintaining and expanding AusNet Services' customer base and average demand enables efficient costs to be shared across a large number of customers, thus avoiding price rises.

AusNet Services' opex in the current regulatory period has been significantly lower than that of its peers. The chart below shows how our opex per customer compares with peers across Australia.



Gas marketing activities are expected to have a positive return on investment and will enable efficent costs to be shared across a larger number of customers in the future.

Figure 11: Total forecast opex

Source: AusNet Services

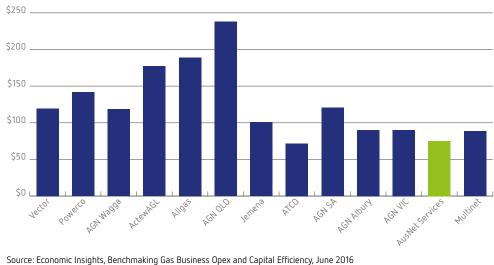


Figure 12: Annual opex per customer \$2010 (2011–2015 average)

Important information

Rate of return

A large proportion of our proposed revenue relates to financing past investments. This reflects the allowed rate of return to fund the interest we need to pay on debt and dividends to pay to our shareholders.

Setting the right rate of return on capital is very important:

- If the rate of return is too high, network charges will be higher than necessary; and
- > If the rate of return is below a fair market return, network businesses will be unable to attract the necessary investment required to provide a gas service that is in the long-term interests of customers.

For the next five years, we are proposing a historically low rate of return (5.63%), which is consistent with the AER's Guideline. Our proposed rate of return is one of the lowest rates ever applied to a regulated electricity or gas distribution network.

Depreciation

Depreciation represents the decline in value of an asset over time. The original value needs to be recovered by the investor, and this is done over time according to the depreciation schedule. Depreciation costs are one of the key components of the revenue that we recover from our customers. Doing this ensures that network businesses are able to recover the full costs of assets over their lives from customers.

Depreciation costs account for around 20% of our proposed gas network revenue. We will continue to apply the 'straight-line' approach to depreciation in the next regulatory period. This is calculated by allocating a constant value of the asset over each year of its life, which can be up to 60 years.

Incentives-based regulation aligns the interests of our business with the long-term interests of consumers and drives better outcomes.

Incentives

The AER can apply a number of incentive schemes that provide financial rewards and penalties to network businesses depending on cost and service performance. We support well-designed incentive mechanisms because they are intended to align the interests of our business with the long-term interests of customers and drive better outcomes for customers, particularly around improved safety and reliability.

For example, our sound performance under the opex efficiency scheme over successive regulatory periods demonstrates that incentive schemes have delivered value for customers. Our participation in this scheme has delivered benefits to customers due to greater network efficiency in operational expenditure.

We propose the introduction of two new incentive schemes, which if approved, will apply to gas networks in the upcoming regulatory period, including:

- > A Capital Expenditure Sharing Scheme which encourages us to find more opportunities to deliver capex savings, and pass these on to customers. The scheme we are proposing will include a counter balancing parameter, where if AusNet Services achieves capex savings at the expense of not meeting its targets on key performance indicators, a deflator applies to the efficiency reward.
- > A Network Innovation Scheme which provides an allowance for small scale innovation projects which have the potential to deliver benefits to customers. The scheme is intended to overcome the barriers to innovation expenditure that arise as a consequence of resetting costs on a 5-year basis.

We believe that our proposed schemes are consistent with best practice regulation. At our customer and stakeholder events, customers also expressed support for these schemes.



Key risks and benefits



Key Benefits

Keeping prices sustainable

Our Proposal includes a range of initiatives to minimise the upward pressure on prices. Through initiatives such as a historically low rate of return and prudent expenditure, we are proposing a 5% decrease in gas network charges for customers from 1 January 2018.

We are also anticipating that the introduction of our proposed marketing activities will assist in keeping gas prices sustainable into the future. Expert analysis shows that the proposed marketing activities, designed to mitigate the impact of changing customer behaviour on our network, will safeguard customers from future price hikes. The marketing program is therefore in the long-term interests of our customers and a key benefit of our Proposal.

Maintaining the safety and reliability of the network

A key focus of our Proposal is to ensure that we continue to manage and operate our network in a safe and reliable manner. The continuation of our mains replacement program, focused on removing deteriorated and unsafe assets, will ensure the safety and reliability of our network into the future. Additional activities such as the replacement of end-of-life metering assets and install mains reinforcement will also assist us in delivering a safe and reliable service to customers.

Greater innovation

Our proposal includes an innovation incentive scheme to fund projects that have the potential to deliver net financial beneficial to gas customers. This research and development has the potential to develop learning that can be applied by all relevant gas networks. The innovation scheme aims to provide a financial catalyst for innovation in gas distribution and transmission networks.

Key Risks

Changing energy mix

Changes occurring in the energy sector when it comes to home generation and storage of energy represent a key challenge to network businesses in the future. It is important that we continue to acknowledge and explore how gas interacts with these new technologies to ensure that we remain relevant and viable in a rapidly changing environment. We anticipate that the introduction of the Network Innovation Scheme, which provides us with an allowance for small scale innovation projects for the benefit of customers, will assist us in mitigating some of this risk.

Retaining and attracting investors

Under-investment in the network may occur if a reasonable return is not provided to investors. This would be contrary to the long-term interests of customers because under-investment will lead to deterioration in safety and the reliability of network services.

Our proposed rate of return is one of the lowest rates ever applied to a regulated electricity or gas distribution network.

AusNet Services is proposing a 5% price decline from 1 January 2018. Our focus is to ensure we continue to manage and operate our network in a safe and reliable manner and continue to deliver the services you value.

Customer and stakeholder engagement

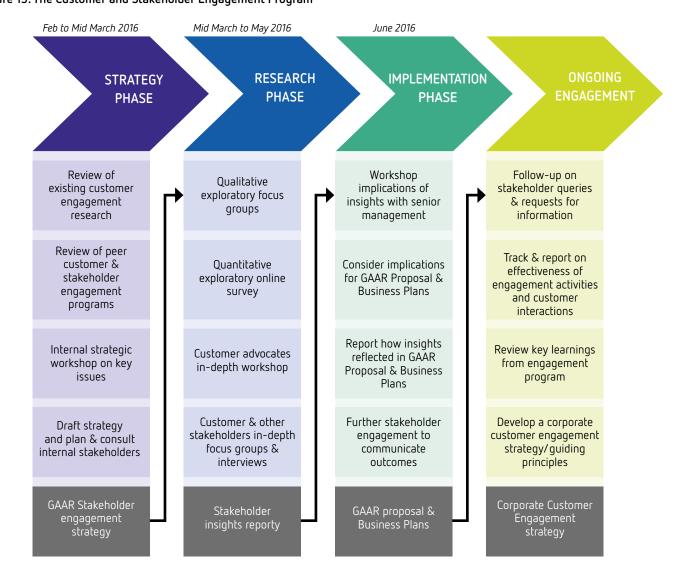
As part of the access arrangement review process, AusNet Services conducted a Customer and Stakeholder Engagement Program. The overarching objective set for this Program was to *deliver authentic*, *customer priority-driven engagement that will meet external stakeholders' expectations, and inform the development of the GAAR proposal and business planning*.

To support this overarching objective, the following secondary objectives were also developed:

- Build enhanced customer and stakeholder understanding of AusNet Services, its obligations, network issues and role in the supply of gas to homes and businesses;
- Figure 13: The Customer and Stakeholder Engagement Program

- Increase our understanding of customer and stakeholders' needs, wants and preferences in relation to the supply of gas;
- Build long term, trust-based relationships with customers and key stakeholders, and;
- > Align our 5-year plan to customer and stakeholder preferences where possible, and, where this has not been possible, explain why this is the case.

Figure 13 below outlines the main phases, timelines and key activities for the 2018 GAAR Customer and Stakeholder Engagement Program.





Customer and stakeholder views and how these are addressed in the proposal

There were five key themes that emerged from the research phase of the Program that were targeted and operationalised at the implementation phase. This has been a beneficial exercise and informed decision-making as outlined below.

Figure 14: Research findings and implementation activities

What we heard from customers and stakeholder across each of these key themes and how we intend to address these views are presented in Figure 14.

Communicate and educate	Customers and stakeholders expect more information and frequent communication from AusNet Services in order to help them make more informed decisions.	 AusNet Services is proposing to undertake several new initiatives to better meet the communication and education needs of customers and stakeholders, including: > A new website that will be more customer friendly and informative > Exploring SMS outage notifications to alert gas customers about any works that may affect them > 1 on 1 meetings with large stakeholders to discuss issues of concern.
Focus on safety	Safety is a major concern due to the seriousness of a safety breach. Customers and stakeholders expect AusNet Services to maintain its network to ensure high levels of safety.	 AusNet Services' commitment to safety continues over the forecast regulatory period, including: > A mains replacement program designed to proactively remove deteoriated mains and pipelines > Dial before you dig services to inform customers on the location of underground assets > A free asset location service which seeks to prevent accidental third party damage of gas assets > An emergency response time of less than 60 minutes > A proactive meter replacement program to replace end-of-life metering assets at customer premises.
Maintain services	Customers and stakeholders value AusNet Services' high reliability and want existing service levels maintained.	 There are a range of ongoing activities that are key to maintaining current levels of reliability, including: > A mains replacement program (see above) > A winter testing program designed to monitor pipeline pressure and identify areas that need additional augmentation > Augmentation in less reliable areas to ensure that network capacity and reliability is maintained > A proactive meter replacement program (see above)
Be transparent	Customers are highly sceptical of gas prices. AusNet Services recognises a need to be transparent around price and its drivers.	 AusNet Services is aware of the cost pressures facing Victorians and therefore will employ a range of activities to ensure that transparency regarding gas network charges. Additional programs that will be implemented in the forecast regulatory period include <i>Tariff education</i> through customer-friendly publications available online to customers and stakeholders AusNet Services' Access Arrangement Information document has been designed to give customers and stakeholders a better understanding of price and how revenues are set. We have also sought to keep prices low in the next regulatory period.
Future demand	Gas is a valued energy source which customers and stakeholders envisage using into the future. Consumption may decline with the introduction of new technologies.	 To ensure AusNet Services continue to deliver the gas services valued by customers and stakeholders it is proposed: A mains replacement program (see above) A winter testing program (see above) Augmentation in less reliable areas (see above) Introduction of the Network Innovation Scheme, an allowance for small scale innovation projects, to ensure that the future energy needs of customers are met.

AusNet Services

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