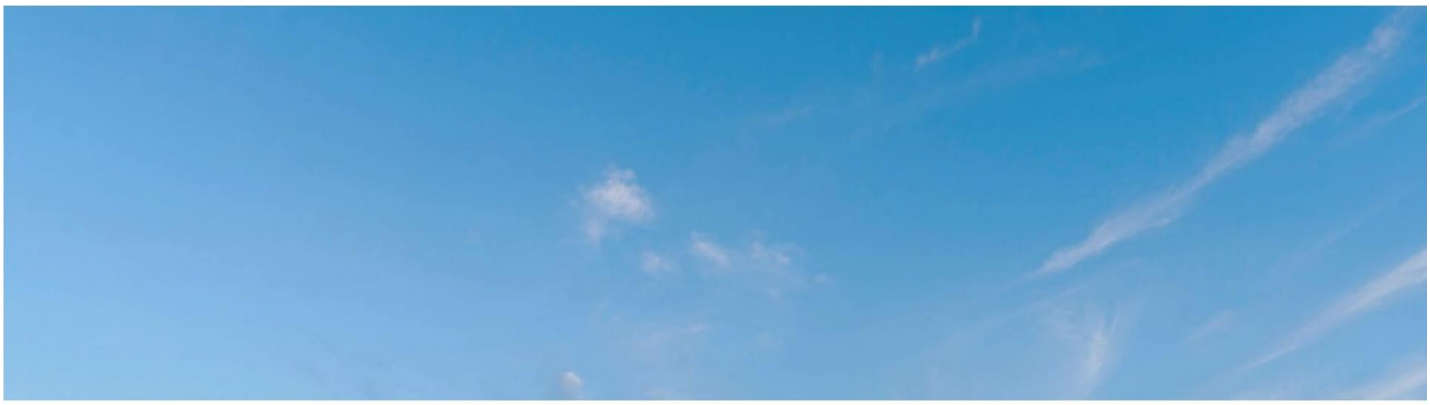

ATCO GAS 2025-29 PLAN

ATCO Mid-West and South-West Gas Distribution System

September 2023

An appropriate citation for this paper is:

2025-29 Plan

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DOCUMENT NOTES

- All forecast and past expenditure values are expressed in real dollars as at 31 December 2023 unless otherwise stated.
- All revenue amounts are expressed in nominal dollars unless otherwise stated.
- Some tables may not add up due to rounding.

OUR ROLE IN THE ENERGY TRANSITION

> The transition to a net zero economy in Western Australia is indeed a challenge. Fortunately, we have a powerful ally in the gas distribution network. ATCO's gas network is uniquely positioned to enable decarbonisation in a "whole of system" approach to support the energy transition.

John Ivulich
Country Chair, ATCO Australia

ATCO is a global energy and infrastructure company with a large Australian presence. After more than 75 years in business, ATCO has a host of expertise and capabilities to support the energy transition.

I want to acknowledge the Traditional Custodians of the land on which we operate, and pay my respects to their Elders, past, present, and emerging. In Australia, we have the unique privilege of living with the oldest living culture in the world, and at ATCO, we recognise the enduring connection that indigenous people have to the land, sea, and community. ATCO globally has a long history of valuing the importance of indigenous owners, including partnerships with the First Nations in Canada. In the spirit of reconciliation, we commit to working together for our shared future.

Climate change is an undeniable threat, and transitioning to a sustainable energy future is crucial to mitigate its impact.

The Federal Government has set a target for Australia to be net zero greenhouse gas emissions by 2050, and we have to work together to find new ways to reach this target. This Plan outlines how we propose to do this over the next access arrangement period.

The transition to a net zero economy in Western Australia is indeed a challenge. Fortunately, we have a powerful ally in the gas distribution network. ATCO's gas network is uniquely positioned to enable decarbonisation in a "whole of system" approach to support the energy transition.

We have already commenced our renewable energy journey. In 2019, we opened our world-class Clean Energy Innovation Hub in Jandakot – a demonstration of solar, battery and renewable hydrogen production through electrolysis. We're looking to trial hydrogen appliances in our hybrid home and training centre, we're demonstrating that hydrogen can be blended into the gas distribution network (through a trial in 2,700 homes), and we're refuelling hydrogen fuel cell vehicles as part of our fleet.

In addition, we are considering network injection of biomethane, a renewable equivalent of natural gas that can be produced from waste.

ATCO is also exploring other renewable energy technologies around Australia and the world. In New South Wales, ATCO is in the early stages of project assessment and development of the Central West Pumped Hydro Project and exploring power transmission in Renewable

Energy Zones. In Canada, ATCO is looking at large-scale solar and wind projects, and sequestration (storage) of carbon dioxide in naturally occurring underground salt caverns.

There is a significant investment in ATCO's 14,500km of pipeline supplying Perth and the Regions, and it's an investment that can be leveraged to be part of the solution.

With the repurposed ability to transport renewable and lower emissions gases in addition to natural gas, the gas network can be a critical and integrated part of a lower-cost and sustainable energy future. Not only to deliver cleaner energy but also to work with the electricity sector as an energy storage mechanism to support the intermittent nature of renewables – a 'giant battery' connected to over 800,000 Western Australian homes and businesses. We could use that 'battery' to store excess wind and solar energy for use when the wind is not blowing and the sun is not shining.

By repurposing our gas network to store and transport renewable gases, we could enable the widespread adoption of these clean energy sources, reduce our carbon footprint, improve energy security, and create new economic opportunities for Western Australia.

However, investments in renewable and lower emissions infrastructure require a long-term horizon, longer than the period of our 2025-29 Plan. These investments must also be made early enough to accelerate the market transition. This is why we are proposing these now.

Our 2025-29 Plan is an essential transitional step in this journey, and we are proud to be taking bold action towards a cleaner future.

John Ivulich

Country Chair, ATCO Australia

With renewable and lower emissions gases, the gas network can be repurposed as a critical and integrated part of a lower-cost and sustainable energy future. Not only to deliver cleaner energy, but also to work with the electricity sector as an energy storage mechanism to support the intermittent nature of renewables.

OUR 2025-29 PLAN

> I feel confident that this 2025-29 Plan aligns to the long-term interests of our customers and our broader community. Our Plan maintains safe, reliable, and affordable gas network services and ensures we are building a strong foundation for the energy system transformation that is underway.

Russell Godsall
Executive General Manager, Gas Operations, Australia

As the leading gas distributor in Western Australia, we supply over 785,000 customers through our regulated gas network. The growth of our business since we acquired the network in 2011 is a testament to our talented team, whose commitment to excellence and customer service has been the driving force behind our accomplishments.

I am therefore pleased to present this 2025-29 Plan for ATCO Gas Australia. It proposes how we will continue to deliver safe, affordable, and reliable services to our customers over the next five years.

Since our 2020-24 Plan was submitted, we have witnessed an extraordinary period of change. The start of our AA5 period was unexpectedly marked by a pandemic that caused profound global changes. People and businesses had to learn and adapt far quicker than we could have expected, and we have all shown incredible resilience in getting through this crisis. It has not been easy, but it's remarkable what we can achieve when we all work together for a common cause.

Despite these challenging circumstances, in the current AA5 period, I'm proud that we've delivered a strong performance in customer service, safety, and network reliability while maintaining high levels of operating efficiency.

Our focus on efficiency has resulted in ATCO having one of the lowest operating costs per customer connection for gas network operators in Australia. Our commitment to providing top-tier customer service has also been reflected in our continued ranking as a leading customer service performer in benchmarking among Australian gas businesses. However, we remain vigilant and will not become complacent.

Resilience and collaboration are as important in AA6 and beyond as they were during the pandemic because our era of uncertainty is far from over. The Australian energy market continues to face both geopolitical and national challenges as we accelerate towards a decarbonised society. We have a once-in-a-lifetime opportunity to create a cleaner and more sustainable energy system for current and future generations of users, and we believe that the gas network has a vital role to play in this energy transition.

ATCO recently commenced a scenario-based research program into the Future of Gas, which is shaping our thoughts for AA6. Although the research is ongoing, we recognise that technology advancements, policy decisions, and customer demand will ultimately determine the long-term future of the network, and this may not be a smooth or predictable pathway.

To address this uncertain future and to promote long-term price stability for our customers, we are proposing to recover our network investment at a slightly accelerated rate than previously. We do this through an approach known as 'accelerated depreciation', and it is recognised as an effective way to maintain our network obligations while sustaining long-term price stability for our customers.

WHAT OUR PLAN MEANS FOR OUR CUSTOMERS

Our 2025-29 Plan has been shaped using the insights from our stakeholder engagement program, which included the release of our Draft Plan in April 2023 for consultation. The ERA will now review our submission and seek further feedback from customers and stakeholders.

In AA6, we propose to deliver the following:

- Continued safe and reliable delivery of gas to over 800,000 households and businesses.
- Approximately 68,000 new customer connections.
- Replacement of 290 km of 'end of life' Polyvinyl Chloride (**PVC**) pipeline with modern polyethylene (**PE**) pipe (about 2% of our +14,000km gas mains)
- Replacement of over 110,000 domestic and commercial meters.
- Using renewable gases as part of our unaccounted for gas replacement to reduce greenhouse gas emissions.
- Ensuring our infrastructure is 'renewable gas ready'.

ATCO has always been committed to keeping prices as low as possible for our customers, and our 2025-29 Plan continues this focus. Affordability is one of our strategic pillars, and it was raised many times during our customer engagement activities.

However, you will notice that our distribution charges for AA6 are forecast to increase. This increase includes broader economic factors beyond our control, including rising inflation and the increased regulated rate of return. We are doing what we can, including our ongoing focus on efficiency to manage our costs in AA6.

The forecast increase in our annual distribution charges at the start of the next Access Arrangement in 2025 for the average residential customer will be around $78.

We understand that any increase may concern our customers and stakeholders, and I encourage you to continue to provide your feedback through the ERA's consultation process.

I am confident that this 2025-29 Plan aligns to the long-term interests of our customers and our broader community. Our Plan maintains safe, reliable, and affordable gas network services and ensures we are building a strong foundation for the energy system transformation that is underway.

Russell Godsall

Executive General Manager,
Gas Operations, Australia

WHAT WE WILL DELIVER

In AA6, we will continue to deliver a safe, reliable, and affordable gas network to support the growth of Western Australia for the long-term interest of customers, enabling our shared journey towards net-zero by 2050.

The publication of this 2025-29 Plan is underpinned by a customer and stakeholder engagement program, through which we sought feedback on our planned activities, investments, and proposed services.

Safe

- Maintaining our strong performance in timely attendance to broken mains and loss of gas supply incidents
- ATCO will continue to drive for a TRIFR consistently less than 1.0 and build on our recent strong safety performance in AA5
- Review and enhancement of ATCO's Cyber Security capability
- Upgrade of step-touch mitigation systems, improving the safety of individuals near high pressure steel pipelines

Reliable

- 290 km of PVC mains replacement
- Replacement of over 110,000 domestic and commercial meters reaching their 'end of life'
- Completion of the metallic mains replacement program
- Upgrade of our Geographic Information System (GIS), improving asset location services for maintenance and emergency response
- Upgrade of our Enterprise Resource Planning (ERP) systems to support our digital transformation

Affordable

- Connecting approximately 68,000 new customers to the network in AA6 allowing us to spread our costs over more customers
- An annual distribution charge increase of $78 ($1.50 per week) between 2024 & 2025 for the average household customer
- A continued focus on efficiency, operating as one of the most efficient gas network operators in Australia

Sustainable

- Continued reduction of our UAFG rates
- Renewable gas preparedness, including 6 renewable gas injection points
- Using renewable gases to replace UAFG
- Targeting a reduction in net emissions (Scope 1) to 30% below 2020 levels by 2030

EXECUTIVE SUMMARY

ATCO Gas Australia (**ATCO**) owns and operates Western Australia's largest regulated natural gas network, delivering natural gas to more than 785,000 customers through nearly 14,500 km of pipelines. We are continuing to work hard for the people of Western Australia to ensure that the network remains safe, reliable, and affordable.

> Our commitment for the AA6 period continues to be a focus on the long-term interests of customers by providing a safe, reliable, and affordable gas distribution network while supporting a competitive retail market, enabling growth for Western Australia, and building the foundation for a more sustainable energy future.

This submission, including all supporting documents and other material, collectively known as the '2025-29 Plan', sets out ATCO's regulatory proposal for the 2025-2029 access arrangement period. This regulatory period, from 1 January 2025 to 31 December 2029, represents ATCO's *sixth* Access Arrangement (**AA6**).

The 2025-29 Plan is submitted to the Economic Regulation Authority (**ERA**). The ERA will conduct a transparent and public process to ensure that our proposed plan is in the long-term interests of customers.

The publication of this 2025-29 Plan is underpinned by our customer and stakeholder engagement program, through which we sought feedback on our planned activities, investment, and proposed services.

OUR CUSTOMER ENGAGEMENT

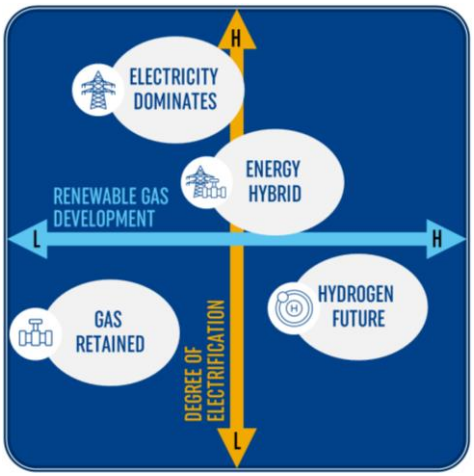
We value the insights of our customers and the community and recognise the importance of actively listening to their feedback. Our AA6 Engagement program has sought open dialogue with diverse stakeholders, including residential customers, large commercial and industrial customers, builders and developers, peak bodies, and gas retailers.

The AA6 Engagement program was designed in multiple stages. Our initial engagement activities were open and exploratory, followed by a comprehensive Choice Model Survey designed to measure and quantify the qualitative insights gathered in the previous engagement activities. Our survey findings show that most of our proposed AA6 investments are important to customers, particularly regarding mains replacement and future support for renewable gas *(see Chapter 4)*.

In April 2023, we released our Draft Plan for consideration and feedback. Following this, we sought feedback from stakeholders over four weeks and received submissions from five stakeholders, both in written form and through meetings. We have incorporated the Draft Plan feedback and our associated response in each relevant chapter of this 2025-29 Plan.

THE FUTURE OF GAS

With Australia's commitment to both 2030 and 2050 emissions targets, Australian gas networks are pursuing a path towards decarbonisation. We believe the gas network will have an essential and continuing role in supporting the future energy transition, be it with natural gas, biomethane, hydrogen, or other renewable gases. We are considering a range of activities to prepare for the future and have included these in our investment forecasts.



To assist with further developing and refining our investment forecasts for the AA6 period, ATCO has considered four future scenarios for the WA energy sector:

- **NATURAL GAS RETAINED:** Global and local factors drive the retention of natural gas in the ATCO network, broadly in line with the medium-term expectations from AA5.
- **ENERGY HYBRID:** Technical learning rates for renewable gases and electrification develop at a similar pace, resulting in some customers choosing to electrify and some remaining with gas.
- **ELECTRICITY DOMINATES:** Renewable electricity generation and storage costs rapidly reduce, leading to a broad-based electrification of industry and households and a move away from gas.
- **HYDROGEN FUTURE:** There is rapid learning and experience developed in renewable hydrogen and other renewable gas production.

Further information on our scenario modelling and the resulting implications for our 2025-29 Plan can be found in *Chapter 3*.

2025-29 PLAN HIGHLIGHTS

- Our Haulage reference services remain unchanged from AA5 and are proposed as reference services for AA6. Our AA6 Ancillary reference services will remain mostly unchanged, with the addition of the previous non-reference service, '*Permanent disconnection*' (referred to as 'Cut and cap service pipe at the main' in our Reference Services Proposal). *(See Chapter 6)*
- Our average customer base is forecast to grow at 1.1% pa. with consumption per customer forecast to decline, resulting in overall forecast consumption decreasing at 0.8% pa. during AA6. *(See Chapter 7)*
- ATCO has selected 11 key performance indicators (**KPIs**) that align with our strategic pillars of safety, reliability, affordability, and sustainability. *(See Chapter 8)*
- Our AA6 operational expenditure (**opex**) forecast is $456 million, compared to the ERA's AA5 Final Decision of $379 million. The increase from AA5 is primarily due to a shift in how information technology (**IT**) expenditure is accounted for, a greater focus on sustainability initiatives, and our new 'Permanent Disconnection' service. *(See Chapter 9)*
- We are proposing to invest $466 million of capital over AA6, which is $16.7 million (3.5%) below the ERA's AA5 Final Decision of $483 million. Major programs include network expansion, mains replacement, meter replacement, and sustainability initiatives. *(See Chapter 10)*

- We have an important responsibility to address the risks of uncertainty that are part of the energy transition. We also need to take action to reasonably future-proof the gas network and ensure that it is a competitive and sustainable part of a low-emissions energy system for generations to come. This is a long-term evolution to support the wider decarbonisation effort. In AA6, we are proposing a modest amount of accelerated depreciation of $80M (or 5% of the RAB) of our long-lived assets. This approach is designed to smooth the intergenerational impact of a transition from a traditional natural gas-based network to a renewable gas-ready network of the future and ensures consideration of the gas network as a cost-effective energy provider into the future.

AA6 TARIFFS

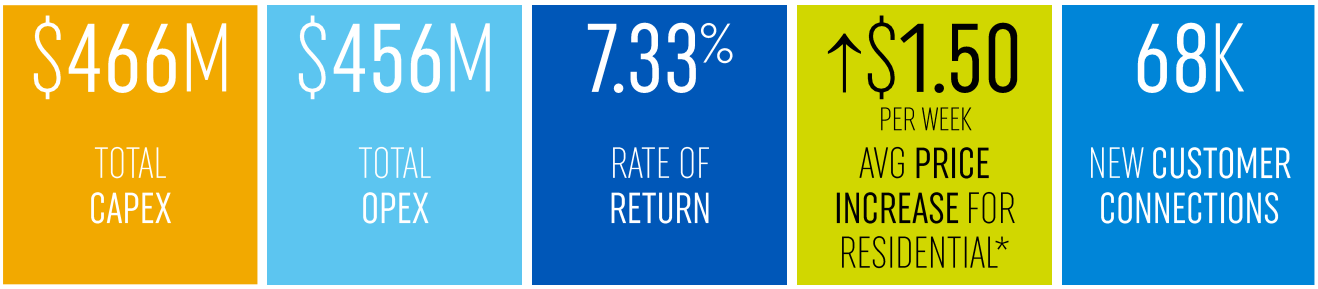
Our existing tariff classes will be retained for AA6. ATCO will also maintain the reference tariff structures for AA6 with an amendment to the B3 tariff structure to simplify to a two usage band structure, removing the first tariff band that currently provides for the first 1.825 GJ to be provided at no charge (*see Section 16.4.2)*.

Our distribution charges are sensitive to the debt and equity risk-free rates, determined in accordance with the ERA's 2022 Rate of Return Instrument (*see Chapter 12* for further details). Due to the uncertainty that inevitably exists with current financial and economic conditions, we have calculated the rate of return using the *June 2023* risk-free rate, which is the most recent practically available data. The resulting rate of return has a material impact on our cost of service and distribution charges for AA6, but this may change following future movements in the risk-free rate. For example, if the May 2023 risk-free rate data was used instead, we estimate the 2025 bill at average consumption would have been $6 lower than our current AA6 forecast.

In addition, a high inflationary environment has also had a material effect on our proposed charges for AA6. The effect of these external economic factors is that our proposed distribution charges are increasing in AA6 by more than we have experienced in previous access arrangements.

For an average residential (B3) customer, the average annual distribution charge will increase by $78 between 2024 and 2025 ($1.50 per week). If retailers fully pass on this increase, this represents an increase of 12% on an annual retail gas bill at the gazetted retail price. The effects of inflation and the regulatory rate of return represent around 63% of the proposed increase *(see Section 16.7)*.

HIGHLIGHT NUMBERS



*Increase in the average distribution charge between 2024 & 2025 for a B3 customer with average consumption.

PART A | Introduction

1. PURPOSE OF THIS PLAN

1.1 INTRODUCTION

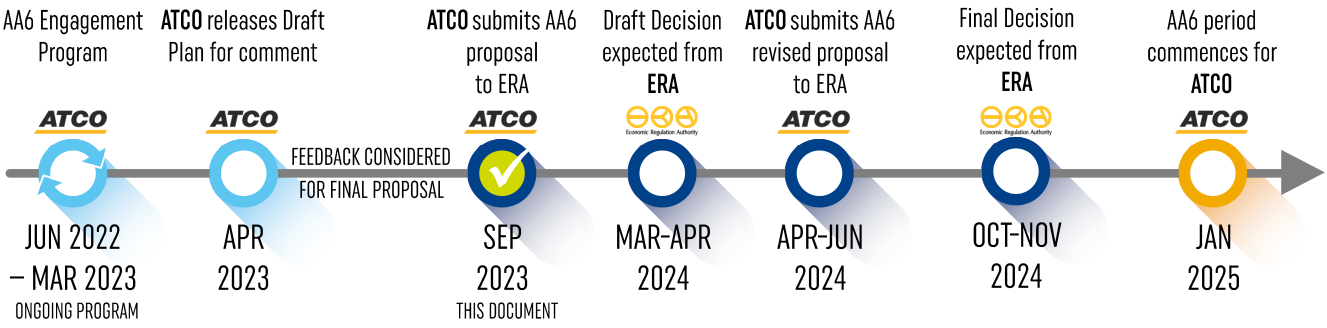
This 2025-29 Plan is also known as the access arrangement information (**AAI**) for our access arrangement revision proposal for the 2025-29 period. The information in this document supports the priorities for our gas network and our services for Western Australian customers. It provides background and supporting information underpinning the access arrangement.

Our submission to the ERA is comprehensive and includes over 600 documents, including a revised access arrangement, access arrangement information and supporting documentation. Together, these documents detail and support our intended investment plans, our planned services, and the prices we propose to charge over AA6 for the Mid-West and South-West Gas Distribution System (**GDS**).

Customer and stakeholder feedback about our planned activities has been incorporated into our proposal. We engaged with customers and stakeholders from June 2022 to May 2023. Our activities are discussed in detail in Chapter 4.

The ERA will now review our submission against the requirements of the NGR and undertake further public consultation before issuing a draft decision. The ERA will then publish their Final Decision on our revisions to the access arrangement, see Figure 1.1.

Figure 1.1: Indicative timeline for ATCO's AA6 submission



1.2 BASIS OF FINANCIAL INFORMATION

Financial information in this document is provided on both a nominal and real basis. All real financial information is expressed in constant prices as at 31 December 2023.

The forecast costs within this document have been prepared in accordance with the method described in our *'Regulatory Cost Allocation Method', (see Attachment 01.006*) to ensure that costs associated with providing non-reference services are not included in the forecasts presented in this document.

Where necessary, to express financial values in dollar values of 31 December 2023, financial values prior to December 2022 were escalated at the rate of inflation as measured by the Consumer Price

Index (All Groups, Weighted Average of Eight Capital Cities) as published by the Australian Bureau of Statistics.

Financial values after 31 December 2022 up to 31 December 2024 are de-escalated at the rate of inflation based on the Reserve Bank of Australia's May 2023 Statement on Monetary Policy.

Financial values after 31 December 2024 are de-escalated using the forecast rate of inflation from the weighted average cost of capital (**WACC**) parameter estimates used in the Plan (which are also calculated as prescribed by the 2022 Rate of Return Instrument (**RORI**))[1].

Table 1.1 shows the consumer price index and inflation values used to provide financial information in this document.

Table 1.1: Actual and forecast consumer price index and inflation rates

	2019 (A)	2020 (A)	2021 (A)	2022 (A)	2023 (F)	2024 (F)	2025 (F)	2026 (F)	2027 (F)	2028 (F)	2029 (F)
December CPI	116.2	117.2	121.3	130.8							
Inflation rate (%)	1.84%	0.86%	3.50%	7.83%	4.50%	3.25%	2.66%	2.66%	2.66%	2.66%	2.66%

1.3 NEXT STEPS

Our lodgement of this AA6 revisions proposal to the ERA marks the formal commencement of the ERA's review process. We encourage customers and stakeholders to engage with the ERA's public consultation process through the ERA's website here.

If you have any questions or would like any assistance in relation to our 2025-29 Plan during the ERA's public consultation process, please contact us by sending an email to: haveyoursay@atco.com

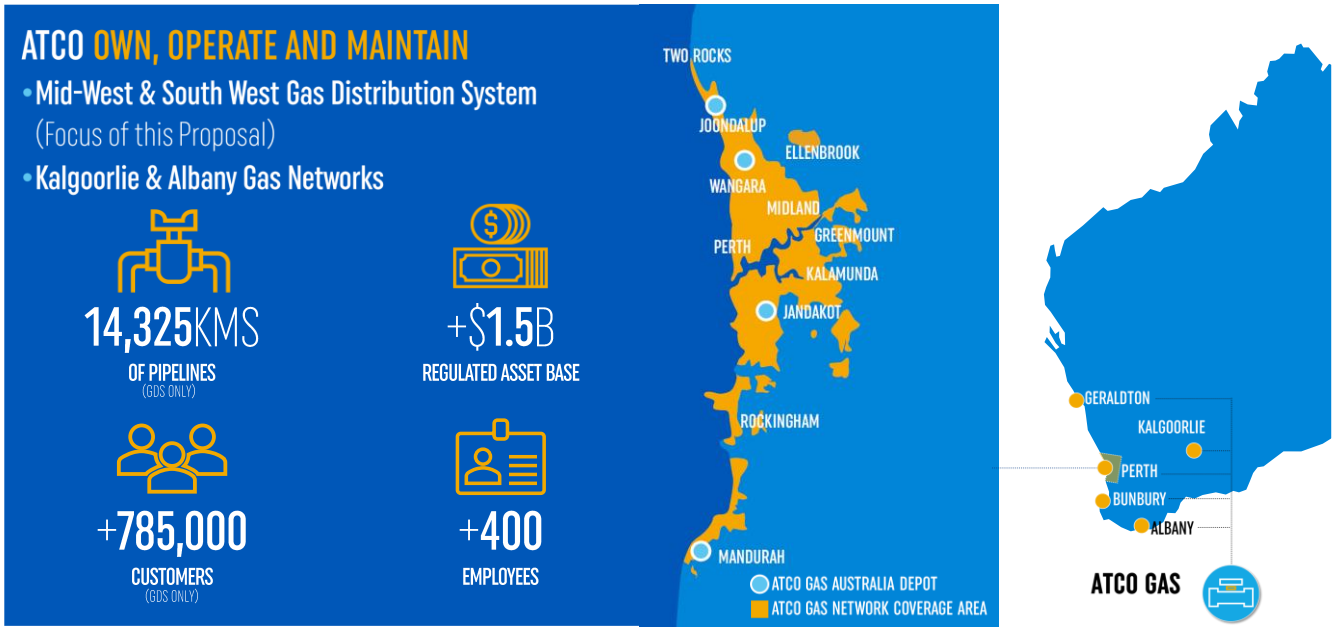
[1] ERA, 2022 Final Gas Rate of Return Instrument, December 2022, section 8.1

2. BUSINESS OVERVIEW

2.1 ABOUT OUR BUSINESS

ATCO owns and operates Western Australia's largest gas infrastructure network, the Mid-West and South-West GDS. Our core business is owning, operating, and maintaining gas distribution networks and providing a safe, reliable, and affordable network service to residential, commercial, and industrial customers, see Figure 2.1.

Figure 2.1: ATCO Business Overview



The GDS currently supplies over 785,000 customers through a network of pipes that are nearly 14,500 km in length, supported by an ATCO workforce of more than 400 employees and an additional contracted workforce.

Our networks are in Geraldton, Bunbury, Busselton, Harvey, Pinjarra, Brunswick Junction, Capel, and the Perth greater metropolitan area. More than 80% of the Perth metropolitan area is serviced by our underground network of pipelines.

Further information on our gas network can be found here or at www.atco.com.

This 2025-29 Plan does not include our gas distribution networks in Albany and Kalgoorlie, which service 15,000 customers (through ~300km of mains), as these separate and smaller networks do not require an access arrangement proposal to the ERA.

2.2 OUR ROLE IN THE NATURAL GAS SUPPLY CHAIN

Natural gas has been used as a fuel in Australia for nearly 60 years, and it features strongly in Western Australia's current energy profile. Natural gas is an important fuel that will support a future with

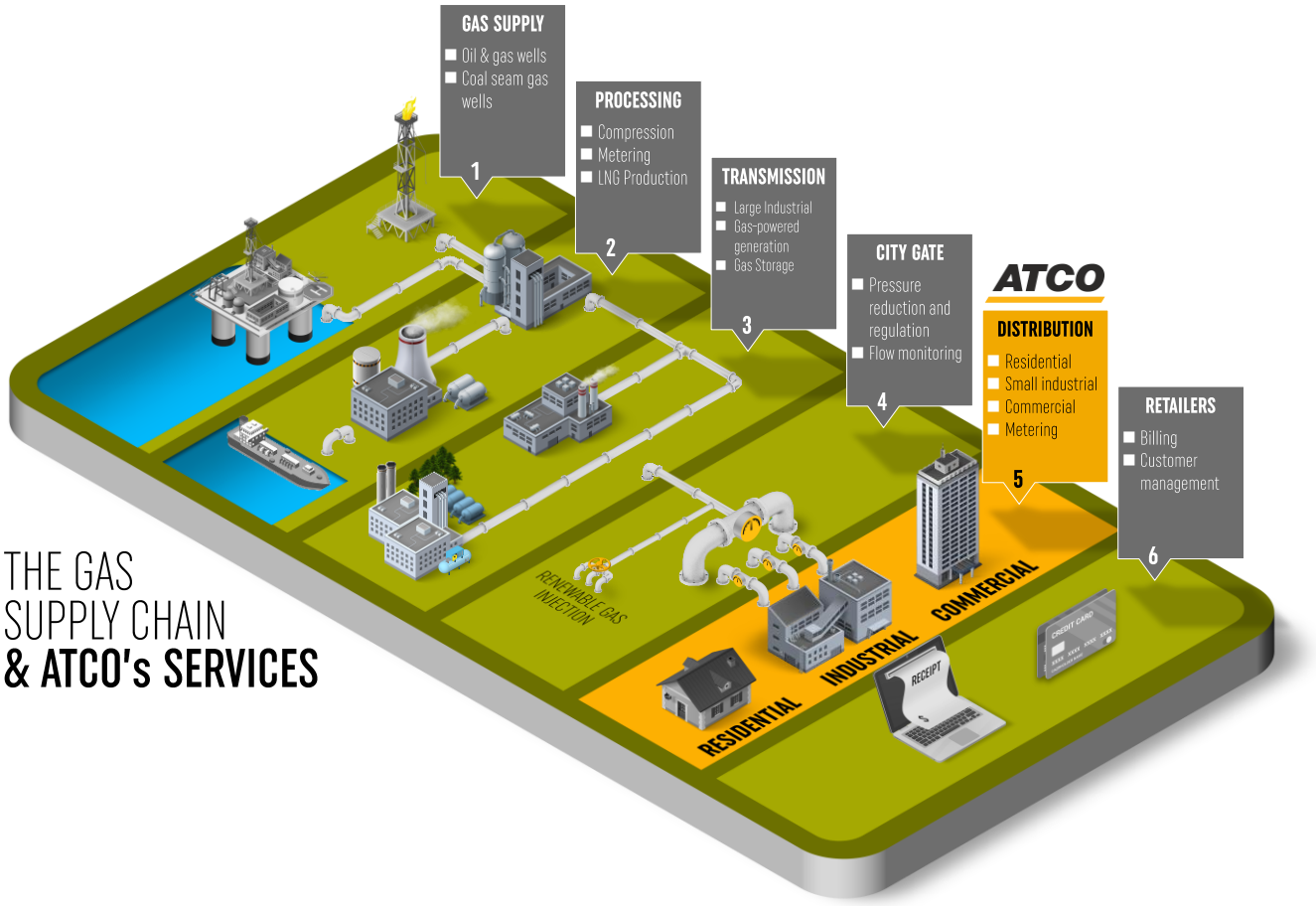
intermittent forms of renewable energy (e.g., wind and solar). We believe natural gas will remain a crucial part of Australia's energy mix.

Our role in the gas supply chain is distributing gas to consumers, as shown in Figure 2.2. ATCO owns, operates, and maintains the distribution pipelines up to the customer's meter box, owns and maintains the meter in the meter box, and conducts the meter readings at each property.

The supply chain model is that following production and processing, gas is delivered through high-pressure transmission pipelines (such as the Dampier to Bunbury Pipeline and the Parmelia Pipeline). The gas is then delivered to homes and businesses through our distribution network. We anticipate that renewable gases will become available in the coming years to inject into our distribution network, providing another source of energy to support the energy transition.

The role of retailers is to organise gas contracts from producers, pipeline transportation contracts with transmission pipeline and distribution network operators, and on-sell gas to customers. Retailers are also responsible for managing the customers' accounts and are the primary customer contact point.

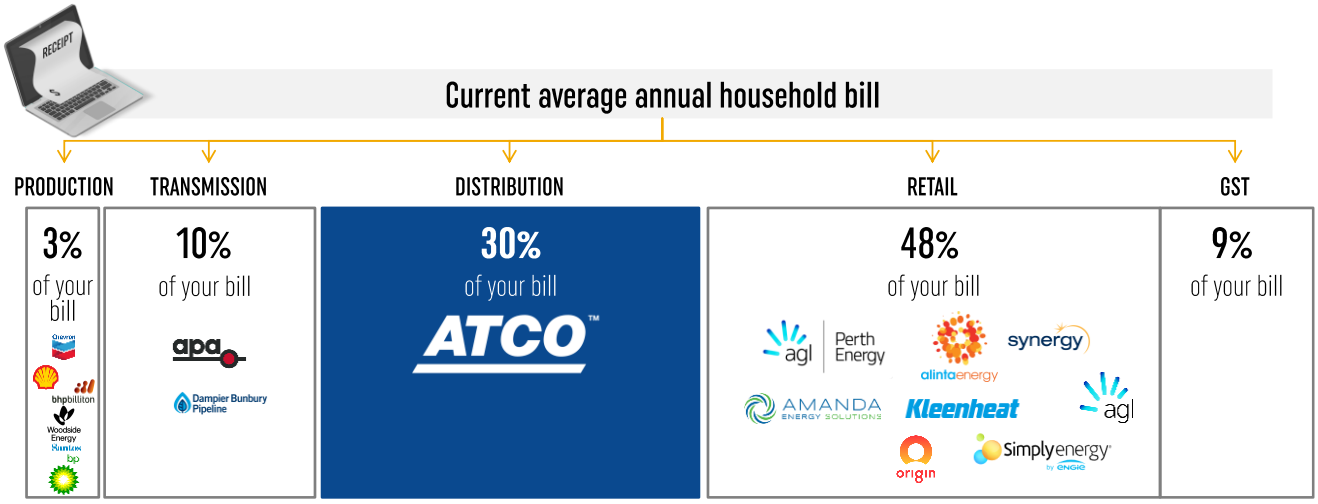
Figure 2.2: ATCO's role in the gas supply chain[2]



[2] Adapted from an image at https://aemo.com.au/learn/energy-explained/energy-101/industry-overview

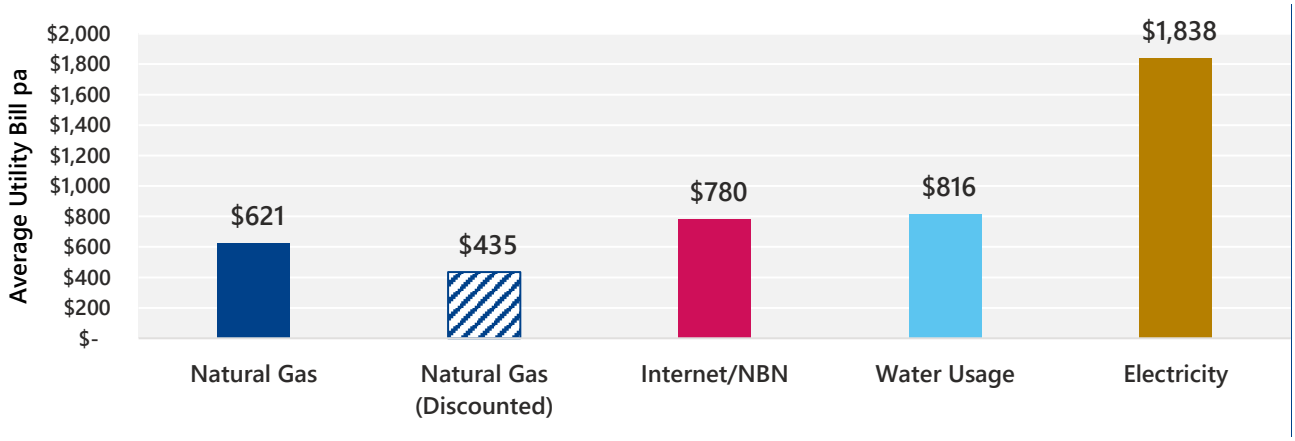
All the costs associated with the gas supply chain are inputs into customers' gas bills. In 2023, the network distribution component (ATCO costs) represented about 30% of the average residential gas bill[3], see Figure 2.3.

Figure 2.3: Average annual residential household gas bill breakdown



Additionally, ATCO's analysis suggests that when compared to other illustrative residential utility bills, a customer's indicative gas bill per year is lower than the household internet, water, or electricity bills in Western Australia, see Figure 2.4.

Figure 2.4: 2023 illustrative annual residential household utility bill comparison[4]



3 Average B3 residential customers at average consumption under non-discounted retail gazetted price

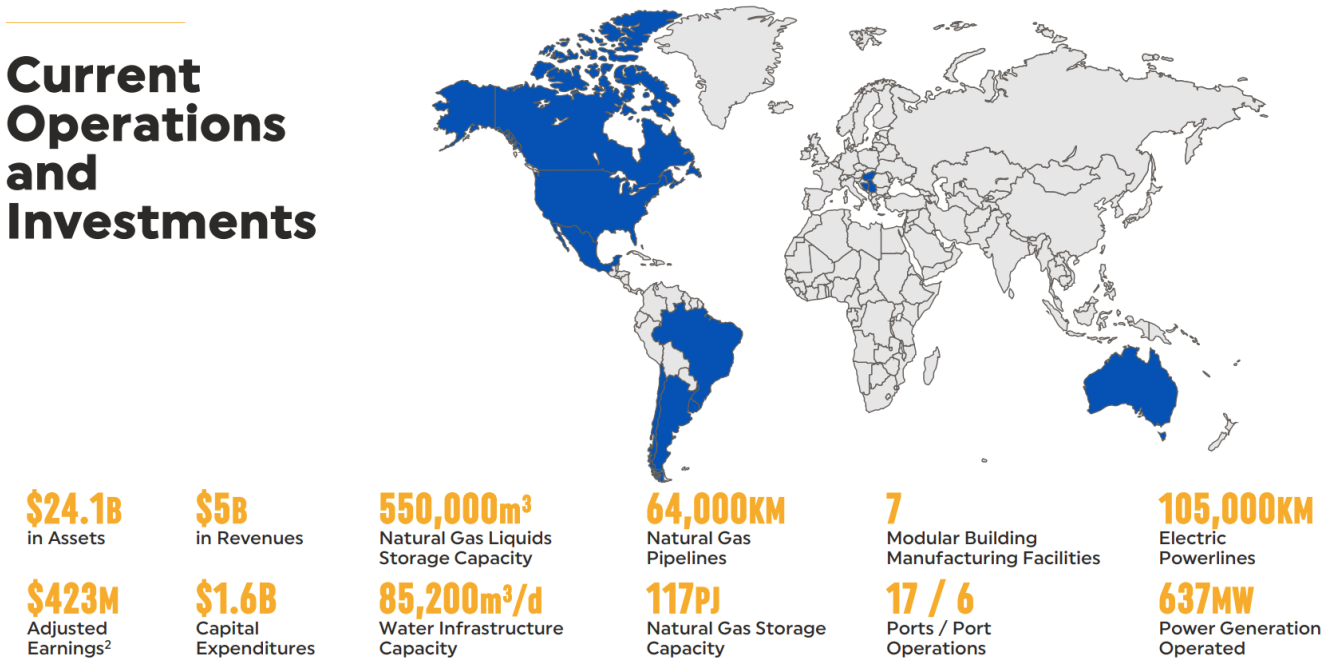
4 This is based on ATCO's analysis of the following average bills for residential customers in WA: average residential **water** bill is derived from Canstar Blue's analysis of $204 per quarter in Western Australia - August 2023 - https://www.canstarblue.com.au/home-garden/average-water-bill/; ATCO has assumed an average residential **internet** bill to be $64.99 per month based on the iiNet NBN12 Limitless Data Plan ($64.99 per month - August 2023), Average residential natural gas (discounted) bill is calculated by using an assumed consumption of 11.49GJ per annum (being the average forecast consumption for the B3 tariff class over AA6) at the regulated natural gas price with a 35% discount to the usage charges, Average residential natural **gas** bill is calculated using an assumed consumption of 11.49GJ per annum at the regulated natural gas price with no discount applied, Average residential **electricity** bill is calculated by using an assumed consumption of 4,730 kWh (being the average consumption calculated from the usage and customer numbers for the RT1, RT13, RT17, RT21 and RT35 reference tariffs detailed in Western Power's 2023/24 Price List) at Synergy's regulated A1 tariff.

2.3 ATCO GLOBAL OPERATIONS

ATCO Gas Australia is part of the ATCO Group of global companies. ATCO Group has been proudly operating in Australia for more than 60 years. Initially supporting the resources sector with our modular structures and logistics expertise, ATCO Group has expanded to offer a full range of energy infrastructure services, including electricity generation and transmission, gas distribution, and renewable energy solutions, including storage and hydrogen.

ATCO Group employs over 6,000 people globally and has approximately $24 billion of assets, see Figure 2.5. The ATCO Group is engaged in structures and logistics, electricity, pipelines and liquids (natural gas transmission, distribution, infrastructure development, energy storage, industrial water solutions), and retail energy.

Figure 2.5: ATCO Operations Worldwide[5]



2.4 OUR VISION FOR AA6

ATCO Group's mission is to build a global portfolio of energy-related assets that consistently deliver operational excellence. We are a unique organisation – geographically dispersed, diverse, and built to expertly serve a wide range of customers.

[5] For the year ended December 31, 2022 except for "Power Generation Operated", which includes the renewable generation operating assets acquired on January 3, 2023

Over 2025-29, we anticipate further progress towards a more sustainable, competitive, and customer-centric energy system. We are confident that gas will continue to play a significant role in the energy mix, as supported by feedback from our customers.

> ATCO Gas Australia's Vision reflects this ongoing role and our need to adapt to our changing landscape for a more sustainable energy future.

ATCO Gas Australia's Vision, see Figure 2.6, reflects this ongoing role and our need to adapt to our changing landscape for a more sustainable energy future. We are confident that our AA6 business priorities are in the right areas to support the long-term interests of Western Australians.

Figure 2.6: ATCO Gas Australia Vision

2.5 OUR OPERATING ENVIRONMENT

2.5.1 WESTERN AUSTRALIAN ECONOMY

Since the publication of our 2020-24 Plan, the WA economy has experienced significant fluctuations, mainly due to the COVID-19 pandemic and its impact on global trade and travel.

At the start of AA5, the WA economy was showing signs of recovery after a prolonged period of sluggish growth, with a focus on diversifying beyond the resources sector. This had been supported

by several key projects, including the completion of Elizabeth Quay, progress on the Perth City Link project, and the new Perth Stadium. The resources sector also saw growth in areas such as lithium and other minerals used to manufacture electric vehicles and renewable energy technologies.

However, in 2020, the WA economy was hit hard by the COVID-19 pandemic, leading to a sharp decline in commodity demand and disrupted supply chains. WA's border closures also severely impacted tourism and hospitality, forcing many businesses to close or operate at reduced capacity.

Despite these challenges, the WA economy has shown resilience, with the mining industry continuing to perform strongly and the WA State Government introducing several major infrastructure projects. Like many other businesses, ATCO is experiencing the effects of this economic recovery with strong competition for labour and materials and rising inflation. We expect this will continue into AA6.

2.6 OUR STRONG PERFORMANCE

AN EFFICIENT BUSINESS

ATCO commissioned Quantonomics, an expert benchmarking service provider, to conduct productivity measurement and benchmarking review of its gas distribution network operations (*see 'Quantonomics Benchmarking Report', Attachment 09.003*). This benchmarking review examined ATCO's efficiency performance over 2000–2022 within a group of nine gas distribution businesses in Australia. Figure 2.7 and Figure 2.8 show ATCO's efficiency against the six other gas distribution network service providers with the highest customer density. The benchmarking shows that ATCO is efficient, with the second lowest opex per customer and the lowest opex per km of main compared with our national peers.

Figure 2.7: $Opex per customer, ATCO comparison to Australian peers, 2017-2022.

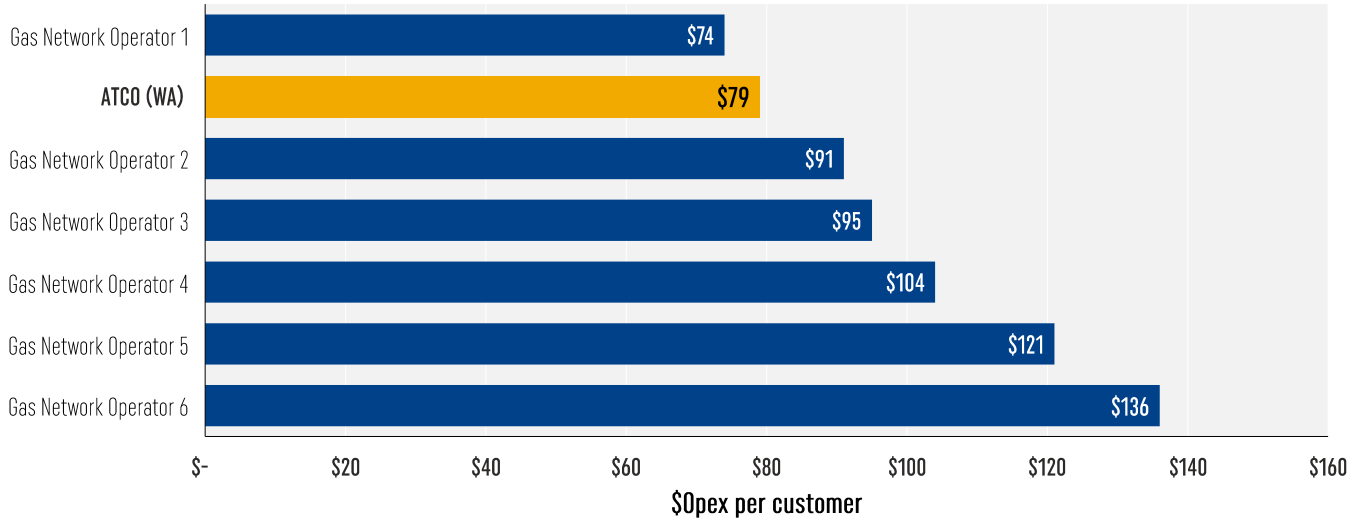
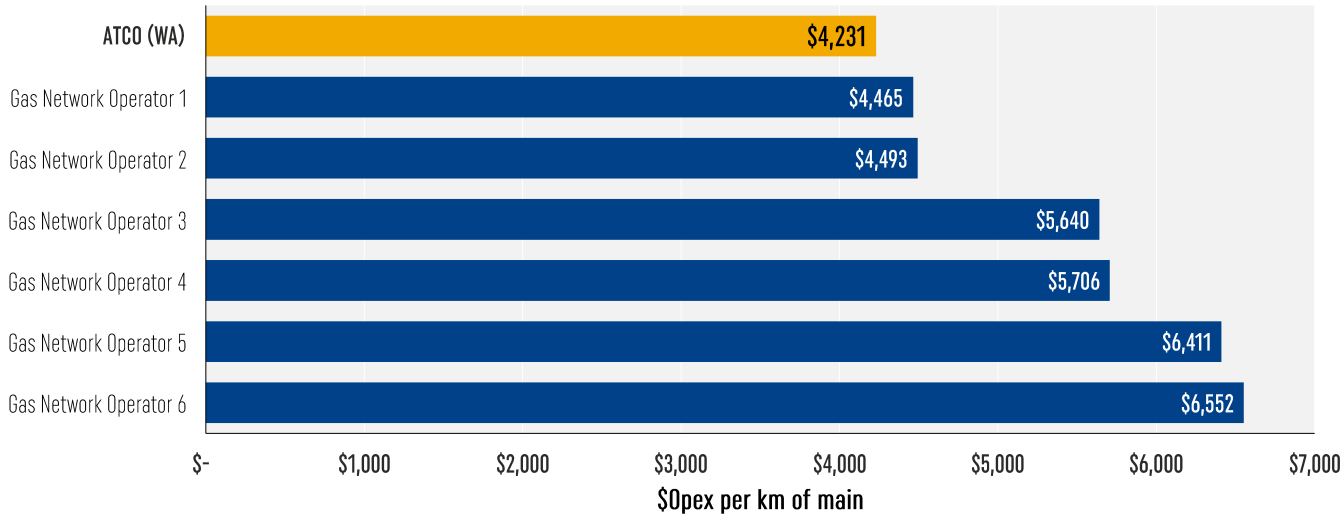


Figure 2.8: $Opex per km of main, ATCO comparison to Australian peers, 2021.



Our efficiency performance supports one of our strategic pillars, affordability. Reticulated gas remains affordable compared to other energy sources, and we want to see this continue in AA6 and beyond. The affordability of gas for customers in WA is also underpinned by other factors, including the following:

- **Retail competition:** The WA gas market is open to retail competition, a key differentiator from electricity, with just a single retailer for most residential electricity customers. Retail competition benefits gas customers, with discounts and other offers readily available. ATCO's systems and business processes play an important role in supporting competition in the market.
- **Low gas prices:** WA has an abundant supply of gas that, due to the Domestic Gas Reservation Policy, is also lower cost than other jurisdictions in Australia and internationally.[6]
- **Customer service:** ATCO's customer service teams keep our customers informed about their energy choices, including that in WA today, each unit of gas is delivered to a home cheaper than it costs to deliver a unit of grid-based electricity (on a cents per kilowatt-hour (**kWh**) basis).[7]

A CUSTOMER-FOCUSED BUSINESS

ATCO participates in a customer service benchmarking program through Customer Service Benchmarking Australia. The monthly study allows us to track the ATCO customer experience and benchmark our performance against other Australian gas network operators. The participants in the program include AGN, Multinet, Ausnet, Allgas, and ATCO, and ATCO has been the leader in customer service since the benchmarking exercise began. In AA5, ATCO has averaged a customer satisfaction (CSAT) score of 8.8 compared to the average benchmark score of 8.4 (based on 5,355 customer interactions surveyed).

6 AFR, 'Paradise': WA has cheapest gas in OECD, https://www.afr.com/companies/energy/paradise-wa-has-cheapest-gas-in-oecd-20220902-p5bete

7 This is referring to the unit price of energy. It is not referring to the usage of energy and does not take into account efficiency rates of appliances.

In addition to CSAT, the benchmarking program also measures how 'easy' an interaction was as rated by a customer. Once again, ATCO leads the program with an average score of 9.0 compared to the average benchmark of 8.6. Over the last few years, we have consistently scored above the average benchmark in both of these customer experience metrics, *see Section 5.4*.

In AA5, we have delivered a strong performance across other customer metrics, including:

- ATCO has delivered on average 11,523 new residential connections and 237 new commercial and industrial connections annually (2020-2022).
- We continue to work with our industry stakeholders and participate in organisations such as the Urban Development Institute of Australia and the Master Plumbers & Gasfitters Association.
- Our Contact Centre has averaged 47,627 customer calls per year. 88% of calls to the Contact Centre were answered within 30 seconds (92% in 2022), with a 2% call abandonment rate.
- 90.5% of customers rated their Planned, Unplanned interaction, or New Connection experience with ATCO as either 'Good' or 'Excellent'.
- 92.2% of customers said their Planned, Unplanned interaction or New Connection experience with ATCO was 'Easy'.

2.7 SUSTAINABILITY AND THE FUTURE ROLE OF GAS

ATCO recently published our Sustainability Strategy for the WA Gas Business, detailing our ambition to deliver short and long-term economic, environmental, and social benefits for our people, customers and community partners (*see Attachment 03.003*). Our Sustainability Strategy supports the delivery of the ATCO Group corporate and sustainability objectives while also addressing the role we can play in supporting the achievement of the United Nations Sustainable Development Goals. Our priority areas are founded on three pillars: Community, Planet, and Governance, see Figure 2.9.

Figure 2.9: ATCO Gas Australia: AA6 Sustainability Priority Areas Summary

MATERIAL THEME	AA6 PRIORITY AREAS
PEOPLE	
Health & Safety	■ We continue to build a positive health and safety culture across our workforce. ■ We promote, support, and protect the mental health and wellbeing of our people. ■ We maintain the highest standards of asset performance and safety to support the ongoing delivery of safe and reliable gas to our customers.
Diversity, Equity & Inclusion	■ We seek to ensure our workforce reflects the diversity of our State. ■ Our work practices are inclusive of a range of diversity dimensions, to encourage full participation in our workforce and so that our staff can reach their aspirations.
Talent Attraction and Retention	■ We will cultivate a workplace environment that attracts and retains talented individuals. ■ We aim for our workforce to thrive by providing training and development opportunities.
Community & Indigenous Engagement	■ We are committed to engaging with and creating positive economic benefit for Indigenous people and organisations through our recruitment, procurement and organisational culture. ■ We are committed to supporting and empowering individuals, groups and organisations where we live, work and operate.
PLANET	
Climate Change & GHG Emissions	■ Reduce net emissions (scope 1) to 30% below 2020 emissions by 2030. ■ Scope 2 emissions to be no higher than 2020 levels by 2030. ■ We are committed to building infrastructure that is reliable, limits emissions, and is resilient to physical climate risks. ■ We seek to minimise and mitigate our environmental impacts through best practices and robust environmental management systems.
Energy Transition & Resilience	■ We commit to provide Western Australians with choice of energy into the future by upgrading the gas distribution network to include renewable gas, including carbon neutral energy.
GOVERNANCE	
Risk Management	■ We will continue to implement risk management systems to ensure that we can quickly and effectively identify, manage, mitigate, and prevent risks. ■ We are actively and thoroughly addressing cyber security threats and proactively developing and maintaining effective prevention strategies aligned with best practice.
Compliance & Performance	■ To maintain compliance to mandatory reporting frameworks. ■ We are creating the internal processes and governance structures to embed ESG within our business and are working towards transparent and accurate external ESG reporting.

In particular, the Planet pillar is a key focus of this Plan. This is because Australia's energy markets are undergoing a profound transformation with the ongoing global shift towards a decarbonised and more sustainable society.

In 2022, the Australian Federal Government committed to new 2030 emissions targets, with a commitment to net zero emissions by 2050. This will require the decarbonisation of domestic gas use in Australia, most likely through introducing renewable gases and reducing fugitive emissions. Energy Networks Australia recently reported that "Emissions across the domestic gas industry can be reduced

by between 16% to 50% by 2030, depending on the level of policy support, across all emission types"[8].

Importantly, a commitment to net zero emissions by 2050 does not exclude the gas distribution network from the future energy portfolio. The network can still play a critical role in transporting natural gas or renewable gases. The uptake of renewable gases will be driven by the rate of development and commerciality of zero-emission technologies and Federal and State government policy, for example, through a renewable gas target. Additionally, the role of the network may expand to include energy storage, complementing its existing role in energy distribution.

CARBON OFFSETS

You may not be aware that most gas retailers offer gas products in the Western Australia market today that incorporate carbon offsets. These products allow gas users to be carbon neutral today. Most of these products are certified as carbon neutral by Climate Active.[9] These products mean that gas users do not need to wait or make any changes to their appliances to lessen their environmental impact.

To find out more about these retail products visit the retailers website links below[10]:

- **AGL** - https://www.agl.com.au/residential/carbon-neutral
- **Alinta Energy** - https://www.alintaenergy.com.au/wa/
- **Amanda Energy -** https://amandaenergy.com.au/
- **Kleenheat** - https://www.kleenheat.com.au/about/sustainability/carbon-offset
- **Origin Energy** - https://www.originenergy.com.au/electricity-gas/plans.html
- **Perth Energy** - https://www.perthenergy.com.au/carbon-neutral/
- **Simply Energy** - https://www.simplyenergy.com.au/why-choose-us/energy-efficiency-and-green-energy/carbon-neutral
- **Synergy -** https://www.synergy.net.au/

To ensure we are proactively preparing for the future, ATCO has included programs within this Plan that go beyond offsets by enabling renewable gases to be injected, stored, and transported across our network.

2.8 RELEVANT REGULATORY FRAMEWORK

We operate our networks in accordance with the Energy Coordination Act 1994 (WA), National Gas Access (WA) Act 2009 (incorporating the National Gas Access (Western Australia) Law (WANGL)), National Gas Rules (NGR), and various state-based operating guidelines. The ERA monitors

8 https://www.energynetworks.com.au/miscellaneous/2030-emission-reduction-opportunities-for-gas-networks-by-enea-consulting-2022/, page 2

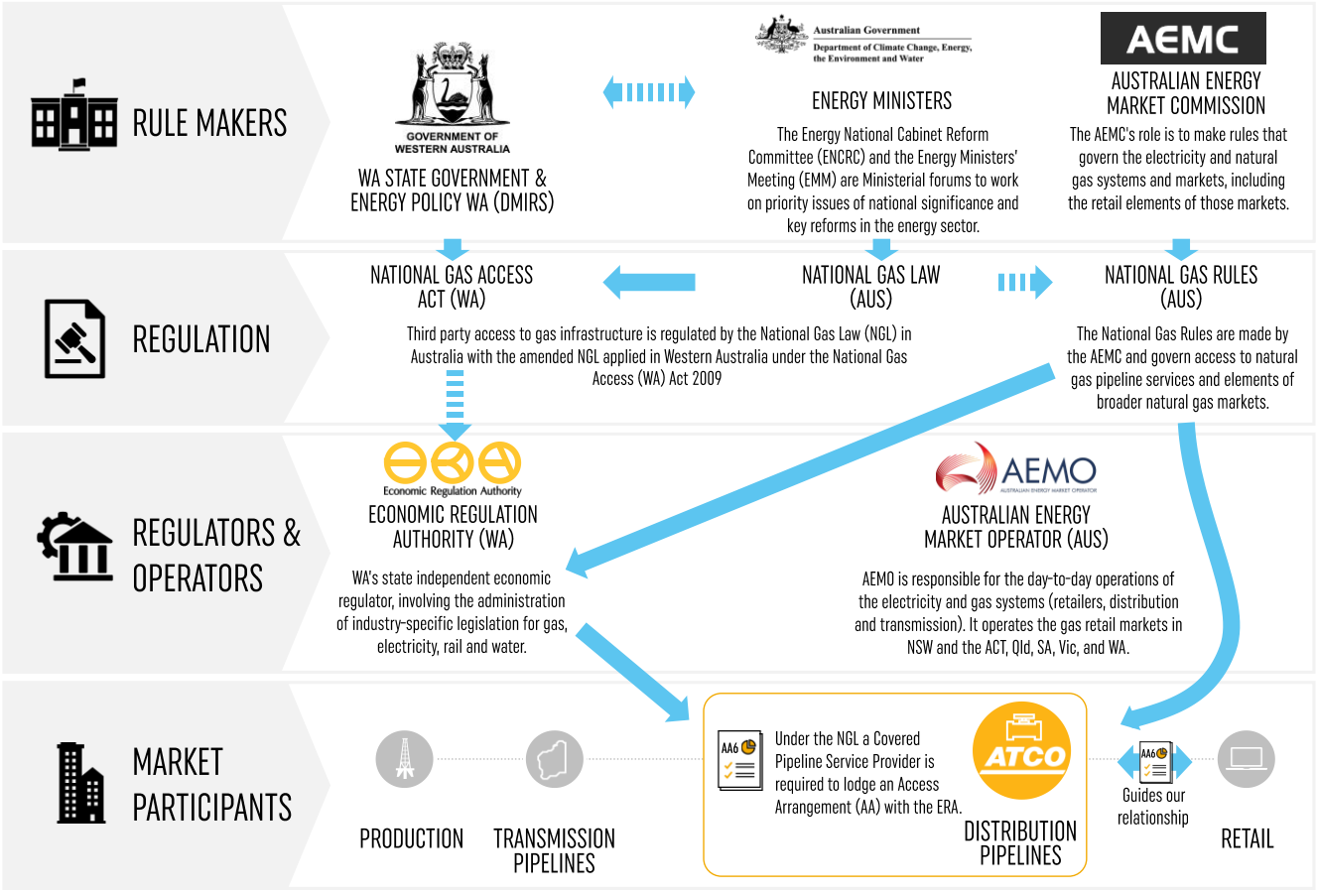
9 Climate Active claims are subject to independent third-party verification to ensure the integrity of the carbon neutral claim. More information on Climate Active is available here - https://www.climateactive.org.au/

10 Website links accessed 11 August 2023

compliance with our Gas Distribution Licence, the National Gas Access (WA) Act 2009, the WANGL and the NGR, see Figure 2.10.

The National Gas Access (Western Australia) Law is a subset of the National Gas Law (NGL) agreed by state and territory Energy Ministers in Australia. The NGL and the NGR together provide a framework for the preparation and approval of AA6. The NGR set the process to be followed and the regulatory tests to be applied for approval of AA6 regarding the 'building blocks' for allowed total revenue. These building blocks include a return on the capital we have invested and *will invest* in the network, depreciation of that capital, an allowance for income tax, and our total regulated opex. Prices are then derived from this total revenue.

Figure 2.10: Our Regulatory Framework



2.9 UPCOMING REGULATORY CHANGES

Nationally, we have observed upcoming amendments to the NGL and NGR that, if adopted in Western Australia, will impact our AA6 proposal. It is anticipated that there will be changes to the WA regulatory framework over the next twelve months to:

1. Incorporate the final package of gas pipeline regulatory amendments, which are already in effect elsewhere in Australia.
2. Extend the regulatory framework to renewable gases, including hydrogen, synthetic methane and biomethane, and blends of these gases.

3. Incorporate an emissions reduction objective into the National Gas Objective.

Due to the advanced stage of these amendments to the NGL and NGR, our AA6 proposal has been prepared assuming that the above changes to the regulatory framework are adopted in WA prior to the approval of AA6, due later in 2024.

EMERGING REGULATORY AMENDMENTS NOT INCORPORATED IN THIS PLAN

In addition to anticipated changes to the NGL and NGR outlined above, other legislative amendments will affect the operating environment during AA6 but have not been included in our forecasts for AA6. These emerging regulatory changes include:

- **WA climate change legislation** – The WA Government has signalled the introduction of legislation to ensure accountability and transparency for the government and establishment of WA's long-term target of net zero emissions by 2050. It will also provide statutory requirements to set interim emission reduction targets and develop policies to reduce emissions and enhance climate resilience.
- **Mandatory reporting frameworks** – Emerging reporting frameworks for climate related financial disclosures and gender equality are expected to be mandatory in the near future. Federal Treasury commenced consultation on climate-related financial disclosure requirements to be developed in 2023 by the Australian Accounting Standards Board. Mandatory climate-related financial disclosures will commence for reporting entities from 2024-25. The Workplace Gender Equality Agency will publish private-sector employer gender pay gaps based on reported data from six Gender Equality Indicators. This requires proactive planning of data collection and implementation during the AA6 period. Changes will be implemented from late 2023 to early 2025.
- **Security of critical infrastructure** – Amendments to regulatory requirements will require gas assets to be subject to 'positive security obligations'. Risk management programs must align with the obligations, including cyber and information security hazard requirements, and comply with ISO/IEC 27001:2015 and the Essential Eight Maturity Model (or equivalent). Entities must comply by August 2024.
- **Aboriginal Cultural Heritage Act** – Our forecast costs for AA6 do not include any costs associated with the recently repealed Aboriginal Cultural Heritage Act. Our cost forecasts assume the continuation of our existing processes, where we undertake the relevant internal Aboriginal heritage assessments and engagement with the Department of Planning, Lands and Heritage (where required) for our project works.

3. THE FUTURE ROLE OF GAS

CHAPTER HIGHLIGHTS

1. The gas distribution network has a key role in the future energy portfolio, be it natural gas or renewable gas. The government's development of a Renewable Gas Target will magnify the transition in the gas sector.
2. To assist with our planning and investment forecasts for AA6, ATCO is exploring four future scenarios for the WA electricity and gas sectors. We are considering a range of activities to prepare for the future.
3. ATCO has developed a Renewable Gas Delivery Strategy to address risks and opportunities with the continued evolution of the energy market.

3.1 INTRODUCTION

With Australia's commitment to a set of 2030 and 2050 emissions targets, gas networks in Australia are pursuing a path towards decarbonisation. The network can be decarbonised by introducing renewable gases and reducing fugitive gas emissions.

> 'Renewable gases' is a term to describe gases produced from renewable sources (e.g., organic waste), which have lower net, or net-zero greenhouse gas emissions.

'Renewable gases' is a term to describe gases produced from renewable sources (e.g., organic waste), which have lower net, or net-zero greenhouse gas emissions. Examples include biogas and biomethane produced from organic waste. Other examples of renewable gases are hydrogen produced from renewable energy (e.g., solar and wind). We will use this definition of 'renewable gas' throughout this 2025-29 Plan to encompass biomethane and renewable hydrogen.

The gas distribution network is key in the energy transition, whether through natural or renewable gas (or a blend). The uptake of renewable gases is dependent on market-driven factors, such as the emergence and rate of development of zero-emission technologies, or policy-driven factors, such as Federal and State government energy and emissions policy decisions or a combination of these factors.

This chapter explores some of the challenges and opportunities flowing from the energy transition and proposes some credible ways forward.

3.2 STAKEHOLDER FEEDBACK

We sought feedback on our Draft Plan regarding our proposed Future of Gas study. Feedback indicated that although stakeholders supported ATCO's need to adapt with the energy market transition, they would like further information on our proposed actions. To provide further information and to support our proposed AA6 initiatives in this area, we have drafted ATCO's Renewable Gas

Delivery Strategy. The key points of this strategy and the implications for AA6 are summarised at the end of this chapter.

Table 3.1 summarises the feedback received from our stakeholders and our respective responses.

Table 3.1: Consideration of stakeholder feedback on the Future Role of Gas

STAKEHOLDER FEEDBACK	OUR RESPONSE
More clarity needed around impact on consumers/ tariffs under different future scenarios, particularly: • Which scenario ATCO Gas considers is most likely and the associated demand profile, capex / opex, revenue and tariffs over time. • How was each scenario derived, the key assumptions and inputs used, and the nature and outcomes of modelling undertaken, (including sensitivity analysis). • How the scenario analysis has influenced (or will influence) planning and draft expenditure forecasts.	The outcomes and implications of the Future of Gas scenario modelling have been updated and are further explained in this Chapter. In addition, our submission to the ERA includes two documents that provide greater detail and justification for our proposed actions: • The Future of Gas Report (*see Attachment 03.002*) • Renewable Gas Delivery Strategy (*see Attachment 03.004*) We also understand that the Sectoral Emissions Reduction Strategies (SERS) for energy will be completed before December 2023. Based on the timing of this, this will be used to inform our Draft Decision response in Q2 2024.
ATCO Gas' intentions to decarbonise are welcomed, in line with customer expectations. ATCO Gas' overall decarbonisation plan should be more clearly presented, along with information about its emissions reductions to date.	Our decarbonisation commitments and proposed actions are further detailed in ATCO's Sustainability Strategy and the Renewable Gas Delivery Strategy, which are separate documents supporting this submission.
Do not support WA households bearing the risks and costs of investing in hydrogen blending as the major beneficiaries would be industrial users.	The Renewable Gas Delivery Strategy sets out a measured approach to incorporating renewable gas blending into the network that factors in the current and likely future costs of different renewable gases. The benefits of renewable blending would extend beyond industrial users, in that all users of the network will benefit from the ability to purchase renewable gas from their retailer. In addition, lower emissions gases positively impact the well-being and future of *all* members of society.
Concerns raised about hydrogen leakage in production, transportation, and storage as a source of GHG emissions.	ATCO will continue to invest in reducing fugitive emissions, whether this be emissions of natural gas or other gases including hydrogen. Our UAFG Strategy outlines several improvement initiatives for AA6, including improved leak surveys and leak elimination, mains replacement, and metering accuracy improvements.

STAKEHOLDER FEEDBACK	OUR RESPONSE
Further information required regarding the safety and transportability of blending biogas and ATCO's ability to comply with AS 4564 specification requirements.	The supply of biomethane must be in accordance with the ATCO gas quality specification (aligned with Australian Standard AS 4564), which has equivalent properties and characteristics (e.g., Higher Heating Value) to the existing natural gas supply. As such, there are no significant changes to the infrastructure types of piping, fittings, pressure control, measurement, or existing processes and systems for gas distribution, with the exception of the additional injection points. We propose there are no additional safety or transportability concerns arising from transporting biomethane in the network.
Support for ATCO preparing for renewable gases but concern whether WA is big enough for a biomethane market.	ATCO's early research, supported by feedback from end users, retailers, and producers, has indicated that there is sufficient supply, with up to 800TJ of available supply and demand for renewable gases in AA6.

3.3 AUSTRALIA'S CLIMATE CHANGE POLICY ENVIRONMENT

Australia's climate change policy environment has been intensely debated and scrutinised in recent years. However, the election of a new Federal Government in May 2022 resulted in Australia adopting stronger emissions reduction targets. An updated obligation for Australia under the Paris Agreement and supporting legislation through the *Climate Change Act 2022* sets commitments to reduce greenhouse gas emissions by 43% below 2005 levels by 2030 and net zero emissions by 2050.

The Federal Government has recently amended the Safeguard Mechanism with the goal of reducing emissions from Australia's largest industrial facilities. The policy sets a total cap for emissions by all facilities covered by the mechanism and progressively lowers allowable emissions over time. While ATCO is, and will continue to report under the NGER scheme, and has also to date been covered by the Safeguard Mechanism, we currently forecast our emissions to remain below the Safeguard Mechanism threshold for the duration of AA6.

We continue to implement programs to reduce our future annual emissions to below State and ATCO global environmental, social, and governance targets (*see emissions-related KPIs in Chapter 8*).

At a state level, Western Australia has also adopted climate change mitigation targets aligned with the Federal Government's commitments. By the end of 2023, the WA State Government will introduce legislation to reduce Government entities' carbon emissions by 80% below 2020 levels by 2030. The achievement of this aim will be driven by the retirement of state-owned coal power stations and the investment of $3.8 billion in new, cleaner power infrastructure. We also understand that the Sectoral Emissions Reduction Strategies (SERS) for energy will be completed before December 2023.

In line with this renewed focus on tackling climate change from both Federal and State governments, ATCO is committed to playing its part in reducing emissions. Our 2025-29 Plan is important in outlining our initiatives to respond to these policy reforms.

3.4 THE GAS NETWORK: RENEWABLE GASES

We believe a lower carbon (or decarbonised) gas network will play a key role in WA's future energy mix. Energy Networks Australia recently noted[11] that repurposing existing pipelines and networks to use renewable gas is the best solution to reaching net zero emissions. Preparing for these possible options is in the best interests of all energy customers.

> "… a decarbonised energy system that continues to utilise existing gas infrastructure is a cheaper option than full electrification and decommissioning the gas network. Gas networks and pipeline businesses are preparing to be ready to deliver renewable and decarbonised gases to contribute towards Australia's emission reduction goals."
>
> '**Gas Vision 2050, Delivering the pathway to net zero for Australia**'
> *Energy Networks Australia (2022)*

In our AA6 engagement initiative, our customers emphasised the importance of ATCO's innovation and exploration of renewable gas options to ensure the continued relevance of the network in the transitioning low-carbon environment. By offering renewable gas products, gas retailers can also expand their product offerings and appeal to customers looking for more sustainable alternatives. Furthermore, by producing and selling renewable gases, gas retailers can help support the emissions reduction targets of their customers.

We are confident these renewable gases will be important in ATCO's and gas retailers' future operations. We have therefore included expenditure programs within this Plan to enable the transport of renewable gases across our network.

3.4.1 BIOMETHANE

We are exploring the transport of biomethane, the renewably produced equivalent of natural gas. Biomethane is a near-pure source of methane and is produced by 'upgrading' *biogas*, a process that removes CO_2 and other contaminants. Biogas is a mixture of methane, CO_2, and small quantities of other gases and is produced from the breakdown of organic matter in waste, such as landfill sites and sewage treatment facilities.

Biogas sourced from organic waste can reduce greenhouse gas emissions, as the process captures methane that would otherwise have been released into the atmosphere. Furthermore, the role of organic waste in the "short carbon cycle" is a benefit of biogas:

> *Unlike natural gas or oil, biogas and biomethane are produced from fresh organic materials. These are themselves derived from biomass, directly (agricultural residues, intermediary crops, green waste etc.) or indirectly (sewage sludge, manure, some biowaste). During its growth, this biomass has captured a certain amount of CO_2 from the atmosphere in order to do photosynthesis. This captured CO_2 is returned to the atmosphere during the combustion of biogas or biomethane, and then captured again by the newly growing biomass, and so on. The combustion of biogas or biomethane*

[11] 'Gas Vision 2050, Delivering the pathway to net zero for Australia'. Energy Networks Australia, 2022

does therefore not increase the amount of CO_2 present in the atmosphere but it makes it circulate in short carbon cycles.[12]

Biogas production is a relatively mature technology, and it has been widely adopted in some countries, such as Germany, the UK, and the USA.

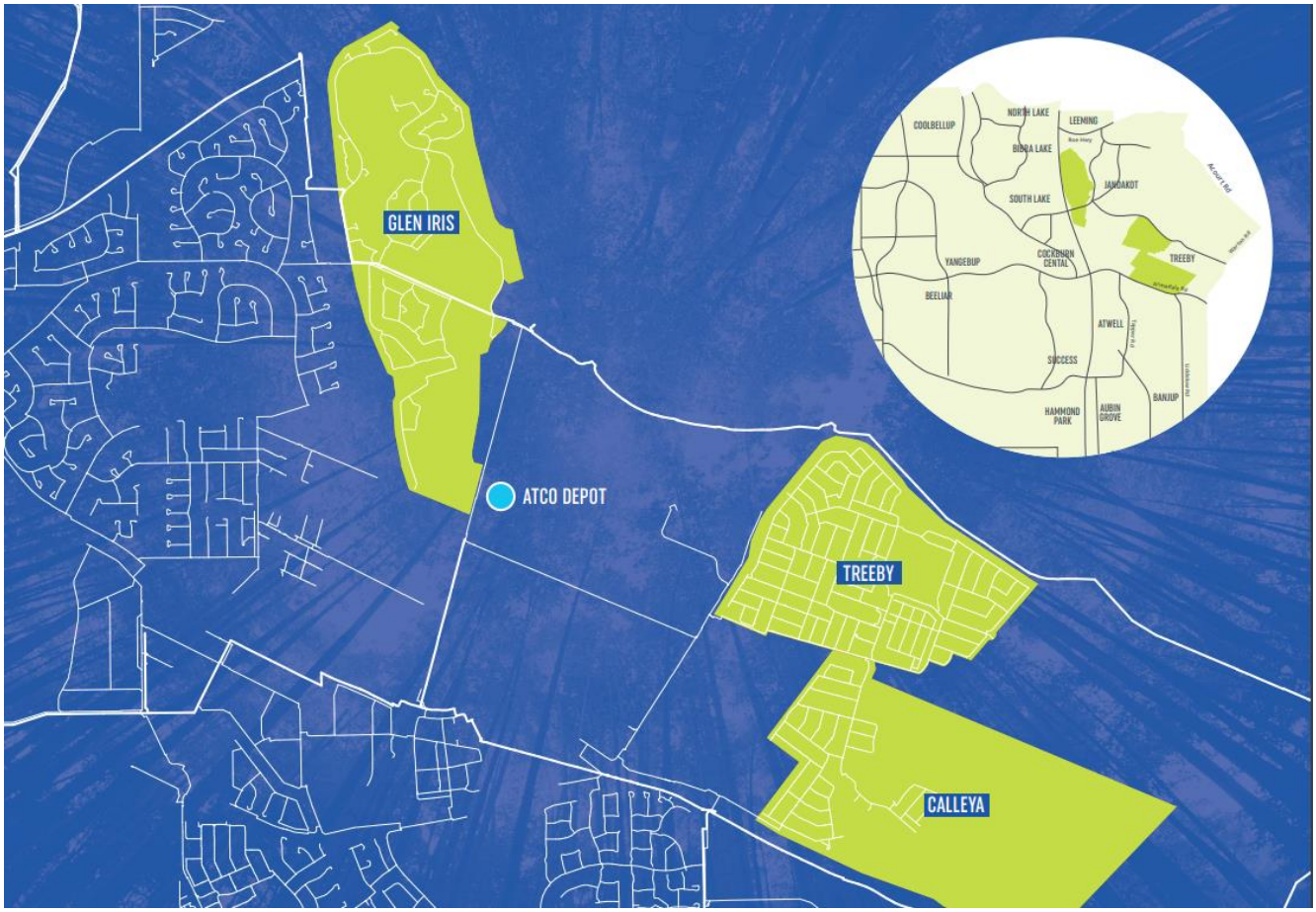
However, production of biogas and biomethane in WA is currently limited, with infrastructure investment required to scale up production and distribution. ATCO is actively exploring the potential of biomethane as a replacement source for unaccounted for gas (UAFG) and to identify and overcome any technical, regulatory, or economic barriers to its implementation.

3.4.2 RENEWABLE HYDROGEN

Gas networks worldwide are increasingly considering the deployment of renewable hydrogen due to its potential to help decarbonise the energy sector. Renewable hydrogen is an energy source that produces only water when burned, making it an alternative to fossil fuels.

In 2022, ATCO commenced the Hydrogen Blending Project in the City of Cockburn, the first of its kind in Western Australia, see Figure 3.1.

Figure 3.1: ATCO Hydrogen Blending Map, City of Cockburn



[12] European Biogas Association, '*The contribution of the biogas and biomethane industries to medium-term greenhouse gas reduction targets and climate neutrality by 2050*', April 2020, Available from: https://www.europeanbiogas.eu/the-contribution-of-the-biogas-and-biomethane-industries-to-medium-term-greenhouse-gas-reduction-targets-and-climate-neutrality-by-2050/

This project is one of the largest of its kind in Australia, with around 2,700 connections. The project blends renewable hydrogen into discrete sections of the WA gas distribution network within Glen Iris, Treeby, and Calleya Estates within the City of Cockburn. The project will continue for approximately two years and involve blending between 2% and 10% volume of renewable hydrogen into the network within the Project area[13]. We aim to gradually increase the proportion of renewable hydrogen blended with natural gas, ultimately reducing carbon emissions from using gas supplied through the network.

In addition to reducing carbon emissions, renewable hydrogen offers other benefits, such as increased energy security and storage capacity. In the future, it is possible that our network could be used for energy storage by converting excess electricity into hydrogen via electrolysis. The hydrogen can then be stored in the network infrastructure until needed.

When energy demand is high, the stored hydrogen can be converted back into electricity through fuel cells or heat through combustion. This solution allows for storing large amounts of energy for long periods, which can help balance the intermittent supply of electricity from renewable sources.

There are several benefits to using gas distribution networks for energy storage. First, it takes advantage of the existing infrastructure and avoids needing costly new storage facilities. Second, it provides a flexible and scalable storage solution that can help to meet the energy demands of a rapidly changing energy landscape. While we are at the start of the large-scale implementation of renewable hydrogen, we are continuing to invest in renewable hydrogen solutions because we are confident this is an important step towards a cleaner and more sustainable energy future.

3.5 FUTURE OF GAS: SCENARIO PLANNING

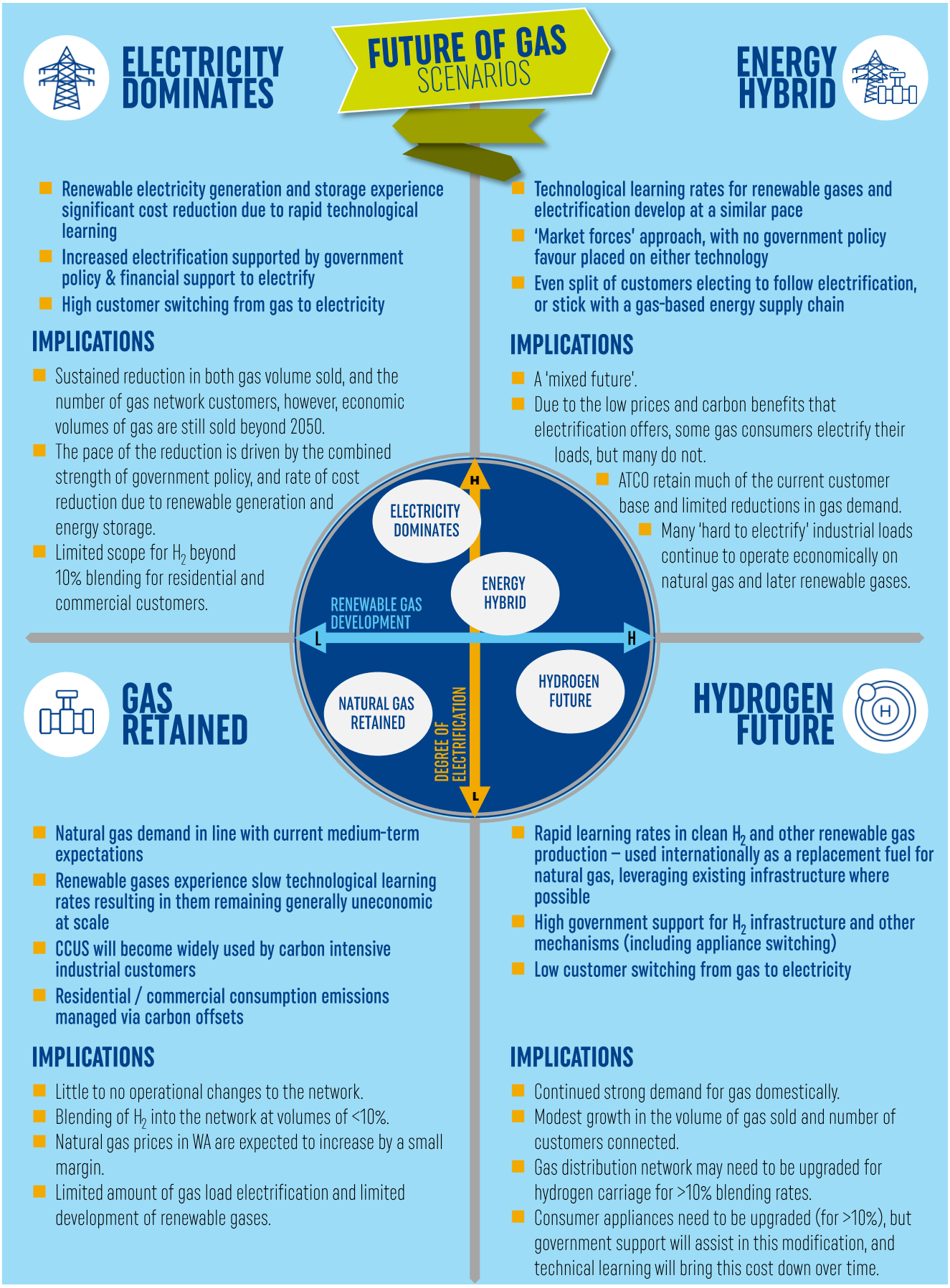
To assist further with our planning and investment forecasts for AA6, we have developed four future scenarios for the Western Australian electricity and gas sectors. The purpose of these scenarios is to define plausible trajectories relating to potential market, policy, environmental and industrial sensitivities. See Figure 3.2. Further information on these scenarios is provided in the *'Future of Gas Report' (see Attachment 03.002)*.

3.5.1 THE FUTURE OF GAS: FOUR SCENARIOS

These four scenarios allow us to better anticipate and prepare for future events and changes, rather than simply reacting to them. This is particularly important for our AA6 planning, as many of the decisions we make today have implications beyond the end of the period, such as price trends and demand, investment levels for innovation, and network capital expenditure (**capex**) levels.

[13] More information is available online: https://www.atco.com/en-au/projects/hydrogen-blending.html

Figure 3.2: Future of Gas Scenarios Summary



HYDROGEN FUTURE

Under the Hydrogen Future scenario, rapid learning rates for renewable gas production enable renewable gases to displace natural gas domestically and internationally. The resulting hydrogen industry mirrors the current natural gas and Liquefied Natural Gas (**LNG**) industries, with a high-volume export focus enabling the economic servicing of the smaller Australian domestic market.

ELECTRICITY DOMINATES

Under the Electricity Dominates scenario, renewable electricity generation and storage experience a rapid reduction in cost through increased technological learning. As such, the relative cost of renewable electricity against natural gas and renewable gases falls dramatically, to such an extent that a broad electrification of industry and households occurs.

ENERGY HYBRID

Under the Energy Hybrid scenario, technical learning rates for renewable gases and electrification develop at a similar pace resulting in some customers electing to electrify and some remaining on the gas network. From an economic and environmental point of view, both electricity and renewable gases become viable options as alternatives for natural gas. This results in a mixed response from residential, commercial, and industrial customers, with an even split electing to follow electrification or stick with a gas-based energy supply chain. From a government policy perspective, this scenario represents a 'market forces' approach, with no policy favour placed on either technology.

GAS RETAINED

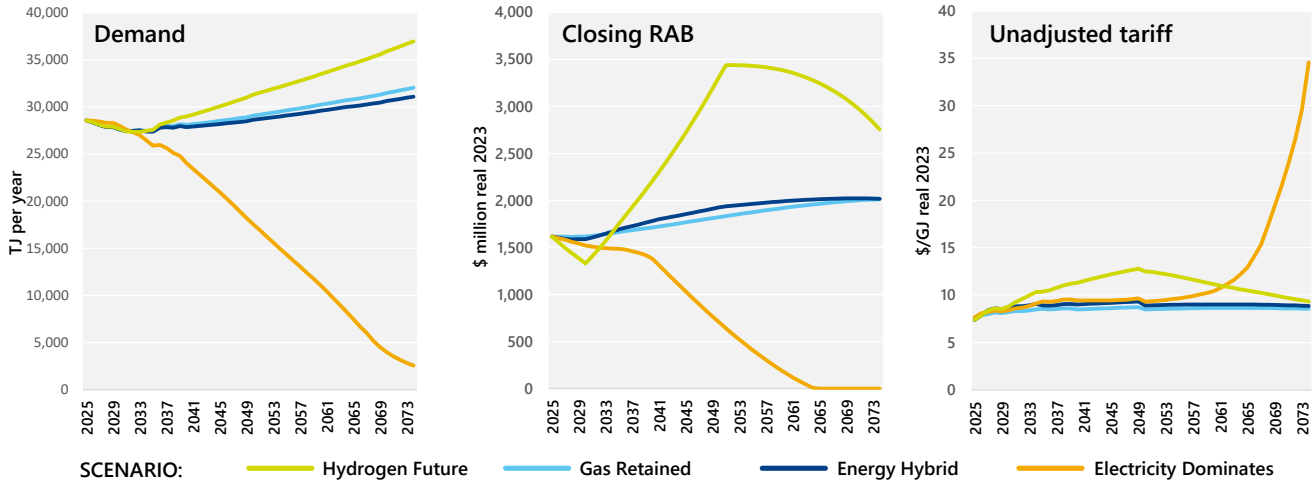
Under the Gas Retained scenario, global and local factors result in natural gas being retained in the ATCO network, broadly in line with the medium-term expectations from AA5. Renewable gases experience slow technological learning rates, which results in them remaining generally uneconomic at scale and low local and international uptake. As such, natural gas continues to be embraced as a 'transition fuel' used in large volumes globally to reduce carbon emissions quickly and reliably through coal to gas switching and to support renewable generation. The carbon intensity of natural gas and natural gas products such as LNG is also reduced thanks to rapid technological learning relating to CCUS.

3.6 OUR RESPONSE TO THE FUTURE OF GAS STUDY

The Future of Gas study allows us to look into the long-term future of the gas distribution network through scenario modelling – an important tool when faced with uncertainty and the need to make large and long-life investments. Figure 3.3 illustrates demand profiles, regulated asset base (**RAB**) value, and retail gas price through each scenarios.

Three of the four scenarios modelled in the study conclude that the gas network has a long-term role in the energy mix: Hydrogen Future, Energy Hybrid, and Gas Retained. The remaining scenario, *Electricity Dominates*, outlines a future where the gas network experiences a significant and sustained reduction in demand and associated investment.

Figure 3.3: Future of Gas Scenarios implications



Our response to the findings from the Future of Gas Study is set out in the following sections.

3.6.1 CONTINUING TO MAINTAIN OUR ASSETS

While one scenario shows that the longer-term utilisation of assets may be much lower than currently, all scenarios indicate that the assets will continue to be at least *partly utilised* over the technical life of the assets (which can be up to 80 years). Prudent maintenance and investment in the existing network are critical for safe, reliable, affordable, and sustainable operations.

3.6.2 MANAGING UNCERTAINTY WITH ACCELERATED DEPRECIATION

We propose changing the depreciation profiles of our gas distribution assets to maintain stable long-term prices for consumers that promote the efficient utilisation of the network over time. Accelerated depreciation will assist us in maintaining price stability over the long term and avoid imposing unreasonably large charges on customers in the future, irrespective of whether that future is where we transition to a lower emissions gas (e.g., renewable

> Faster depreciation means that some of the costs for gas network services can be recovered from more consumers today, compared to a smaller number of consumers in the future.
>
> **AER Media Release. 30 April 2021 Evoenergy Access Arrangement 2021-26**

hydrogen) or where the gas network needs to be wound down. This approach is designed to smooth the intergenerational impact of a transition from a traditional natural gas-based network to a renewable gas-ready network of the future and ensures consideration of the gas network as a cost-effective energy provider into the future.

The Future of Gas study shows that the gas network customer base could decline in certain circumstances, whether through market-driven factors (such as a consumer shift towards electric cooking appliances), or policy-driven factors (such as the recent Victorian State Government decision to ban new gas connections). Should a customer base decline occur, the burden of past network investments may be disproportionately carried by fewer gas customers in the future. Accelerated depreciation allows us to manage the equitable recovery of these costs from what will be a declining, and sometimes vulnerable, customer base in the future. This approach has been accepted in several recent gas distributor regulatory decisions.

As each scenario is plausible, any brought-forward depreciation path could be considered reasonable. However, the least 'no regrets' approach would be to choose a depreciation path that follows or is close to the most significant number of scenarios possible. In this regard, ACIL Allen recommended selecting the mid-point between the Gas Retained and Electricity Dominates scenarios, which resulted in accelerated depreciation of $120 million over AA6.

ACIL Allen's approach to levelling prices has dual benefits:

- **Reasonable opportunity to recover costs**: Levelling prices for the Electricity Dominates scenario is likely to provide ATCO with a reasonable opportunity to recover its costs.
- **Efficient utilisation:** Under all scenarios, including the Electricity Dominates scenario, levelling prices is likely to promote the efficient utilisation of the gas networks over time.

This is not a new concept for regulated gas networks. In April 2021, the ERA adjusted the depreciation schedules of the Dampier to Bunbury Pipeline to reflect economic lives capped at 2063. More recently in June 2023, the AER approved accelerated depreciation between $53 million for Multinet and $175 million for Australian Gas Networks (Victoria).

For AA6, ATCO proposes to bring forward a lesser amount of **$80 million of accelerated depreciation** (*See Section 11.5.2)*. In proposing this lesser amount, it allows us to minimise the cost impact of the transition for customers in the short term and avoids the risk of much higher future price increases.

> For AA6, ATCO proposes to bring forward a lesser amount of $80 million of accelerated depreciation

3.6.3 PREPARATION FOR RENEWABLE GAS IN THE NETWORK

In light of the climate change policy positions at the Federal level and consistent with good industry practice, ATCO proposes to make investments in AA6 to allow renewable gases to be transported across the network. ATCO is in the early planning stages for renewable gases (including biomethane and renewable hydrogen) and proposes building infrastructure at key locations within the network to enable the injection of renewable gas. Six renewable gas injection stations (to inject around 100-200 TJ per site, or enough to power about 7,500 homes) are proposed for AA6. (See Section 10.7.2 for expenditure details). Our Renewable Gas Delivery Strategy is an attachment to our submission *(see Attachment 03.004)* and is summarised below.

The Renewable Gas Delivery Strategy was developed to articulate ATCO's objectives and approaches to enable the introduction of renewable gases (including hydrogen and biomethane) into the network to reduce both ATCO's and end users' emissions. The strategy document outlines:

- The drivers for enabling renewable gases within the distribution network
- The pathway to enabling renewable gases for emissions reduction
- Relevant upgrading, modifications or changes to asset management and supporting processes.

The strategy demonstrates how enabling the injection of renewable gases supports emission reductions by 2030:

- Reducing net emissions (Scope 1) and supporting market demand for renewable gases (Scope 1 for our end-users, which is equivalent to ATCO Scope 3)
- Reducing the intensity of emissions of the energy delivered through the network.

The Renewable Gas Delivery Strategy proposes the replacement of all or a portion of UAFG with renewable gases and the purchase and surrender of offsets in the event of no or limited available supply of renewable gases to deliver a 30% reduction in net emissions (Scope 1) based on 2020 levels by 2030.

The strategy covers the GDS and outlines the requirements for injection point installations, component replacements, process updates, and the governance required before injecting renewable gases.

The strategy notes that biomethane, if supplied, must be in accordance with the ATCO gas quality specification (aligned with Australian Standard AS 4564), which has equivalent properties and characteristics (e.g., Higher Heating Value) to the existing natural gas supply. As such, while additional injection points are required, no significant changes are required to existing processes or systems to enable biomethane to be distributed through the network.

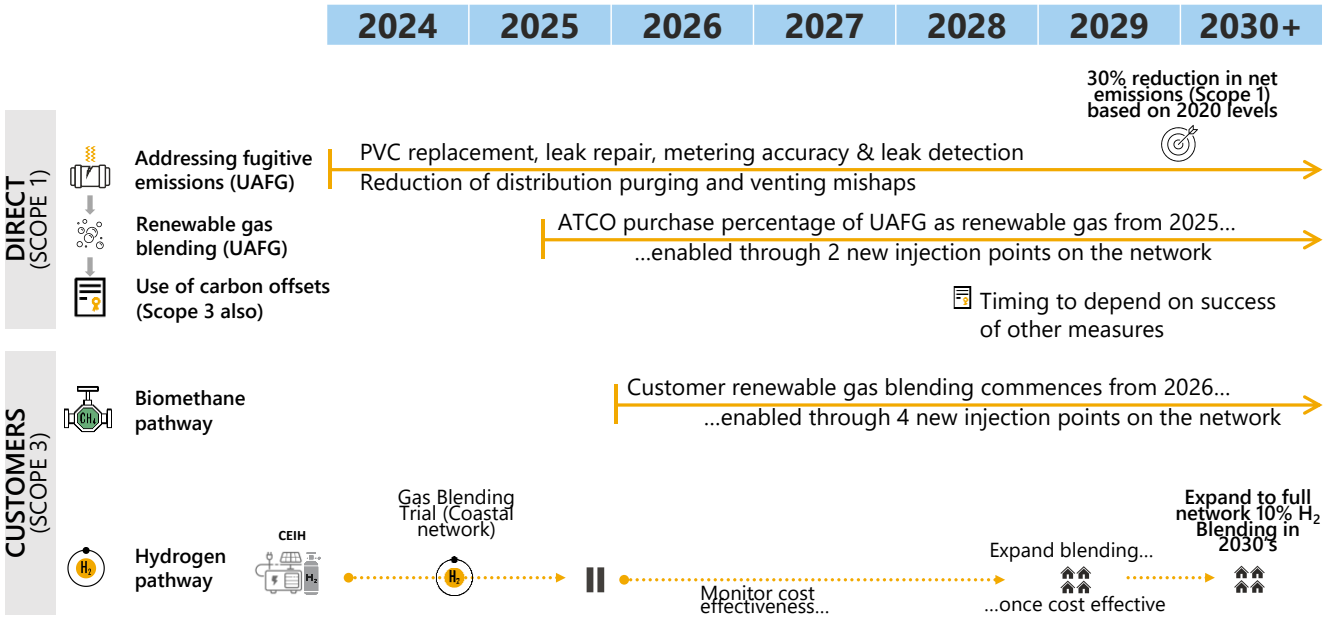
The strategy also includes blending renewable hydrogen of up to 10% by volume into the network. A limited number of changes to existing asset management practices are required to maintain existing high levels of network reliability and safety. Higher blend ratios of hydrogen (up to 100% hydrogen), which may require more changes to existing processes and systems, could be explored in the future but are beyond the scope of AA6.

In AA6, we propose investment in six renewable gas injection points (associated opex and capex costs are provided in *Chapters 9 and 10,* respectively):

1. **Two injection points for UAFG replacement**: Utilising renewable gas for all or a portion of UAFG requires 2 additional gate stations or delivery injection points to be constructed and operated. This needs to be done with continued reliability to ensure market delivery. It was determined that two facilities are required to achieve these reliability requirements based on investigations into production facility capacities and network modelling.
2. **Four injection points for retailer/end user demand:** In addition to the replacement of UAFG, it is proposed that the construction and operation of a further 4 gate stations for renewable gas injection to the GDS will be required to support the emissions reduction for end users. Feedback from end users, retailers, and producers indicates that there is up to 800TJ of available supply and demand for renewable gases in the next AA period.

Figure 3.4 illustrates the Renewable Gas Delivery Strategy activity proposed through AA6 and beyond to meet ATCO's emissions reduction targets.

Figure 3.4: Renewable Gas Delivery Strategy – roadmap to 2030



3.7 POLICY SUPPORT

In addition to Australia's commitments to emissions targets, clear policy direction by the government is needed to ensure the right mix of resources is available to be used by energy networks to supply safe, reliable, affordable, and sustainable energy to consumers. Emissions reduction in gas networks needs the same priority and level of supportive policies as renewable electricity generation and storage technologies. Clear policy support will ensure the ongoing utilisation of existing network assets, which are already providing services to over 785,000 connected customers in our regulated network, at a lower overall cost to customers as the energy transition continues.

> "...the government's development of a Renewable Gas Target would magnify the transition in the gas sector and provide the signal to attract investment across supply chains for renewable gases from production, transport, and end-use.

Nationally, the process to change the NGL and NGR has commenced. The changes will facilitate the integration of renewable gases and emissions reduction principles into the processes of energy market bodies. ATCO welcomes these changes. The same changes to the WA regulatory framework must be swiftly implemented to reflect the national amendments to support the AA6 review process.

Furthermore, the government's development of a Renewable Gas Target would magnify the transition in the gas sector and provide the signal to attract investment across supply chains for renewable gases, including production, transport, and end-use. Like the Renewable Energy Target in electricity, a Renewable Gas Target could impose an obligation on gas retailers and large gas users to meet gas use requirements from renewable sources, creating greater demand and price efficiency for renewable gases and consequently lowering emissions.

4. CUSTOMER & STAKEHOLDER ENGAGEMENT

CHAPTER HIGHLIGHTS

1. The insights from our AA6 Engagement program underpin our 2025-2029 Plan.
2. We explored stakeholder sentiment towards gas, their outlook on the future of gas distribution in Western Australia, and their understanding and support of ATCO's AA6 investment opportunities.
3. We received feedback from three retailers on the Draft Plan and ATCO's proposed projects and investments. Feedback was mostly related to policy and biomethane market challenges, price path preferences, and hydrogen safety.
4. ATCO's planned program investment areas have strong support, with most residents indicating the programs are of high personal importance and more than half of ATCO's customers rating "gas from renewable sources" as their top priority compared to the other areas.
5. Gas continues to be regarded as a safe and reliable energy source, and household access remains a valued option for 97% of residents, with 53% considering it "extremely important."
6. Customers believe that gas has an important role in a low-carbon future and expect ATCO to drive the decarbonisation of the gas network in WA. However, government policy and greater education around sustainability initiatives could further bolster customer support.

4.1 INTRODUCTION

ATCO is a provider of essential products and services around the world. With this comes a responsibility to ensure those products and services are safe, reliable, affordable, and sustainable. In performing this work, we embrace a long-range outlook that builds future prosperity – value for our customers, employees, share owners, and Indigenous and community partners.

In Western Australia, ATCO has proudly built a reputation as a customer-focused business. Our success hinges on the relationships we have built through genuine and meaningful engagement with our customers, and we are committed to maintaining critical ties with the communities in which we live and operate.

Furthermore, we deeply value the insights of our customers and the community and recognise the importance of actively listening to their feedback. These insights are fundamental in creating a genuinely community-driven and community-supported AA6 submission.

Through this lens, ATCO designed a stakeholder engagement program to capture the needs and expectations of a diverse range of stakeholders. This chapter outlines our approach to engagement and how the respective findings have informed our plans for AA6.

ATCO AA6 PROGRAM

CUSTOMER & STAKEHOLDER ENGAGEMENT PROGRAM

ATCO has proudly built a reputation as a customer-focused business and ongoing genuine and meaningful engagement with our customers is a core part of our business. Our Customer & Stakeholder Engagement Program is designed to ensure our 2025-29 plans and investments are aligned to our customers' needs and expectations. The highlights of our initial Engage Phase are summarised below.

76 Customers and stakeholders were engaged through a series of interviews, community forums and workshops, and a survey

- WA Residents
- Customer Reference Group
- Retailers
- Peak Bodies
- Commercial, Industrial, Builders & Developers

4-STAGE APPROACH

1 DESIGN JUL-AUG 2022
Design an engagement approach aligned to our strategy

2 ENGAGE SEP-OCT 2022
Capture qualitative insights from our customers & stakeholders
- 6 Resident Focus Groups
- Customer Reference Group forum
- 8 interviews with Retailers
- 13 interviews with CIBD customers
- 5 interviews with Peak Bodies

3 MEASURE NOV-JAN 2023
Test insights and trade-offs through a quantitative survey and choice modelling with +1,000 customers

4 RE-ENGAGE APR-JUN 2023
Collate feedback on the Draft Plan

ENGAGEMENT INSIGHTS

IMPORTANCE OF OUR AA6 INVESTMENTS TO CUSTOMERS

- **95%** support for our **Gas Mains Replacement** Program
- **94%** support for **gas from renewable sources**
- **93%** support for our **IT Infrastructure** Program
- **89%** support for our **Gas Meter Replacement** Program
- **88%** support for our **Network Expansion** Program

TOPICS OF DISCUSSION

Awareness & Knowledge

- Residents prefer gas for cooking and heating due to speed and affordability
- Residents consider gas to be reliable and safe, almost never experiencing problems with their gas supply
- Residents displayed a very low awareness of the gas supply chain and how gas distribution operates, however, gas is seen as an important energy source

Future Network Challenges

- Reducing network emissions is key, however a lack of policy makes it difficult for retailers to fully support sustainability initiatives at this time
- The societal shift towards electrification and maintaining relevance for the gas network
- The WA labour shortage and its associated impact on completing future projects

Addressing Challenges

- ATCO should educate consumers on its plans to future-proof the network, while ensuring that the costs remain affordable
- ATCO should focus on building the demand for gas, and educating consumers and encouraging policy for H_2
- Gas consumption may increase if manufacturing demand increases. Maintenance and upgrades of infrastructure is of critical importance

Net-zero Emissions

- ATCO should reduce emissions or offset them with 'green' initiatives, however Residents also want to know how these investments will affect prices
- For H_2 blending, it's important that it's at an affordable cost, that it's safe, and that it must be reliable to support retailers' net-zero ambitions
- ATCO should enact its own initiatives that align with net-zero government targets, and collaborate with industry to achieve the targets

ATCO

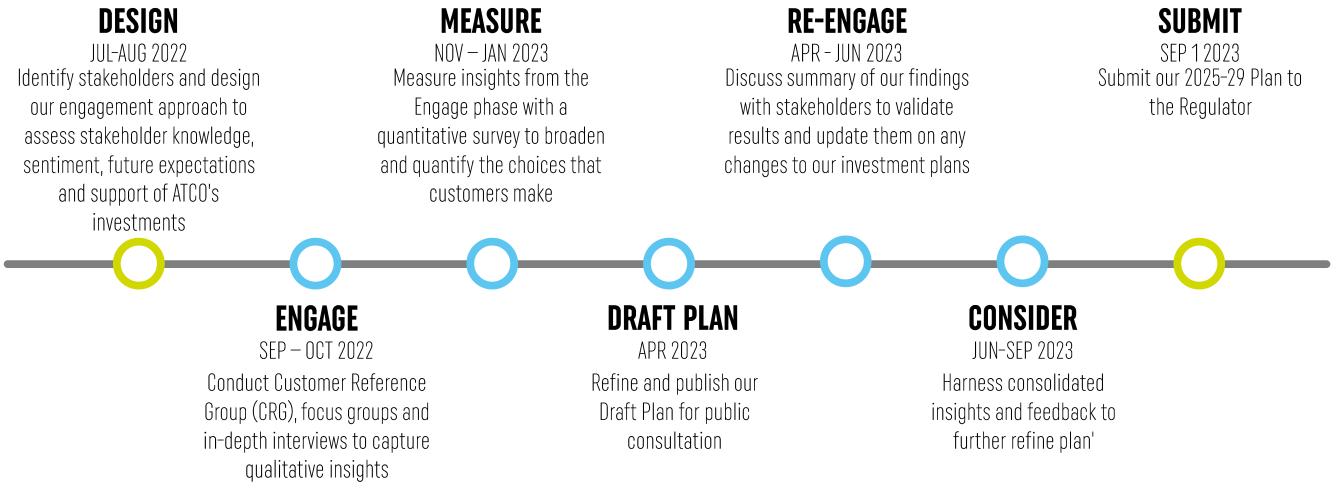
4.2 OUR ENGAGEMENT PROCESS

The AA6 Engagement program builds on our ongoing engagement and has been designed with the valuable learnings of previous engagement programs in mind.

For AA6, ATCO engaged market research consultants Kantar Public, in partnership with Synergies Economic Consulting, to assist in designing and delivering a robust and customer-centric engagement program across ATCO's end-use customers, retailers, and stakeholders. Kantar and Synergies assisted in ensuring the consultation approach was fair and transparent.

The engagement program has sought to facilitate open dialogue with stakeholders through multiple stages, as shown in Figure 4.1.

Figure 4.1: AA6 Engagement Timeline



4.3 ENGAGE PHASE

The purpose of the engage phase was to gain qualitative insights from our customers and stakeholders that we could use throughout the remainder of the engagement program.

4.3.1 WHO WE ENGAGED

To ensure a fair and accurate program, we engaged customers across various demographics, bill size, household composition, gas use, and sentiment towards gas. Participants included large commercial, industrial, and residential customers. Residential participants were screened and recruited by an accredited market research agency and were provided with a financial incentive, as is standard practice in the research industry.

We engaged directly with other stakeholders, including builders and developers, peak bodies, and gas retailers, in one-on-one interviews and workshops.

4.3.2 ENGAGEMENT ACTIVITIES

The Engage phase began with qualitative research, which allowed us to gather feedback and generate new ideas from community residents, retail businesses, and other stakeholders, providing deeper

insights and context for the quantitative phase that followed. Our initial engagement activities were designed to be open and exploratory to understand the needs and priorities of the WA community and stakeholders.

Engagement activities conducted in the Engage Phases included:

4.3.2.1 **CUSTOMER REFERENCE GROUP (CRG)** #1: 21 SEPTEMBER 2022, 3 HOURS

The objective of this workshop was to consult and gather feedback from a representative cross-section of ATCO customers and the general WA population to understand their needs and wants from the gas network.

Figure 4.2: Stevan Green (former President, ATCO Gas Australia) presenting to CRG participants on the role of ATCO Gas and AA6

The session comprised a learning component, delivered by the then President of ATCO Gas Australia, which highlighted ATCO's business values, operations, Access Arrangement requirements, proposed future investments, and a summary of our engagement process.

Participants were then divided into four groups for a robust discussion facilitated by Kantar. The discussion included broad lines of enquiry, such as general awareness and knowledge of ATCO and the gas network, future expectations of gas as an energy source, and support for ATCO's key investment areas.

4.3.2.2 **RETAILER WORKSHOP**: 4 OCTOBER 2022, 1 HOUR

This online workshop sought to provide retailers with an overview of the AA6 program and to encourage open discussion and questioning amongst the group around sustainability initiatives and industry needs and wants. A total of 16 participants attended the session on behalf of eight individual

retailers, comprising a 30-minute presentation of ATCO's key investment priorities for AA6, followed by a question and answer session.

4.3.2.3 **WA RESIDENTS FOCUS GROUPS:** 5 – 13 OCTOBER 2022, 1.5 HOURS

The Focus Groups aimed to collect and share views of the broader Western Australian community. Kantar Public facilitated these six 1.5-hour online workshops with ATCO and ERA employees observing from a virtual viewing room. The workshops followed a similar format and line of questioning as the CRG to capture the knowledge and sentiments of the group towards the future of gas in WA and ATCO's proposed investment program. A small amount of upfront education was provided on ATCO's role to ensure we obtained relevant information. A total of 30 residents shared their views on a range of topics and were paid for their time.

4.3.2.4 **1-ON-1 IN-DEPTH INTERVIEWS**: 10 OCTOBER – 11 NOVEMBER 2022, 0.5 HOURS

Over four weeks in October and November, Kantar facilitated a series of in-depth interviews (via web conferencing or telephone) with a cross-section of stakeholders to gather detailed qualitative insights. These interviews explored the gas and energy needs and sentiments of a representative cross-section of ATCO's largest commercial and industrial customers, builders and developers, peak industry and community bodies, and retailers.

4.3.3 SUMMARY OF CUSTOMER INSIGHTS

These insights were then compiled and extrapolated in a comprehensive report (*see 'AA6 Voice of the Customer Insights Report', see Attachment 04.001*) to validate key hypotheses and address any information gaps before proceeding to the Measure phase of engagement.

A summary of the insights gathered in the Engage stage is below in Table 4.1.

Table 4.1: Engage Stage Insights

TOPIC	INSIGHTS	RESIDENTS	RETAILERS	CIBD	PEAK BODIES
Awareness & Knowledge	Natural gas is viewed as an important, reliable, and affordable energy source	✓	✓	✓	✓
	Low awareness and understanding regarding topics of the gas supply chain and ATCO's brand and role in gas distribution	✓			
	Desire for more information about ATCO and our services	✓		✓	✓
Future Gas Distribution Challenges	Societal shift to electrification	✓	✓		✓
	Future-proofing the network and maintaining the relevance and affordability of gas	✓	✓	✓	✓
	Reducing emissions is also key, however, a lack of policy makes it difficult to fully support sustainability initiatives		✓		

TOPIC	INSIGHTS	RESIDENTS	RETAILERS	CIBD	PEAK BODIES
How To Address The Challenges	ATCO expected to build demand for gas through greater education and advocacy efforts	✓	✓	✓	✓
	Opportunity for ongoing collaboration with stakeholders to better understand and achieve net zero together		✓	✓	✓
	Challenges must be met in a way that keeps costs affordable		✓	✓	✓
Net Zero	ATCO plays a role in decarbonisation of the gas network, although it is not solely ATCO's responsibility	✓	✓	✓	✓
	Opportunity and expectation for ATCO to help customers meet their own net-zero goals			✓	
	It is expected that ATCO will enact initiatives that align with net zero government targets		✓		✓
INVESTMENT PROGRAMS					
Gas Mains Replacement	Broad support for investment, with 95% of residents considering it to be personally important	✓	✓	✓	✓
	Considered important for network safety and reliability	✓	✓	✓	✓
	The expectation that pipes can withstand future gas blends		✓		✓
Sustainability Projects	Strong support and keen interest in learning more about ATCO's plans in this area	✓		✓	✓
	Strong support among residents, with 94% indicating the investment is important to them personally	✓			
Network Expansion	The majority support the investment, but it is not considered a high priority in comparison to other investment areas	✓	✓	✓	✓
	99% of customers consider it "important" to have access (choice to connect and use) to gas in the household	✓			
Meter Replacement	Most respondents support investment and expect ATCO to replace meters as they reach their 'end of life'	✓	✓	✓	✓
	A growing interest in having the option of digital or 'smart' meters for greater accuracy	✓	✓		✓

4.3.4 INSIGHTS - AWARENESS AND KNOWLEDGE (RESIDENTS ONLY)

Residents displayed a low awareness of the gas supply chain and how gas distribution operates, however, it was evident that gas as an energy source is important for household heating, heating water, and cooking, and is largely considered safe and reliable.

> But also, for now, probably for a big chunk of the community, [gas is] the cheapest, one of the cheapest. So, it's sustainable in the terms of it's actually affordable.
>
> **Metro Resident**

This line of unprompted questioning sought to capture residents' understanding of gas and the distribution network, current household gas usage, attitudes regarding the safety, reliability, and affordability of gas, and the perceived future role of gas as an energy source.

4.3.5 INSIGHTS - FUTURE GAS DISTRIBUTION CHALLENGES

Our stakeholders identified the following matters as the biggest current and future challenges for WA gas distribution:

> For us, the challenge is a continual supply of gas at a reasonable cost. We're contracted to the health department, and we can't afford to have any outages or stoppages.
>
> **Commercial & Industrial Customer**

- **Residents:** While there was no clear consensus on the challenges specific to gas distribution (which is likely a result of low awareness and knowledge), the group cited a wide variety of challenges for energy distribution in WA, with economics, affordability, maintenance, availability of gas supply, and reducing emissions identified as key considerations for ATCO to address.
- **Retailers:** Retailers regard the societal shift towards electrification (and subsequent potential reduction in new gas connections), along with ATCO's investment in sustainability projects and alignment with net zero targets being the key challenge facing ATCO. In particular, the lack of policy support makes it difficult for Retailers to visualise how ATCO can realistically reduce carbon emissions.
- **Commercial & Industrial Customers and Builders & Developers:** The group proposed two main challenges facing gas distribution: the WA labour shortage and its potential impact on reliability, completing future projects and reducing carbon emissions in the gas network.
- **Peak Bodies:** Conceptually, Peak Bodies consider the future role of gas in a rapidly evolving energy landscape to be the biggest challenge for ATCO. Future-proofing the network and maintaining the relevance of gas, and particularly the affordability of gas and the environmental benefit it has on customer preferences, is of greatest concern for Peak Bodies and the communities they represent.

4.3.6 INSIGHTS - ADDRESSING THE CHALLENGES AND A FOCUS ON THE FUTURE

Stakeholders were asked to share their views on ATCO's role in addressing the challenges above, including where ATCO should focus, and which investment areas were perceived as most important.

> I'm sure they have investment requirements for SCADA, and cyber security is a big one and it's getting bigger very rapidly.
>
> **Retailer**

- **Retailers:** Retailers expect ATCO to be responsible for building the demand for gas, educating the public on the benefits of hydrogen and renewable gases, and encouraging associated policy. This will assist in future-proofing against defection to electric-only households in new sub-divisions and mitigating any potential mass disconnection in current households with gas. The group recommended ATCO remain focused on developing its sustainability projects (noting that policy support is required to build confidence) and investing in IT to improve its systems while ensuring that costs remain affordable.

- **Commercial & Industrial Customers and Builders & Developers:** These stakeholders expected ATCO to develop and drive the uptake of sustainable alternatives while ensuring the viability of gas by supplying it at a reasonable price. According to the group, gas will likely remain a relevant and necessary energy source. Some commercial and industrial customers suggested that their gas consumption may increase if manufacturing demand increases. As such, they consider active ongoing maintenance and upgrades of the current infrastructure to be critical for continued safe and reliable gas access.

> … we're all looking for a sustainable future and that's the huge focus of companies. So what can ATCO do to work with us, I guess, to help us realise that future of a more sustainable way of manufacturing, I would encourage them to get involved on that level.
>
> **Commercial & Industrial Customer**

- **Peak Bodies:** Peak Bodies expressed a desire for ATCO to focus on working with and educating consumers on its plans to future-proof the network, while ensuring that the costs remain affordable, particularly for residential and vulnerable customers.

> I think any company that is dragging its heels, that didn't take that sense of corporate social responsibility and the social licence to operate very seriously, is folly.
>
> **Peak Body**

4.3.7 INSIGHTS - ATCO'S RESPONSIBILITY IN ACHIEVING NET ZERO

Stakeholders shared their thoughts on ATCO's decarbonisation responsibilities and whether they felt ATCO could do more to help the WA community achieve net zero. Their insights included:

- **Residents:** Most residents feel there is a need for ATCO to reduce emissions and offset them with 'green' initiatives. There is an expectation that ATCO will help educate customers on their plans to achieve net zero, specifically regarding their planned investments in new technologies and how this will impact their bills.

> I think it's important for ATCO to try to be at zero. But I think for a company that is based on hydrocarbons, and you know, it is going to be a long journey to achieve proper net zero for ATCO.
>
> **Regional Resident**

- **Retailers:** The perception of ATCO's responsibility in achieving net zero varied between each retailer and appears to depend on the retailers' own ambitions for net zero. However, it is largely considered appropriate for ATCO to set reasonable net zero business targets across their operations and enable retailers (and customers) to achieve their own goals. For renewable hydrogen blends, it's important to retailers that it is at an affordable cost, that it is safe, and that it must be reliable to support retailers' net zero ambitions. Retailers expect a gradual transition to gauge the impact of the change on their processes.
- **Commercial & Industrial Customers and Builders & Developers:** To stay relevant and in business, it is expected amongst these participants that ATCO enact initiatives that align with net zero government targets and collaborate with industry to better understand and realise the targets.

- **Peak Bodies:** While it is acknowledged that achieving net zero may be challenging for the industry, Peak Bodies believe that ATCO should set milestones, explore offset programs, and consider alternative strategies to reduce their carbon footprint within their overall business and supply chain.

4.3.8 INSIGHTS – INVESTMENT AREAS

Our customers and stakeholders provided insights on four major programs that ATCO plans to undertake over AA6 to address safety, reliability, sustainability, and growth. The insights included views on the need for and priority of these programs.

MAINS REPLACEMENT

Most participants were highly supportive of ATCO's investment in the Mains Replacement program, which is seen as necessary to maintain the safe supply of gas and mitigate leaks. Generally, it was felt that investment in maintaining the gas distribution network was ATCO's 'business as usual' responsibility.

- **Residents:** Safety is seen as a particular priority for residents, with broad support for proactive investment to improve the safety of the network. There was a high degree of support for the project amongst CRG members, with all participants indicating that the program was of high personal importance and relevance.

> I think it's important. Obviously, you don't want to have leaks and problems and issues that are going to cost more in the long run. So, it's better to sort of fix the problem before it becomes a big problem.
>
> **Regional Resident**

- **Retailers:** Technical considerations such as the suitability of pipes for future gas blends and the type of pipe to be replaced were raised, with most seeking further detailed information.

SUSTAINABILITY PROJECTS

Overall, there are high levels of support and interest in ATCO's sustainability-related projects, with all stakeholder groups expressing a desire for further involvement and education around the economics, benefits, and impacts as the projects progress.

- **Residents:** Continuity and security of supply were seen as important by residents when it came to the gas delivered to their households, with many viewing the initiative as a logical step to secure future supply. 18 out of 20 CRG participants demonstrated support for the investment area.

> I think sustainability is very relevant and very important. I think this is 100% something they should be investing in.
>
> **Metro Resident**

- **Retailers:** Retailers are genuinely interested in sustainability projects, in particular hydrogen blending. There is varied support for hydrogen blending, with retailers citing pre-requisite conditions that should be met before changing the whole network to facilitate hydrogen. The pre-requisite conditions involve feasibility studies to understand the economic benefits, the future demand for gas and legislative support before recovering costs from customers. Retailers also desire more information about project progress to deliver a clear message to their customers.

NETWORK EXPANSION

- **Residents:** Residential feedback on Network Expansion was mostly positive (all want equal access to gas for all Western Australians), with the issue of who should benefit first as a point for debate, e.g., metro or regional customers. Customers generally expect that the cost of gas will go down with more customers on the network and that having the choice to connect to gas is a driver of competition. Only one resident out of 20 CRG participants did not agree that the investment was personally important or relevant.
- **Retailers:** Retailers considered the investment 'normal business practice' and expect ATCO to allow new customers to access the network, suggesting an anticipated growth in sub-divisions where there is a high net benefit to costs (e.g., high demand and highly populated areas). Retailers also intimated a strong commitment to the investment if and where WA state policy supports it.
- **Commercial & Industrial Customers, Builders & Developers & Peak Bodies**: While support for network expansion was positive overall, there were mixed sentiments amongst CIBD and Peak Bodies, with some suggesting it is less of a priority when compared to Mains Replacement and Sustainability Projects, but important, nonetheless.

METER REPLACEMENT

ATCO's Meter Replacement Program is largely supported as a necessary investment for safety reasons at the end of the meters' 25-year life. Retailers acknowledged the necessity of the investment for ATCO to meet its regulatory compliance obligation and noted the program's benefits, including accurate billing. The topic of 'smart meters' was raised several times in discussions with residents and retailers, who expressed an interest in their potential to enhance network services and increase efficiency. However, it was accepted that there is no current policy driver for this. All CRG participants expressed support for investment in the Meter Replacement Program.

4.4 MEASURE PHASE

The Measure phase was specifically designed to quantify the insights gathered in the Engage stage and analyse customers' willingness to accept a price change to fund certain investment programs or changes to service levels. This involved surveying the residential segment to gather and validate their perspectives and opinions.

4.4.1 WHO WE ENGAGED

Over three weeks in December 2022 and January 2023, more than 1,000 quantitative online interviews were conducted with Western Australian residents aged 18+ living in metropolitan and regional areas.

This online survey was specifically developed to measure the preferences of approximately 1,000 community residents living in the Perth metropolitan, Busselton, Bunbury, and Geraldton areas.

This activity was facilitated by Q&A Market Research in Brisbane, who have a specialist consumer panel in WA.

4.4.2 ENGAGEMENT ACTIVITY

The engagement in this stage was in the form of an online survey. The survey included a Choice Model design to quantify the community profiles and priorities. The survey also evaluated the surveyed individuals' willingness to accept a price change to fund certain investment programs or changes to service levels.

Based on the insights gained in the Engage stage, the survey assessed customer preferences related to gas usage, future expectations, and the importance of household gas supply. By exploring simulated real-life decision scenarios, this research module helped us better understand energy priorities of the community, the significance of various service offerings, and the value placed on each product and price offering.

4.4.3 SUMMARY OF SURVEY INSIGHTS

In summary, the results of the survey included:

- **Strong support for access to gas as an energy source:** 97% of respondents consider household access to gas to be important (of which 53% consider it to be 'extremely important').
- **Gas is affordable in Western Australia:**
  - 79% of customers believe their gas bill to be 'affordable' (in contrast with electricity bills, which only 50% consider to be affordable).
  - However, customers are sensitive to bill changes, with 'overall bill size' being the most influential attribute in the Choice Model compared to the other attributes when making a decision, highlighting to us that overall customer bill size is important to our customers.
- **Support for key investment programs**
  - 9 in 10 customers consider the suite of key investment programs for AA6 to be of personal importance.
  - Gas Mains Replacement program investment had the strongest overall support among residents, with 95% considering it personally important, suggesting that respondents value a safe and reliable network.
  - Of the key investment areas, almost half of respondents consider 'gas from Renewable sources' to be of 'extreme importance' to them personally, with 94% of all respondents regarding it as 'important'.
- **Strong support for renewable gases:**
  - Gas from Renewable Sources was ranked as the number one priority in terms of investments, with 54% of respondents considering it to be of highest personal priority (followed by Gas Mains Replacement at 16%). This indicates that customers are eager for "gas from renewable sources" to be transported through the network as a service from ATCO.
  - Of the remaining five non-price attributes tested in the Choice Model, customers were willing to pay the most to introduce gas from renewable sources into the network (up to 12% more on their bill for a 15% gas blend from renewable sources).

The findings from the quantitative survey were consistent with the outcomes of the earlier qualitative stage. The results indicate that, at a base level, nearly 9 in 10 customers consider the suite of investment programs personally important.

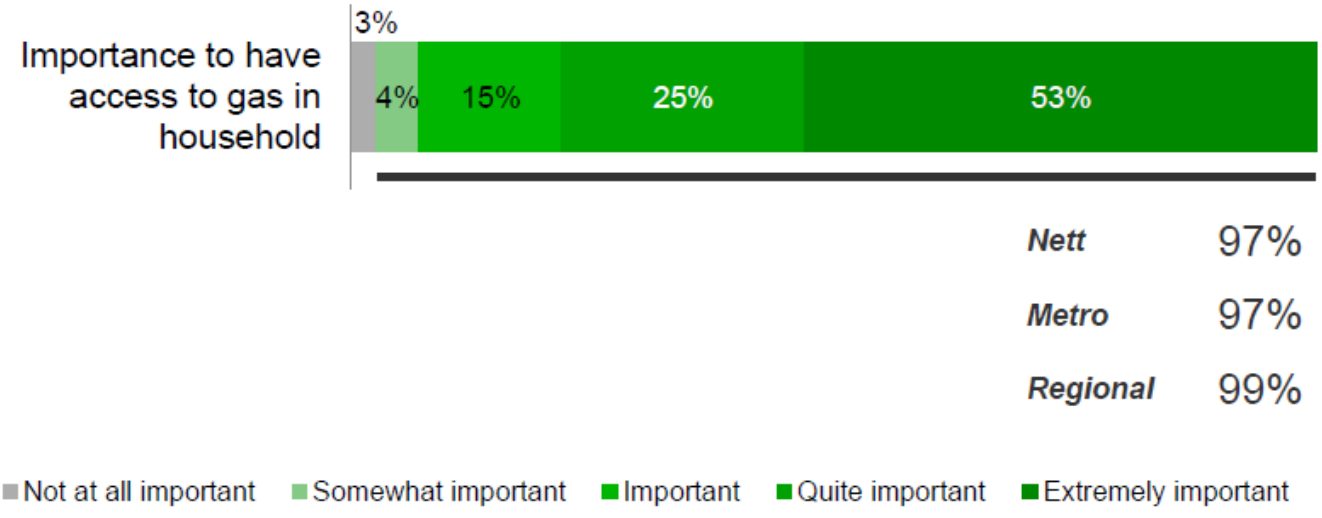
4.4.4 INSIGHTS – SURVEY RESULTS

The survey results provide insights into customers' views on gas affordability and our proposed investment program.

GAS ACCESS AND AFFORDABILITY

When asked to rate how important it is to have access to gas in their household, more than half of residents (53%) considered access to gas as "extremely important" in their household. A further 44% ascribe some degree of importance to having access to gas (thus resulting in 97% in total that believe gas to be important) (see Figure 4.3).

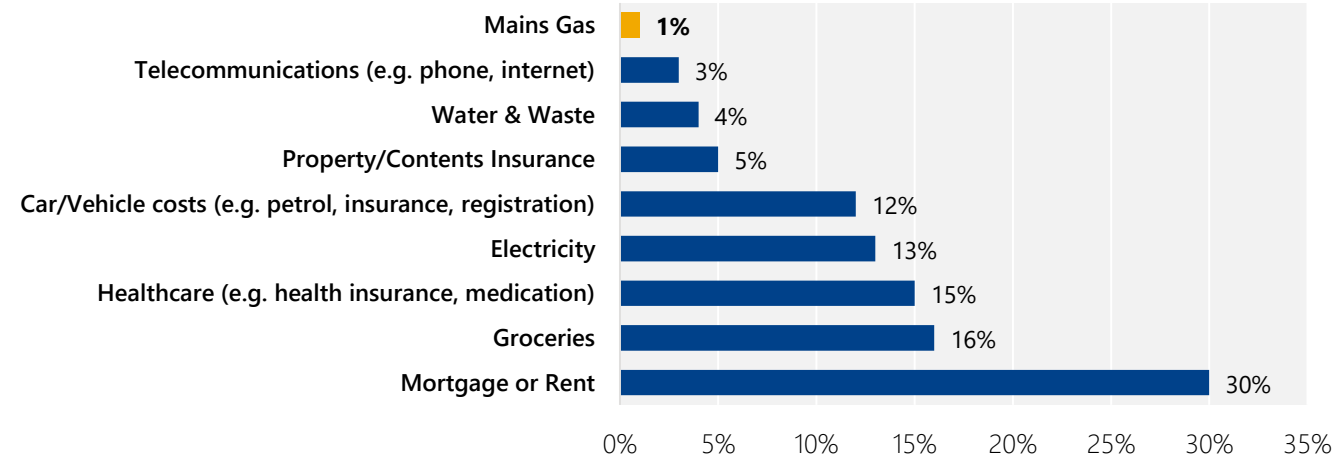
Figure 4.3: Perceived importance of access to natural gas in the household



When queried on the affordability of their household energy bills, 50% of the customers found their electricity bills to be affordable, while a much higher proportion of 79% considered their gas bills affordable. This indicates there is a discernible difference in the perceived affordability of each energy source, with gas being perceived as significantly more affordable. These results support the qualitative insights where residents consider gas more affordable than electricity. This analysis is further supported by the recent Consumer Sentiment Survey[14] conducted by Energy Consumers Australia (see Figure 4.4), which found that of the household bills surveyed, consumers considered their mains gas bill to be of the least concern.

[14] https://ecss.energyconsumersaustralia.com.au/sentiment-survey-june-2023/sentiment-against-other-utilities-sentiment-june-2023/

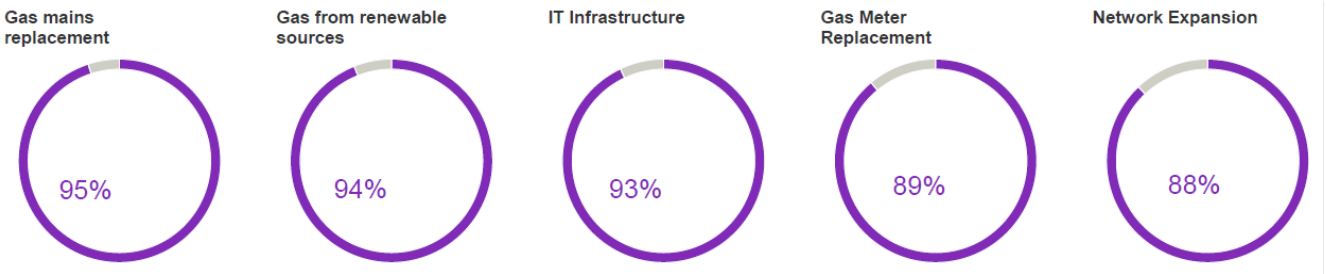
Figure 4.4: Concern with paying bills (Data from ECA Consumer Sentiment Survey June 2023)



INVESTMENT AREAS

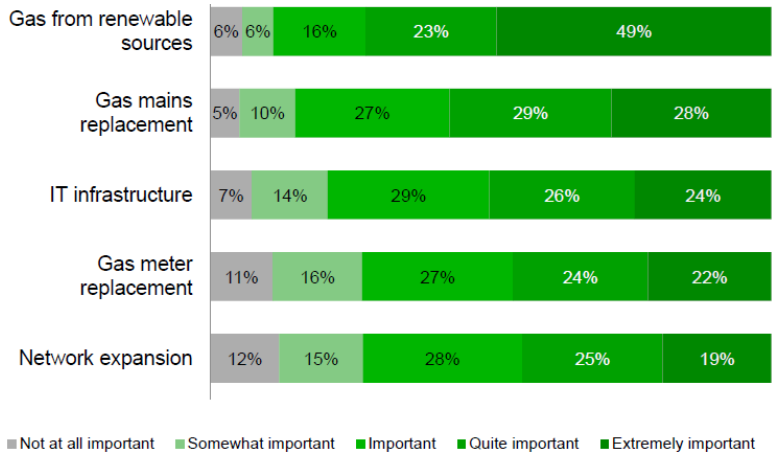
Customers were provided information on the drivers of the five key investment programs proposed for the AA6 period. Following the Choice Model task, each customer was asked to rate how important each investment program is to themselves personally, with 9 in 10 customers considering the suite of investment programs to be personally important (see Figure 4.5).

Figure 4.5: Proportional importance of key investment areas



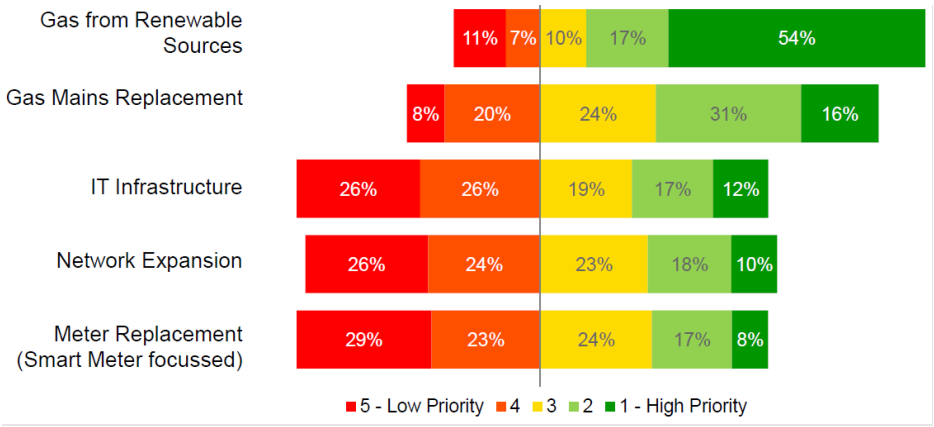
A further breakdown of the customer importance data highlights the key difference between "gas from renewable sources" and the other program areas – almost half of customers regard it as an 'extremely important' investment, nearly twice the size of each of the other program areas. This indicates that customers are eager for "gas from renewable sources" to be transported as a service from ATCO. Overall, respondents consider the BAU activities as "important" (there is a very low % of respondents who consider these activities as 'not important').

Figure 4.6: Proportional Importance of key investment areas – breakdown



Respondents were then asked to rank each program area from highest (1) to lowest (5) priority to themselves personally. Similar to the perceived personal importance data, over half of the respondents rated "gas from renewable sources" as their number one priority compared to the other areas, with 86% of these respondents attributing their choice to aspiration factors such as 'better for the environment' (43%), 'sustainability/ for the future' (28%), and 'combat climate change' (15%) (see Figure 4.7).

Figure 4.7: Priority ranking for key investment areas



4.4.5 INSIGHTS – CHOICE MODEL RESULTS

The choice modelling provides insights into customers' preferences and willingness to pay for the key investment areas in AA6 (Network Expansion, IT Infrastructure, Meter Replacement (smart meters), Mains Replacement, and Gas from Renewable Sources), plus the "Overall Bill Size".

Of the five non-price attributes tested, customers were willing to pay the most to introduce gas from renewable sources into the network.

The findings from the choice modelling include the following:

- **Gas from Renewable Sources**

  Customers strongly prefer gas from renewable sources, as shown by their willingness to pay an additional 12% more on their bills to receive a 15% renewable gas blend. This is the largest and

most preferred investment area for the AA6 program. There are diminishing returns for renewable sourced gas beyond 15%, as seen by the small increase in preference.

- **Gas Mains Replacement**

  Gas mains replacement is the next most highly-valued attribute. Customers would be willing to pay, on average, 3% more on their quarterly bill to increase the rate of gas mains replacement from 60km/year to 100km/yr. Reductions in the level of this attribute (below the current replacement rate) cause a greater impact on customers than increases in the level. That is, they are willing to pay, on average, 4% more to guard against a reduction from 60km/year to 20km/yr. This demonstrates that customers are concerned about gas leaks.

- **Meter Replacement Program (Smart Meters)**

  Customers were informed of ATCO's regulatory obligation to routinely replace domestic gas meters and were asked to consider a scenario in which they had the option to pay an additional amount for their standard meter to be replaced with a smart meter. Investment in upgrading the "operational support for smart meters" does not affect preference. This could be due to customers' extreme unfamiliarity with the concept of smart meters in the gas network (as there are no residential smart gas meters currently installed in Western Australia).

- **IT Infrastructure**

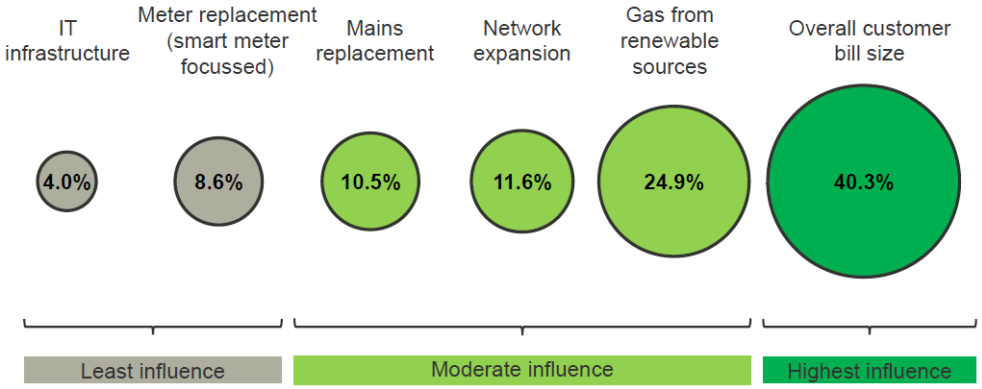
  There is little appetite for paying more to move from ATCO's current level of IT Infrastructure to a more advanced level. However, decreasing investment in IT infrastructure has a greater impact on customer preference than increasing investment.

- **Network Expansion**

  Investment to expand the gas network to 100% of new dwellings and suburbs is not overly important to customers (3.5% preference), with a relatively low willingness to pay for a higher service level. ATCO's current service offering of 90% of new dwellings and suburbs is considered an acceptable limit for customers. However, customers do not prefer ATCO to scale back the network expansion program and are willing to pay to guard against a specified decrease in network servicing of new suburbs (although more connections would in fact result in costs being shared across a wider customer base and thus lower bills). In essence, there is an expectation that ATCO at least maintains its current utility.

The choice modelling found that "overall customer bill size" is the most important factor when making a decision, as shown in the chart below. This means customers are very responsive to a smaller shift in % change compared to the other attributes. This highlights that overall customer bill size is important to our customers, which is a sentiment we have observed in different ways throughout this engagement process. However, a material increase in our tariffs and charges is being proposed as part of this submission, and we have made every effort to keep increases minimal.

Figure 4.8: Proportional influence of attributes in decision making



4.5 2025-29 DRAFT PLAN FEEDBACK

An important stage in our engagement process was to publish our Draft Plan. Following a similar format to this document, the Draft Plan aimed to provide stakeholders with as much detailed information on our plans for AA6 as possible at the time of publishing. It also highlighted the key topics and considerations that we had identified as being most material to stakeholders and encouraged their input so that we could integrate their feedback into our formal submission.

4.5.1 ENGAGEMENT ACTIVITY

We published our Draft Plan on 18 April 2023 and notified our stakeholders that it was available on our website through direct emails and posts on social media.

Following this, we sought feedback from stakeholders over four weeks. We received submissions from five stakeholders, both in written form and through meetings.

4.5.2 INSIGHTS FROM THE DRAFT PLAN FEEDBACK

We have incorporated the Draft Plan feedback and our associated response in each relevant chapter of this 2025-29 Plan. For ease of reading, we have summarised the stakeholder feedback rather than include verbatim comments.

Additionally, the CRG and retailers were invited back to share their views on our findings and plans as part of the Re-engage phase (see section 4.7).

4.6 RE-ENGAGE STAGE

The insights drawn from all stages of our engagement process have informed the development of our 2025-29 Plan. The Re-engage phase provided an opportunity to present these insights to our stakeholders and demonstrate how they were considered in developing our Plan, as well as to validate the findings and identify any changes in sentiment over the seven months since the initial phases of engagement.

4.6.1 ENGAGEMENT ACTIVITY

4.6.1.1 **CUSTOMER REFERENCE GROUP (CRG) #2**: 19 APRIL 2023, 2 HOURS

The second CRG was conducted in April 2023 to explore the community's perception of the price tariff changes since the first CRG.

The session involved a general discussion about gas affordability, inflation, and switching trends to explore participants' perceptions of utility bill affordability and assess reasons to switch from gas. Due to the previous research being conducted months before, it was appropriate to re-test affordability perceptions to ensure that results reflect the current economic situation. Overall, participants' attitudes and behaviours remained largely unchanged between sessions.

Participants had mixed views on ATCO adjusting prices due to inflation, with some believing ATCO should "absorb inflation-related costs". However, there was broad expectation and acceptance that gas bills would increase somewhat "as everything else has".

The group was then presented with an overview of ATCO's sustainability journey and drivers for AA6, to explore perceptions about the suitability and feasibility of our proposed goals. This was received well, with participants demonstrating support for the "clean" initiatives and an interest in staying informed about ATCO's progress.

The session also aimed to explore customer responses to price changes (tariffs and inflation), through a learning component covering the forecasted B3 tariff increase in AA6, the bill contribution to each key investment area, and the impact of interest rates and inflation on prices. Participants generally supported ATCO's Network Expansion, Sustainability projects, Meter Replacements and Mains Replacement. Still, some members of the group expressed concerns about the inflationary and interest costs and queried whether there was any way that ATCO could reduce these 'uncontrollable' costs.

4.6.1.2 **RETAILER INFO SESSION**: 27 APRIL 2023, 1 HOUR

Following the release of the Draft Plan, we invited Retailers to an online information session to discuss the key points of the Draft Plan and to provide the results of the stakeholder research. Participants were encouraged to provide feedback (both in the session and via a formal written submission) on the proposed plans and to use the session to ask questions or seek clarification on the Draft Plan.

A total of 15 participants representing seven retailers attended the call. As with the first Retailer session in October, the session was more informational than a robust discussion, with retailers opting to provide feedback directly either in separate meetings or via written submission.

5. PAST PERFORMANCE

CHAPTER HIGHLIGHTS

1. We are proud to deliver customer service levels, safety, and network reliability that meet our customers' expectations.
2. We continue to pursue a strong safety culture, and we champion a safety mindset grounded in psychological safety and human factors.
3. We have consistently met or exceeded our key performance indicators (KPIs).
4. We expect ATCO's AA5 total opex to be $22.0 million ($2023) less than forecast in the ERA's AA5 Final Decision.
5. Total capex in AA5 is expected to be $413.7 million ($2023), against an ERA forecast of $482.5 million ($2023). We have delivered strongly on the investment programs necessary to maintain the safe and efficient operation of our network and facilitate growth.

5.1 INTRODUCTION

ATCO has delivered a strong and balanced performance during AA5. We are proud to deliver customer service levels, safety, and network reliability that meet our customers' expectations while maintaining high levels of operating efficiency.

Over AA5, ATCO has reported its performance measured against the AA5 Final Decision to the ERA on an annual basis. We have provided comprehensive information to the ERA as part of this annual reporting, including details on our KPI, opex and capex performance. We have also provided the ERA with detailed explanations of material variances in actuals against the AA5 Final Decision.

This chapter describes what we have delivered over AA5 against the ERA approved capex and opex allowances and our KPIs, and our safety and customer experience performance. It should be read with the detailed annual reporting filings made throughout AA5.

5.2 HOW WE PERFORMED AGAINST OUR KPIS

We have performed well against our AA5 KPIs (see Table 5.1), demonstrating that we have been delivering services that meet our customer service expectations, that our asset management practices over AA5 have maintained the integrity of the network, and that we remain efficient.

Table 5.1: Performance against AA5 KPIs

KEY PERFORMANCE INDICATOR	TARGET	2020	2021	2022	2023(F)	2024(F)
CUSTOMER SERVICE						
Domestic customer connections within five business days	>98.7%	99.2%	99.5%	99.6%	>98.7%	>98.7%
Attendance to broken mains and services within one hour	>99.9%	100.0%	100.0%	99.9%	>99.9%	>99.9%
Attendance to loss of gas supply within three hours	>99.9%	99.7%	100.0%	100.0%	>99.9%	>99.9%
NETWORK INTEGRITY						
Asset Health index	100	127	98	128	100	100
Total public reported gas leaks per one kilometre main	<0.65	0.64	0.61	0.54	<0.65	<0.65
System Average Interruption Frequency Index (SAIFI)	<0.0041	0.0026	0.0034	0.0026	<0.0041	<0.0041
Unaccounted for Gas (UAFG)						See below
EXPENDITURE ($real as of December 2023)						
Opex per km of main *Target*		$5,079	$5,150	$5,196	$5,250	$5,226
Opex per km of main *Actual/Forecast*		$4,578[15]	$5,352	$5,219	<$5,250	<$5,226
Opex per customer connection *Target*		$96	$98	$98	$99	$98
Opex per customer connection *Actual/Forecast*		$85	$99	$96	<$99	<$98
UNACCOUNTED FOR GAS (UAFG)						
Target		2.45%	2.43%	2.40%	2.39%	2.37%
Actual / Forecast		1.69%	1.65%	1.14%[16]	<2.39%	<2.37%

5.3 SAFETY PERFORMANCE

At ATCO, we embrace safety as part of our culture, and we aspire to achieve the highest safety standards. We understand that upholding safety goes beyond just the physical safety of our teammates, contractors, business partners, and customers. We consider psychological safety, the safety of our assets, and the public.

[15] 2020 opex/km supressed due to the commencement of the COVID-19 pandemic

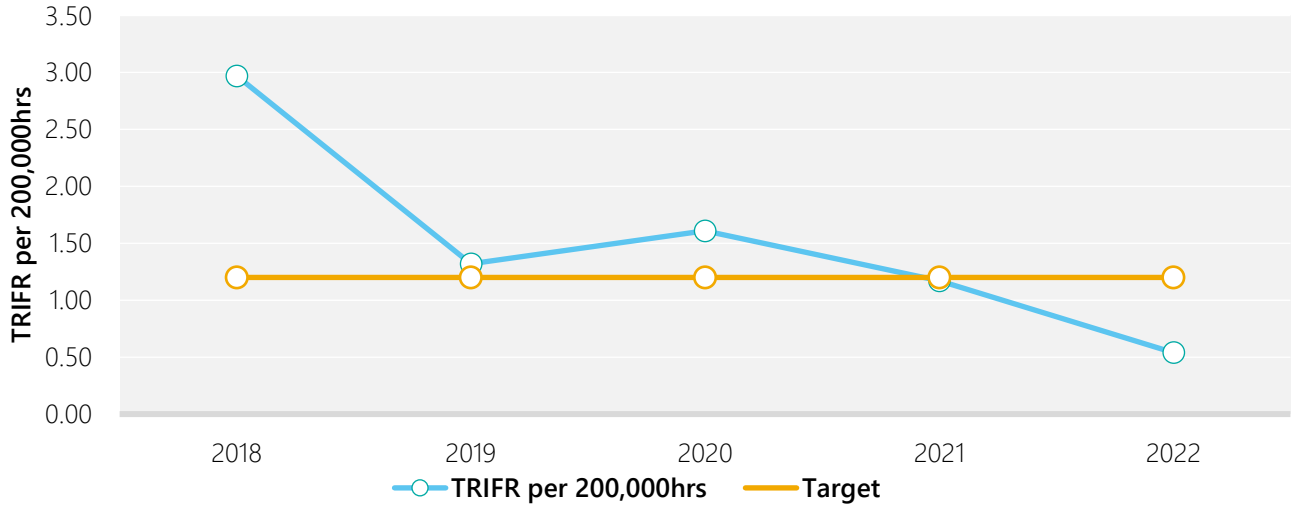
[16] 2022 UAFG measurement supressed by a warmer than normal summer experienced, resulting in a perceived artificial drop between 2022 and previous years.

5.3.1 WORK HEALTH AND SAFETY

We work to ensure that all our employees get home safely every day. Over AA5, we continued to build a positive health and safety culture across our workforce. This is demonstrated through the following safety performance highlights over AA5 including:

- **Decreasing TRIFR:** Safety performance is measured using Total Recordable Injury Frequency Rate (**TRIFR**). Our TRIFR rate has been decreasing over the years (as shown in Figure 5.1); and for the last 2 years (2021 & 2022) has been below our target of 1.2.

Figure 5.1: ATCO Gas TRIFR (per 200,000 hours)



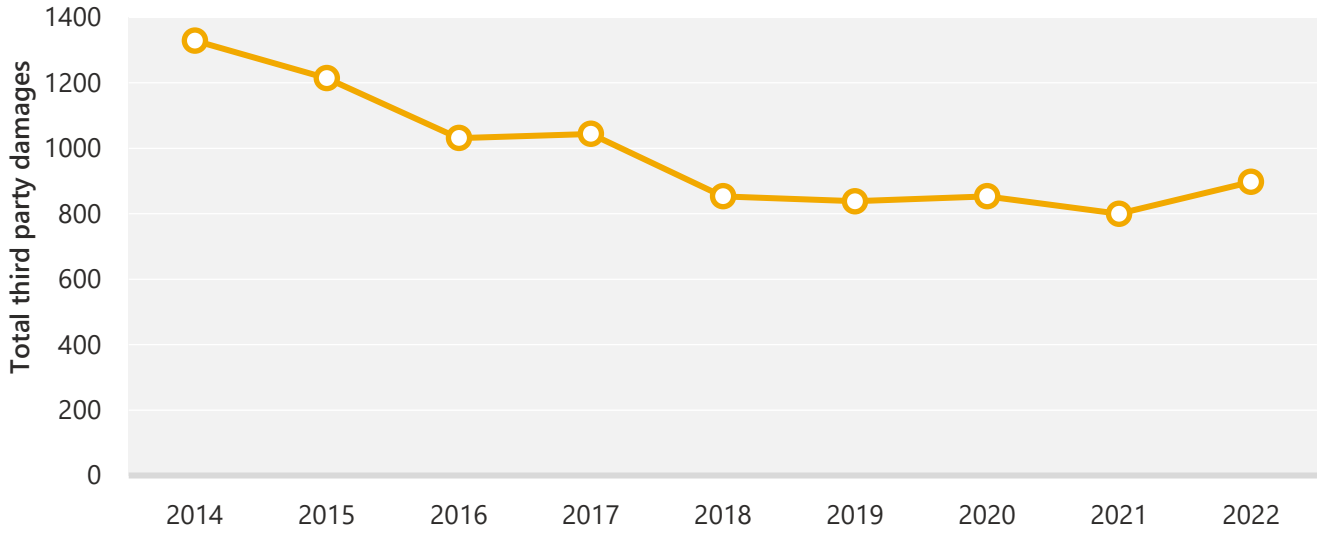
- **Well-being**: As part of our well-being initiatives, we support and educate our workforce on psychological well-being. We also continue to provide our workforce and their immediate families with access to an employee assistance program.
- **eSafe:** We have recently implemented an HSE Risk Management Software Solution referred to as *eSafe*, making it easier to report hazards and incidents, manage actions, meet compliance obligations, and monitor our service delivery.

5.3.2 COMMUNITY AND CUSTOMER SAFETY

We are committed to educating Western Australians to be safe around gas and providing accessible ways for hazards and leaks to be safely and quickly reported. Over AA5, we have measured our success through the volume of third-party damages to the network.

Between 2020 and 2022, there has been an annual average of 850 instances of third-party damage to the network. As shown in Figure 5.2, the total number of instances of damage has decreased over the years, with a slight increase in 2022 (897 instances of damage), potentially due to the increased volume of government-driven infrastructure works occurring in the metropolitan area. ATCO's damage prevention team continues to work with the public and industry to help reduce the risks associated with underground activities and look for improvements to facilitate third parties to work safely around the gas network.

Figure 5.2: Annual third party damages to the network



5.4 OUR CUSTOMERS' EXPERIENCE

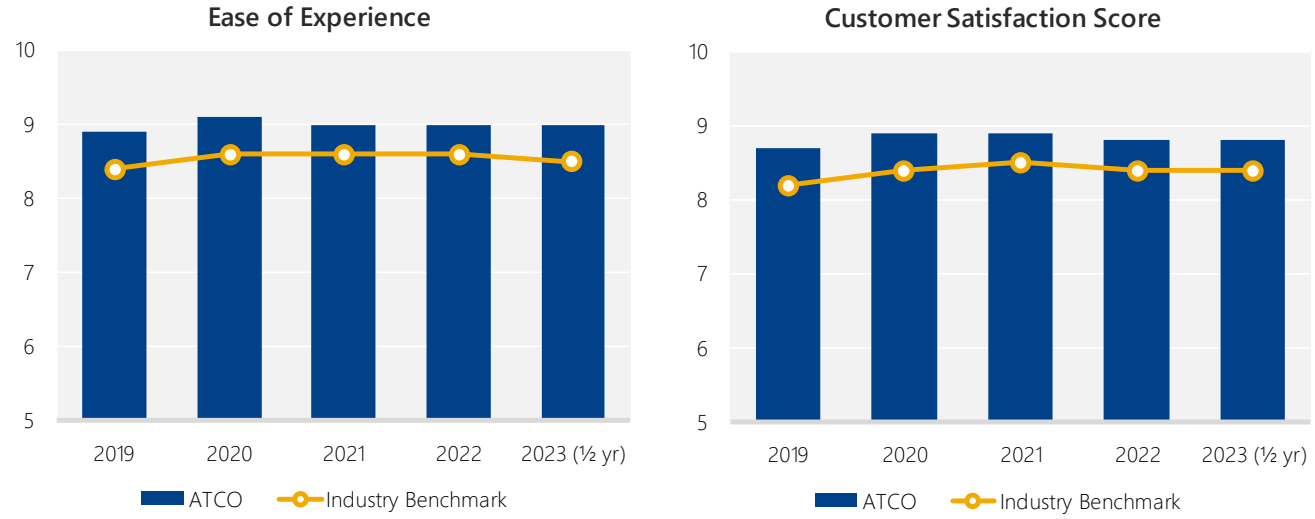
Over AA5, ATCO has delivered, on average, 11,523 new residential connections and 237 new commercial and industrial connections annually (2020-2022). Whether existing customers, or new customers, we are consistently in contact with customers to ensure that they have a positive customer experience.

Over AA5, we have continued to work with our industry stakeholders. We are participating members of organisations such as the Urban Development Institute of Australia (UDIA) and the Master Plumbers & Gasfitters Association (MPGA) to ensure that our customers and stakeholders continue to have a positive experience of our services and operations.

In AA5, ATCO has averaged a customer satisfaction (CSAT) score of 8.8 compared to the average benchmark score of 8.4 (based on 5,355 customer interactions surveyed). ATCO participates in a customer service benchmarking program through Customer Service Benchmarking Australia to benchmark our performance against other Australian gas network operators. The participants in the program include AGN, Multinet, Ausnet, Allgas, and ATCO, and ATCO has been the leader in customer service since the benchmarking exercise began.

In addition to CSAT, the benchmarking program also measures how 'easy' an interaction was as rated by a customer. Once again, ATCO leads the program with an average score of 9.0 compared to the average benchmark of 8.5. Over the last few years, we have consistently scored above the average benchmark in both customer experience metrics, as shown in Figure 5.3.

Figure 5.3: ATCO Customer Experience Benchmarking Scores



In the AA5 period to date we have delivered strong performance across other customer-related metrics. Some highlights include:

- Our Contact Centre has averaged 47,627 customer calls per year. 87.8% of customer calls to the Contact Centre were answered within 30 seconds (91.7 % in 2022), with a 2.0% call abandonment rate (1.5% in 2022).
- 90.5% of customers rated their Planned, Unplanned interaction, or New Connection experience with ATCO as either 'Good' or 'Excellent'.
- 92.2% of customers said their Planned, Unplanned interaction or New Connection experience with ATCO was 'Easy'.

5.5 NETWORK USAGE

Table 5.2 and Table 5.3 provide information on the usage of the distribution network over the AA5 period, including minimum, maximum, and average demand and customers numbers in total and by tariff class.

Table 5.2: Minimum, maximum, and average demand for AA5 (TJ / day)

DEMAND AA5	2020	2021	2022	2023 (F)	2024 (F)
Average	74	78	76	76	82
Minimum	44	38	37	40	40
Maximum	112	126	118	119	119

Table 5.3: Average customer numbers by tariff class for AA5 (average for year)

TARIFF CLASS	2020	2021	2022	2023 (F)	2024 (F)
A1	74	74	73	75	76
A2	106	104	104	104	105
B1	1,808	1,877	1,940	1,997	2,055
B2	12,130	12,229	12,429	12,659	12,899
B3	744,038	751,397	761,658	771,643	779,503
TOTAL	**758,155**	**765,680**	**776,204**	**786,477**	**794,637**

5.6 OPERATING EXPENDITURE

ATCO's forecast total opex over AA5 is $355.9 million, $22.0 million less than forecast in the ERA's Final Decision. Figure 5.4 and Table 5.4 show the comparison of the total opex over AA5 between allowable and actual spend. The variances in the different opex categories are further explained in this section.

Figure 5.4: AA5 Opex spend by category ($million real as at 31 December 2023)

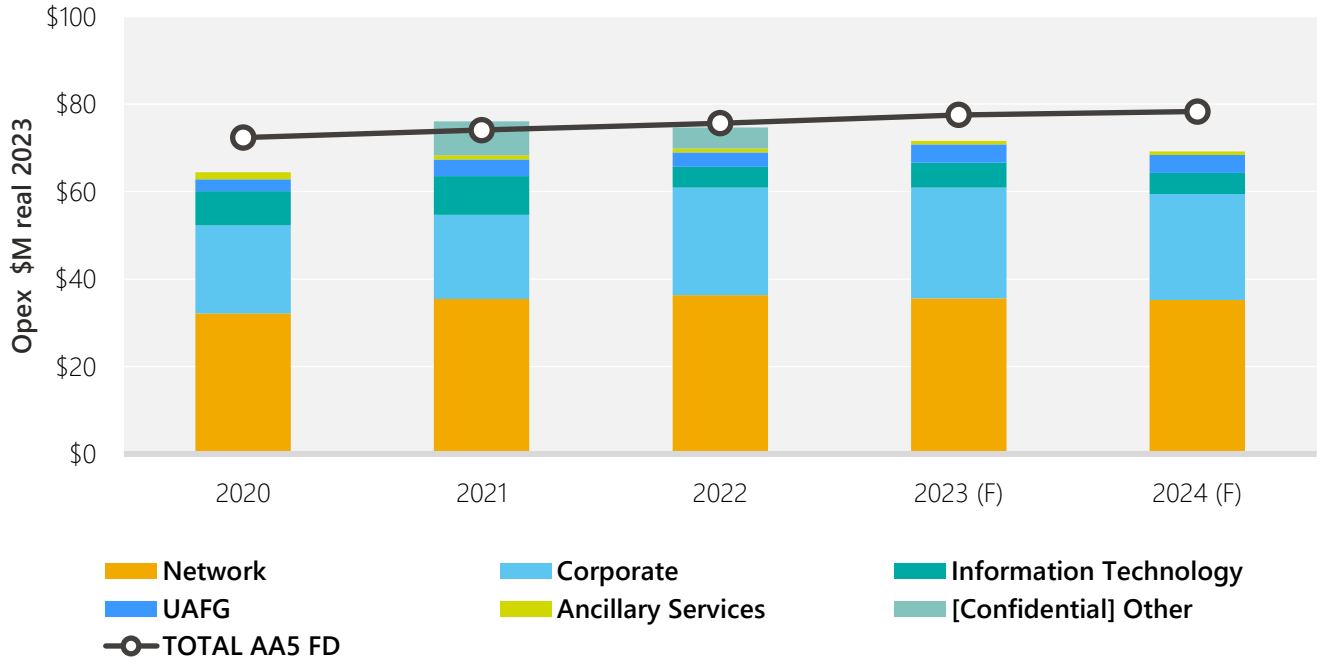


Table 5.4: Opex actual/forecast as at Dec 2022 ($M real as at 31 December 2023)

CATEGORY	2020	2021	2022	2023(F)	2024(F)	TOTAL AA5		%VAR
						ACTUAL	APPROV.	
Network	32.2	35.5	36.3	35.6	35.2	174.7	197.7	*-12%*
Corporate	20.1	19.2	24.6	25.3	24.2	113.5	92.8	*22%*
Information Technology	7.8	8.8	4.7	5.7	4.8	31.9	41.7	*-24%*
UAFG	2.7	3.8	3.3	4.2	4.1	18.1	25.8	*-30%*
Ancillary Services	1.6	0.9	0.9	0.8	0.8	5.1	19.9	*-75%*
[redacted]								
TOTAL	**64.4**	**76.0**	**74.7**	**71.2**	**69.0**	**355.9**	**377.9**	***-6%***

5.6.1 NETWORK OPEX: VARIANCE TO AA5 FINAL DECISION

The AA5 Network Opex is forecast to be $22.9M (-12%) lower than the ERA's Final Decision. The main drivers for this variance are:

- **COVID-19 pandemic**: Due to the COVID-19 pandemic and the WA State Government health directives, there was a reduction and deferral of operations projects and non-urgent planned network maintenance to minimise contact between staff and the public. During this period, we also experienced reduced motor vehicle, travel, and administration expenses due to the restrictions in place.
- **Tight labour market:** Several positions remain vacant as a result of a tight labour market caused by both COVID-19 effects on staff availability and increased competition for staff due to the WA Government's infrastructure spending program and the improvement in the overall economy.
- **Increased efficiency of pipeline surveys**: Pipeline survey expenditure for private properties was reduced, as this work was combined with other surveys conducted in the same areas.
- **Internalisation of reinstatement activities for a portion of network activities:** Same-day reinstatement activities were transferred from contractors to ATCO staff. Utilising the ATCO teams already on site to carry out these works has reduced contractor and traffic management costs, creating a net reduction in reinstatement costs.

5.6.1.1 IMPROVEMENT INITIATIVES OVER AA5

Over AA5, we have strived to achieve greater efficiency in delivering network opex and to introduce improvement initiatives in response to our operating environment. We have introduced several improvement initiatives during AA5, including:

- **Telematics**: Operational efficiency was increased with the introduction of vehicle telematics. Control and Planning Departments can visualise field crews' locations and dispatch work more effectively. This has lead to improvements in response times for time-critical tasks.

- **Traineeship programs:** The Traineeship program cultivates skills through specially designed learning pathways, provides on and off the job training, and provides a route towards a nationally recognised Certificate III in Gas Industry Supply Operations. The first program resulted in 7 trainees joining the business, and in 2023, a new cohort of 5 trainees joined the business. Half of the two Traineeship program participants are female, further committing to our aim to create a diverse and inclusive workplace.
- **Vocational Education & Training (VET):** During 2020-2021, we partnered with Baldivis Secondary College to provide work placements for 5 students undertaking VET in Certificate II in Business. The partnership was extremely successful in helping participants to develop skills for their future employment, and we were able to offer permanent employment to one of the students in a Gas Distribution Officer role.

  Over AA5, we continued to organise and deliver training at our Training Centre to ensure consistency and compliance of work on our network. To date in AA5, we have delivered training to an average of 1,430 attendees annually (2020-2022). In 2020 we were approved as a Registered Training Organisation. Furthermore, the Gas Industry Reference Committee developed and introduced hydrogen-specific training units for a nationally accredited training package, which commenced in 2022.

5.6.2 CORPORATE COSTS: VARIANCE TO ERA FINAL DECISION

We have seen an increase in Corporate costs in AA5 (forecast to be $20.7M (22%) higher compared to the ERA Final Decision), with the main drivers being:

- **Maintaining a safe working environment in response to COVID-19**
  - Additional expenditure was required to reconfigure office spaces to reduce the risk of exposure to critical response staff and safeguard ATCO's ability to respond to network emergencies.
  - Increased expenditure on protective and sanitary supplies and extra cleaning services at all depots and offices.
  - Increased internal communications (including work and safety instructions as internal newsletters and intranet articles) were prepared and issued to keep the employee group informed and engaged, especially those working on the front line with customers.
- **Support from head office**
  - The Australian and Canadian head offices provide finance, treasury, IT and HR support to ATCO's gas operation in Australia.
  - From 2021 onwards, there was an increase in the support cost allocation from ATCO Canada to align with the ATCO Group allocation methodology under the Massachusetts formula. Prior to this change ATCO had a lower allocation of group costs (lower opex costs).
- **Regulatory licence fees**
  - In 2020 there was an increase in the costs passed through by the ERA in relation to licencing activities. These settled to be back in line with the Final Decision in the following years.

- **Legal Costs**
  - Additional external legal advice was required during the AA5 period due to the re-negotiation of our Enterprise Agreement, ongoing tax reform changes, the introduction of Securities of Payments (SOPA) legislation, and the Modern Slavery Act.
- **IT service provider transition costs**
  - One-off cost associated with transitioning to a new IT Service Provider.

5.6.3 INFORMATION TECHNOLOGY (IT): VARIANCE TO ERA FINAL DECISION

This expenditure relates to IT systems at an operational and corporate level that enable ATCO to provide services to customers and the delivery of strategic initiatives, such as the digital transformation of ATCO's business. Our IT opex for AA5 is forecast to be lower than approved in the Final Decision (-$9.8 M, -24%).

This variance is mainly due to a change in the allocation method applicable to IT costs. With the engagement of our new IT service provider (since 2022), we can allocate costs for IT services directly to relevant users' or activities' cost centres rather than the overarching IT cost centre. As a result, the IT cost centre costs are reduced while department cost centres are increased to reflect their actual usage of IT services.

5.6.4 ANCILLARY SERVICES: VARIANCE TO ERA FINAL DECISION

Ancillary Services expenditure is significantly lower than forecast (-$14.8M, -75%) and is due to reduced demand for these services from retailers.

As part of the response to COVID-19, retailers voluntarily paused meter lock and disconnections activities in the 2020/21 year. The pause in disconnections was lifted in the 2021/22 year, but retailers have not used the disconnection process at pre-pandemic levels. In addition to this, although hardship cases are at the highest recorded level due to the debts accrued during the disconnection pause, there appears to be more customers now completing hardship plans, including the use of instalment plans leading to a reduction in disconnections due to non-payment.

Special meter read requests were lower than forecast. This is due to lower retailer churn activity as the larger retailers have now been in the market for several years, and there is also less action by retailers to disconnect customers for non-payment due to financial hardship.

5.6.5 UAFG

UAFG is the difference between the measurement of the quantity of gas delivered into the gas distribution system and the quantity delivered from the gas distribution system during a specified period. ATCO incurs costs to purchase gas to replace UAFG.

5.6.5.1 VARIANCE TO ERA FINAL DECISION

The main drivers for the lower UAFG expenditure (-$7.7M, -30%) over AA5 include:

- The gas loss rate has improved compared to the forecast due to the cumulative impact of UAFG management initiatives such as leak repair and measurement enhancement.

- Lower consumption across the network contributed to lower UAFG TJ, specifically in the industrial (A1) and commercial (B1 and B2) tariff classes. This is largely a result of operating interruptions during the COVID-19 lockdown period, and although the residential (B3) consumption was higher while people worked from home, the residential increase was not sufficient to offset the commercial and small industrial downside.

The improvements in UAFG performance seen in this period have been considered in setting the UAFG targets for AA6.

5.6.5.2 IMPROVEMENT INITIATIVES OVER AA5

ATCO has continued to refine and improve leak survey techniques, equipment, and capabilities over AA5. The delivery of improved leak surveys and targeted mains replacement programs have lead to decreased leak volumes in line with UAFG reduction.

The introduction of electronic dual-wheel drive bikes for leak survey has improved safety by improving stability. In 2022, ATCO introduced leak surveys of meter positions where the risk is intermediate as determined by the Mains Replacement Prioritisation (**MRP**) tool. In addition, Mains in Private Developments and Major Services were included in the assets surveyed.

We are continuing to refine and explore new leak survey techniques, for example, vehicle leak surveys utilising the Picarro Leak Detection system are currently being trialled.

5.7 CAPITAL EXPENDITURE SUMMARY

During AA5, we have invested prudently and efficiently in our network investment program. We are forecast to spend $413.7 million ($2023) within AA5 compared to the AA5 Final Decision of $482.5 million ($2023).

Our capex was lower in AA5 compared to AA4, largely due to the COVID-19 pandemic and industry resource constraints. However, we have delivered strongly on the investment programs necessary to maintain the safe and efficient operation of our network and facilitate growth.

Our thorough planning and approval processes ensure capex is prudent, efficient, and consistent with good industry practice. Of our total AA5 capex forecast:

- 52% was invested in continuing our mains, meter, and regulating facilities replacement programs to ensure the safe and reliable operation of our network, including projects to improve the performance and safety of our assets.
- 35% was invested in customer and demand-initiated growth programs in the network.
- 8% was invested in IT projects to improve the efficient operation of our business.
- 5% was invested in maintenance and improvement of our structures (depots) and equipment (including our vehicles) to ensure they remain safe, fully operational and fit for purpose for our employees and allow us to carry out our network operations efficiently.

We submit that all the past capex satisfies NGR 79(1)(a) and is justifiable on the grounds stated in NGR 79(2). In support of this, we have provided detailed compliance summaries, business cases, and

supporting documentation for every program or project undertaken during AA5 on a confidential basis to the ERA as part of our Access Arrangement Submission.

The following sections outline the AA5 capex program and what has been delivered. Our capital investment profile is shown in Figure 5.5, Table 5.5, and Table 5.6.

Figure 5.5: Total capex: Actual/forecast v ERA AA5 Final Decision ($M real as at 31 December 2023)

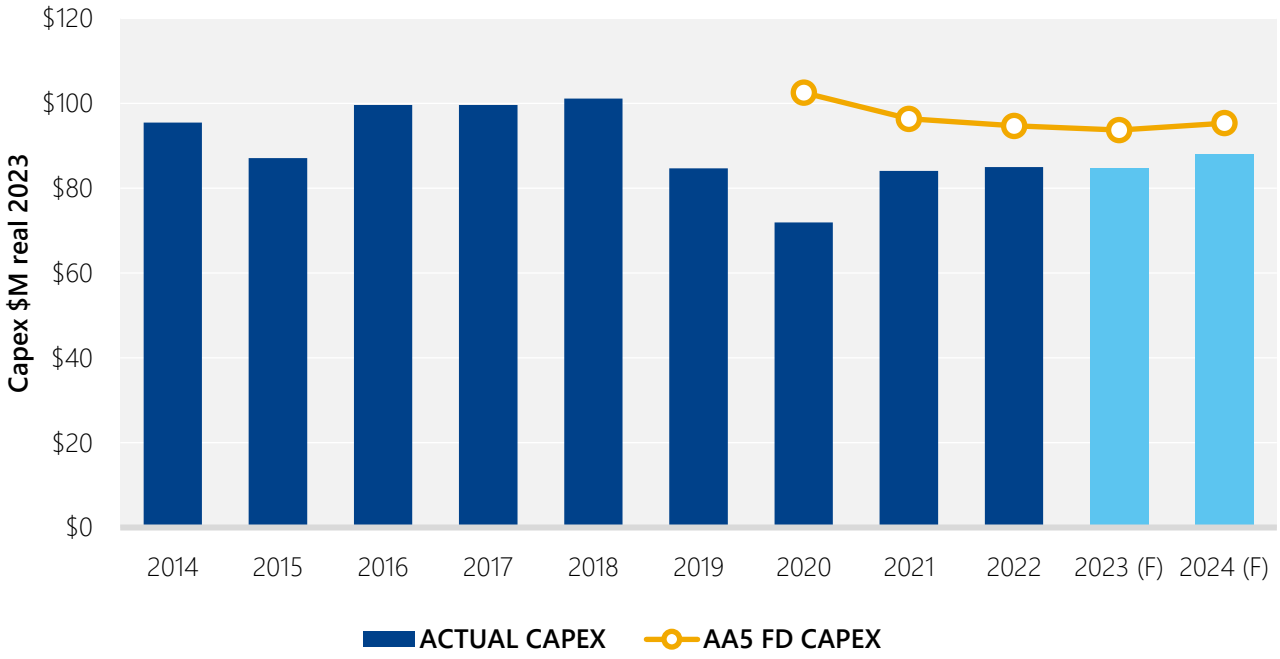


Table 5.5: Actual/Forecast Capex by Cost Driver ($M real as at 31 December 2023)

COST DRIVER	*2019 (AA4)*	2020	2021	2022	2023 (F)	2024 (F)	TOTAL AA5		
							ACTUAL	APPROV.	*%VAR*
Network sustaining	***45.7***	**37.7**	**41.9**	**43.7**	**42.7**	**48.4**	**214.4**	**242.6**	*-12%*
Asset replacement	*41.1*	32.3	37.9	38.9	38.5	41.7	189.3	222.2	*-15%*
Asset performance & safety	*4.6*	5.4	4.0	4.9	4.1	6.7	25.1	20.4	*23%*
Network growth	***25.8***	**26.5**	**30.1**	**30.2**	**29.1**	**27.1**	**143.0**	**171.5**	***-17%***
Customer initiated	*25.2*	26.4	28.8	30.2	29.1	27.1	141.5	169.6	*-17%*
Demand related	*0.6*	0.2	1.3	0.0	0.0	0.0	1.5	1.9	*-22%*
Information technology	***1.4***	**2.9**	**8.2**	**7.6**	**9.5**	**6.4**	**34.6**	**41.0**	*-15%*
Structures & equipment	***11.0***	**4.8**	**3.8**	**3.4**	**3.5**	**6.0**	**21.6**	**27.4**	*-21%*
Equity raising costs	***0.8***	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	*0%*
TOTAL	***84.6***	**71.9**	**84.0**	**85.0**	**84.7**	**88.0**	**413.7**	**482.5**	***-14%***

Table 5.6: Actual/Forecast Capex by Asset Class ($M real as at 31 December 2023)

CATEGORY	2020	2021	2022	2023 (F)	2024 (F)	TOTAL AA5		
						ACTUAL	APPROV.	*$VAR*
High pressure mains - steel	4.4	4.7	4.7	2.3	4.6	20.8	15.1	*5.7*
High pressure mains - polyethylene	0.7	-0.2	0.0	0.0	0.0	0.5	0.0	*0.5*
Medium pressure mains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
Medium and low pressure mains	31.6	37.6	39.0	36.5	36.5	181.2	206.6	*-25.4*
Low pressure mains	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
Regulators	1.6	1.2	1.7	2.4	3.0	10.0	4.5	*5.5*
Secondary gate stations	0.1	0.0	0.0	0.2	1.3	1.7	0.4	*1.3*
Buildings	0.5	0.4	0.9	1.0	1.4	4.2	3.2	*0.9*
Meter and services pipes	25.0	27.6	27.6	29.5	29.0	138.6	178.6	*-40.0*
Equipment and vehicles	1.1	0.8	0.9	1.1	1.1	4.9	4.9	*0.0*
Vehicles	3.3	2.6	1.7	1.5	3.5	12.5	18.7	*-6.3*
Information technology	2.9	8.2	7.6	9.5	6.4	34.6	41.5	*-6.9*
Telemetry and monitoring	0.8	1.1	0.9	0.7	1.1	4.6	8.9	*-4.2*
Full retail contestability	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
Land	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
Equity raising costs	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*0.0*
TOTAL	**71.9**	**84.0**	**85.0**	**84.7**	**88.0**	**413.7**	**482.5**	***-68.8***

5.8 NETWORK SUSTAINING CAPEX

5.8.1 ASSET REPLACEMENT PROGRAMS

ATCO has undertaken replacement programs through the AA5 period to ensure network assets approaching their end of life (EOL) remain in a safe and reliable condition. During AA5, capex program delivery has been affected by COVID-19 restrictions and resource constraints due to the increased activity in the mining and resources sector. As a result, several programs were deferred to later in AA5, with priority given to those programs necessary to maintain a safe and efficient operational network.

Table 5.7 provides details on the replacement programs planned for completion in AA5.

Table 5.7: Asset Replacement Programs, AA5 Actual Capex ($million real as at 31 December 2023)

PROGRAMS	2020	2021	2022	2023 (F)	2024 (F)	TOTAL
Mains Replacement Program	22.0	25.3	28.7	28.4	29.0	133.4
Meter Replacement Program	4.3	4.3	4.1	4.5	4.9	22.0
Other asset replacement programs	6.0	8.3	6.1	5.6	7.8	33.9
TOTAL	**32.3**	**37.9**	**38.9**	**38.5**	**41.7**	**189.3**

5.8.1.1 MAINS REPLACEMENT PROGRAM

To ensure the network's safety, reliability and integrity, the gradual replacement of ageing mains is a core component of ATCO's risk-based asset lifecycle management. The Mains Replacement programs are categorised by pipe material, namely PVC[17], Metallic Mains and Odd Size Steel.

PVC Mains Replacement ($118.9M):

The PVC Mains and Services Replacement Program started in 2015, driven by the operational risks arising from ageing pipes reaching the end of their serviceable lives and increasing leak rates.

ATCO commenced implementation of the MRP Tool in AA4. This software enables the consideration of asset specifications such as age, historical leak data from material failure and fittings and exposure criteria to estimate pipe condition. The MRP tool provides more detailed insights into the risk of each segment of PVC mains. The risk outcomes from the MRP tool are used in defining the risk to public safety from each PVC main segment and are correlated to the ATCO Risk Management Matrix to inform ATCO's PVC Replacement strategy.

As part of the AA5 FD, the ERA endorsed a capex forecast that included replacing 305km of PVC mains and services, identified through analysis using the MRP tool, with fully-fused PE mains.

SCOPE PERFORMANCE

We are forecasting to deliver 90% of the forecast (305km) scope, with 13km of this scope delivered in 2019 and a further 262km of mains replacement planned for completion within AA5.

The delivery of the program was impacted by the COVID-19 pandemic early in the AA5 period (2020 & 2021), where several works programs were reduced in line with the government restrictions and requirements for social distancing. Following this, the post-pandemic impacts on resources (labour and supply chains), which have been faced throughout the construction and utilities industries, have affected the contractor and internal labour delivery capabilities. While the overall scope has been lower than planned, the program has maintained a steady delivery model, and ATCO has built up a resource base capable of delivering the mains replacement program.

While COVID-19 may have impacted the overall works program, PVC works in the Fremantle CBD were reprioritised to be completed during the government mandated lockdowns. This allowed otherwise costly and complex works to be undertaken at a reduced cost, but more so, significantly lessened the level of disruptions to local businesses. This action was commended by the local businesses and the

[17] Unplasticised polyvinyl chloride. All references to PVC mains on the ATCO network refer to unplasticised PVC.

local council. We have also taken opportunities to reduce the potential extent of cost and other operations effects on stakeholders in our Mains Replacement programs by undertaking combined works with other utilities (Water Corporation (PVC Replacement in Fremantle)) and Western Power (Metallic Mains Replacement in East Perth).

EXPENDITURE PERFORMANCE

The overall program is forecast to be delivered under budget due to the reduced scope and lower than forecast costs of delivery achieved (as shown in Table 5.8). This has been achieved through:

- Favourable ground conditions (less than anticipated hard ground conditions)
- Lower than forecast service connections
- Increased implementation of pipe insertion methodology (leading to lower asset locating, site set up, and installation costs as we are utilising our existing pipe as a sleeve for a new main)
- Undertaking complex and costly works in Fremantle CBD during periods of reduced business activity (due to lockdowns) and in conjunction with another utility (as previously mentioned)
- Maintenance of relatively steady contractor rates throughout AA5 with limited major cost swings outside of inflation through engagement under long-term contractual agreements.

Table 5.8: PVC Mains Replacement Program, AA5 Performance against FD

	ACTUAL	AA5 FD	*VAR.*
Scope (km)	262	305	*-44; -14%*
Expenditure ($M real 2023)	$118.9	$148.0	*-$29.0; -20%*
[redacted]	[redacted]	[redacted]	[redacted]

Metallic Mains Replacement ($13.4M)

The Unprotected Metallic Mains replacement program commenced in 2006, driven by operational risks arising from the deterioration of ageing pipes. The program is now in its final stages, with the remaining unprotected metallic mains originally scheduled for replacement in AA5.

The project was delayed during AA5 mainly due to the COVID-19 pandemic, causing longer planning phases, getting approvals from third parties (i.e., PTA, ARC, railways closure), access restrictions at site locations, and increased work around railways from government-driven projects.

Much of this program is due for completion within AA5, with only a relatively small scope (3 railway crossings) carrying over into 2025 (AA6).

There has been an increase in expenditure ($1.3M) compared to the AA5 FD due to increased, and underestimation of, the complexity of some of the subprojects located under and along major roadways.

Odd Size Steel ($0.4M)

In AA5, the final works to conclude this program were completed. The Odd Size Steel Mains Replacement Program started in 2006, driven by the operational risks associated with odd size steel

mains being difficult to isolate during an emergency. To ensure the network's safety, reliability and integrity, we have gradually replaced these assets over successive regulatory periods.

Perth CBD Mains Replacement ($0.7M)

In AA5, we identified sections of CBD steel mains that had inadequate corrosion protection. A project to replace these sections will commence in 2024 and be completed in AA6. This program was not identified at the time of the AA5 submission.

5.8.1.2 METER REPLACEMENT PROGRAM

The Meter Replacement Program addresses our regulatory obligation under the *Gas Standards (Gas Supply and System Safety) Regulations 2000* to manage the integrity and continued service of meters and eliminate the likelihood of meter measurement error.

The Meter Replacement Program is divided into domestic and commercial meters (used for billing and network monitoring (non-billing)). The scope and expenditure performance of these programs is shown in Table 5.9.

Table 5.9: Meter Replacement Programs, AA5 Performance against FD

PROGRAMS	EXPENDITURE ($M 2023)		VOLUME (NO. OF METERS)	
	ACTUAL	AA5 FD	ACTUAL	AA5 FD
Meter Replacement - Domestic	21.1	29.6	91,593	124,935
Meter Replacement – Commercial Billing	0.9	0.8	56	50
Meter Replacement – Non Billing	0.0	0.0	0	0
TOTAL	**22.0**	**30.4**	**91,649**	**124,985**

Domestic Meter Replacements

74% of forecast scope is planned for completion in AA5. This reduced volume is due to scope refinement (extension of in-service life for certain models to 25 years) and a reduction of works activities at the beginning of AA5 during the COVID-19 pandemic restrictions and government requirements for social distancing. This program has been delivered by both internal labour and contractor resources. ATCO has delivered the program at a marginally reduced unit cost compared to the AA5 FD forecast: actual average unit rate of [redacted] against a forecast unit rate of [redacted]

Billing Commercial Meter Replacements

In 2020 and 2021, ATCO did not undertake any works on this program. The driver of this program is compliance (accuracy of metering is a regulatory obligation) not safety-related, and it was de-prioritised in response to government public health advice regarding social distancing during the COVID-19 pandemic. The program was rescheduled to ensure the required scope was completed by the end of AA5 (2024).

The AA5 FD forecast was based on historical assumptions of 10 meter replacements per annum (total of 50 meters). This number is subject to change as meters are identified through field visits or a suitable replacement meter is not available through our meter refurbishment program. We have identified 56 meters for replacement under this program in AA5.

Non-Billing Commercial Meter Replacements

Flow monitoring on high-pressure regulator sets and pressure reduction stations provides vital data to model network dynamics. The non-billing commercial meter replacement program ensures that the accuracy of this data is maintained.

No meters were identified for replacement in AA5, in line with the AA5 FD.

5.8.1.3 OTHER REPLACEMENT PROGRAMS

The other End of Life (EOL) replacement programs that ATCO has undertaken in AA5 are detailed in Table 5.10. Details on the larger programs against the AA5 FD and new programs are detailed further in this section.

Table 5.10: Other Replacement Programs, AA5 Actual Capex ($million real as at 31 December 2023)

EOL REPLACEMENT PROGRAMS	ACTUAL EXPENDITURE ($M 2023)
Service and Riser	12.1
Mechanical Fittings	4.6
Regulator sets and metering facilities	4.6
Telemetry equipment	3.8
CBD Services	1.1
Isolation Valves	1.2
Pressure Vessels	1.2
Meter Position Upgrades	1.0
Greenfield St Bridge Replacement	0.6
Cathodic Protection asset replacements	0.5
Facility Equipment	0.4
Warning Signs	0.3
Other small asset replacement programs	2.5
TOTAL	**33.9**

Service and Riser Replacements ($12.1M)

This program replaces ageing and leaking risers and PVC services identified through maintenance activities or from public notification ('smell of gas' calls). The volume of these estimated in the AA5 FD is significantly lower than the actual volume identified through the AA5 period as shown in Table 5.11. While the volume has increased, these works were undertaken at a lower average unit cost than what was included in the AA5 submission.

Table 5.11: Service and Riser Replacement Programs, AA5 Performance against FD

	ACTUAL	AA5 FD	VAR.
Volume (no. of assets)	9,939	2,289	7,650
Expenditure ($M 2023)	12.1	7.1	5.0
[redacted]	[redacted]	[redacted]	[redacted]

Mechanical Fittings ($4.6M)

ATCO has continued with our program to replace all mechanical compression fittings on the network, as these are susceptible to leakage when exposed to ground movements or earthworks. The non-'as low as reasonably practical' (**ALARP**) risk with these fittings is eliminated by replacement. In AA5 we expect to remove 904 mechanical fittings from the network. While this is higher than the forecast in the AA5 FD, this program was delivered at a reduced average unit cost, as shown in Table 5..

Table 5.12: Mechanical Fitting Replacement Program Performance against AA5 FD

	ACTUAL	AA5 FD	VAR.
Scope (no. of fittings)	904	800	13%
Expenditure ($M 2023)	4.6	5.2	-13%
[redacted]	[redacted]	[redacted]	[redacted]

Telemetry Equipment Replacement ($3.8M)

In AA5 we expect to replace 3,612 items of telemetry equipment used for network monitoring. This program ensures the reliability and accuracy of customer billing data and informs network decisions.

ATCO has delivered on the scope required to keep our telemetry equipment in functioning order, and expenditure on this program is $0.5M ($2023) under the forecast included in the AA5 FD.

Regulator sets and metering facilities ($4.6M)

During AA5, we will replace 15 metersets (meter facilities), 11 Medium pressure regulator (MPR) sets, 1 high pressure regulator (HPR) set and 21 regulator set lids that have reached their end of life. The scope and expenditure for these programs is shown in Table 5.13.

There was an increase in scope for the EOL MPR Replacement and EOL Meter facilities programs. At the time of the AA5 submission, the forecast was based on a historical average of replacement of one MPR and one meterset per year (a total of 5 for each program). These programs are condition-based

and involve analysing data from regular inspections and changes in environmental site conditions. During AA5, 11 MPRs and 15 metersets exhibiting poor condition were identified for replacement, to manage risk to public, personnel, asset integrity and continuity of supply. Further details on the scope and expenditure performance of these programs are provided in ATCO's Compliance Summaries submitted as part of our AA6 submission.

One HPR set has been identified as meeting the requirements for replacement, this is scheduled for replacement in 2024.

Table 5.13: End-of-life Meter facilities and Regulator Replacement Programs, AA5 Performance against FD

PROGRAMS	EXPENDITURE ($M 2023)		VOLUME (NO. OF ASSETS)	
	TOTAL	AA5 FD	TOTAL	AA5 FD
End-of-life Meter Facilities	1.1	0.9	15	5
End-of-life MPR	1.5	0.6	11	5
End-of-life HPR	0.9	0.4	1	1
End-of-life Regulator Pit Lids	1.1	1.3	21	21
TOTAL	**4.6**	**3.2**	**48**	**32**

CBD Service replacement ($1.5M)

We commenced a program in 2019 to replace 260 non-compliant services in the CBD area (e.g., pipes in cavity walls, exposed services, and meters at risk of third-party damage, corroded pipework). This program is planned for completion in 2023.

Isolation valves ($1.2M)

We have continued replacing isolation valves on our high pressure pipelines that have reached their end of life. This ensures that we can have the ability to isolate and control the gas supply during emergency incidents.

Pressure Vessels ($1.2M)

From investigations undertaken by ATCO, 12 pressure vessels in its GDS were identified that could not be certified as "Safe to Operate" due to a combination of factors. Regular maintenance and inspection in line with Australian Standard (AS) 3788-2006 Pressure equipment – In-service inspection was not possible due to lack of vessel design information. This issue coupled with the average age of the vessels, lead ATCO to assess these 12 vessels as being at their End-Of-Life (EOL) and requiring replacement. This project was not included in the AA5 FD as it was identified following the AA5 submission.

Greenfield St Bridge Replacement ($0.6M)

The City of Canning has been investigating the replacement or removal of an existing footbridge (Greenfield Bridge) crossing the Canning River. A medium pressure steel gas main is attached to the existing bridge. This main therefore needs to be removed and replaced. Analysis has been undertaken,

considering other projects in the surrounding network and the ongoing maintenance and associated hazards with an exposed steel main, has resulted in a plan to decommission this exposed bridge crossing and reinforce the network at an alternative location in 2023. This project was not included as part of the AA5 FD as the need for this program was identified following the AA5 submission.

Cathodic Protection Replacement programs ($0.5M)

As a prudent operator, ATCO has undertaken replacement programs to ensure our cathodic protection assets, which protect our steel pipelines from material fatigue and corrosion, are kept to a functioning level. Corrosion can lead to loss of containment or may result in a reduction of the pipeline maximum allowable operating pressure, thus reducing the amount of gas that can flow. In AA5 we will have replaced 105 anodes and 50 corrosion protection test points. Our expenditure on these programs is in line with the AA5 FD.

5.8.2 ASSET PERFORMANCE & SAFETY

In AA5, ATCO has continued to undertake programs and projects that ensure efficient and safe operation of our assets. The key deliverables under this category are detailed in the following sections and shown in Table 5.14.

Table 5.14: Asset Performance & Safety Programs, AA5 Actual Capex ($million real as at 31 December 2023)

PROGRAMS	2020	2021	2022	2023 (F)	2024 (F)	TOTAL
Inline Inspection Infrastructure	2.0	2.3	1.0	0.8	1.5	**7.6**
Step Touch Mitigation	1.5	1.1	0.3	0.9	1.5	**5.3**
Pipeline 28 AC Corrosion Mitigation	0.3	0.5	2.1	-0.1	0.0	**2.7**
OPSO	0.0	0.0	0.2	1.2	0.0	**1.5**
Reinforcement projects	0.0	0.0	0.0	0.0	1.4	**1.4**
Meter compliance	0.3	0.3	0.2	0.5	0.0	**1.3**
Slabbing of HP Pipelines	0.1	0.4	0.4	0.0	0.0	**0.9**
Vehicle Impact Protection	0.0	0.0	0.1	0.1	0.1	**0.4**
Cathodic Protection asset upgrades	0.1	0.0	0.1	0.1	0.1	**0.4**
SCADA projects	0.0	0.0	0.0	0.3	0.2	**0.4**
PMD Upgrades	0.1	0.1	0.1	0.1	0.1	**0.4**
Other	1.2	-0.8	0.4	0.3	1.9	**2.9**
TOTAL	**5.4**	**4.0**	**4.9**	**4.1**	**6.7**	**25.1**

Inline Inspection Pipeline Infrastructure ($7.6M)

This program involves upgrading the Pipeline Inspection Gauge (PIG) infrastructure on HP pipelines, enabling the inline inspection of pipelines with potential steel defects. In AA5, 3 PIG infrastructure upgrades will be completed, and upgrades on a further 3 pipelines will commence and be completed in AA6. The project was delayed due to the impact of COVID-19 on execution and contractor resourcing in 2020 and longer planning phases for remote and complex pipelines. However, the main revision of the schedule has been done to coordinate works with major third-party infrastructure works, which have a planned impact on the pipelines that were targeted for inspection.

Facility Upgrade - 'Step Touch' Mitigation Systems ($5.3M)

In 2017, through a Network Wide Risk Assessment, we identified 40 pipelines needing further investigation. These 40 pipelines had a high potential to be affected by earth potential risk from third-party electrical assets and presented risks to personnel. Through detailed assessments of these pipelines, 58 specific high-risk sites were identified as requiring hazard mitigation measures. These mitigation measures are due for installation by the end of 2024.

The complexity of this program has proved to be greater than what was expected at the time of the AA5 submission. The volume (number of high-risk sites) and the extent of the scope (form of mitigation measures required at each site) could only be determined once the detailed assessments had been completed during AA5. For these reasons, this program has exceeded the AA5 FD forecast expenditure of $1.4M. Further details of this program are given in our Compliance Summary supporting documentation.

As the electrical infrastructure surrounding our assets is subject to change, ATCO needs to continue to undertake regular assessment of the network in relation to 'step touch' hazards. In 2022, ATCO initiated a second Network Wide Risk Assessment to identify any assets that have the potential to pose a risk to personnel due to changes in third-party infrastructure. The findings of this assessment form the basis of our AA6 program, which incorporates the learning from the AA5 program.

Pipeline 28 AC Corrosion Mitigation ($2.7M)

Corrosion was detected on High Pressure pipeline no. 28, forming as a result of elevated alternating current (AC) voltages on the pipeline. Measures were taken by ATCO to mitigate the AC corrosion mechanism in order to reduce the risks of the pipeline integrity to a tolerable level. This project was not included in the AA5 FD. Further details can be found in the Compliance summary for this project.

Over Pressure Shut Off (OPSO) Safety devices ($1.5M)

We have continued with our program to install safety devices on our facilities to prevent risks of over-pressurisation of networks downstream of regulating facilities. By the end of AA5, we are planning to install OPSO safety devices at 20 sites (high pressure regulators and metersets).

Reinforcement projects in Secret Harbour, Atwell and Queens Park ($1.4M)

ATCO annually updates the hydraulic models of the entire gas network and uses these to identify any network reinforcements required. If network pressures drop below the minimum allowed pressure, this can interrupt supply to customers. This can cause a 'flame-out' on an appliance, which is not only

inconvenient but also a potential safety risk. Following the subsequent return of supply, gas may enter the premise unnoticed by the occupant, resulting in a potential fire or explosion.

In 2024 we will undertake 3 projects in network areas where we have identified increase demand due to residential growth.

Projects of this nature were previously classified as Growth capex, however, given that the main driver is a reduction of customer safety risks, these are now classified as Sustaining capex from 2023 onwards. See also Table 5.19.

Meter Compliance ($1.3M)

This ongoing program addresses non-compliant meters found on the network when conducting operational activities. This program has been delivered below the AA5 FD forecast of $1.8M.

The other asset performance and safety programs ATCO has undertaken include:

- **Replacement of Corrosion Probes and installation of Surge Protectors** to keep our CP equipment in functioning order ($0.4M).
- Installation of **Pressure Monitoring Devices** (PMD) and upgrade of our **Asset Monitoring** equipment to enhance the quality of network data being obtained.
- **Vehicle Protection** mitigation measures installed at our facilities to ensure the safety of personnel.

5.8.3 REPRIORITISED PROJECTS

The following network sustaining programs and projects were included as part of our AA5 submission but did not progress:

- **Replacement of exposed pipework on Canning Bridge** ($0.9M included in AA5 FD)
  - Through further routine inspections, it was determined that it was more prudent to undertake opex remediation works rather than the full replacement of the main on the bridge.
- **Automated pressure control projects** ($3.5M included in AA5 FD)
  - This is a continuous improvement initiative that has been deferred to AA6 to prioritise projects with higher safety and risk drivers during AA5.

5.9 NETWORK GROWTH CAPEX

Network growth capex involves:

- Complying with regulatory obligations (*under Gas Distribution Licence 8, Schedule 1, Clause 3*) to offer to connect certain residential customers that are within 20 metres of an existing gas main[18]
- Growing our network base
- Ensuring ATCO can meet forecast growth in demand for services through expansion of the network.

[18] Clause 3, Schedule 1 of ATCO's Distribution Licence requires it to offer to connect certain residential customers within its licence area. The offer to connect applies only for connections requiring 20 metres or less of service pipe and where the gas main is so located that it is practicable in accordance with good industry practice to connect the relevant premises to the main.

5.9.1 CUSTOMER INITIATED GROWTH

Network Growth capex is incurred for connecting new customers to our network.

Growth in customer numbers helps to maintain lower prices for existing customers by sharing the primarily fixed costs of operating the network across a larger customer base.

Our customer initiated programs can be broken down into the following groups:

- Connection of residential (B3) and small commercial customers (B2) within our existing network (**Brownfield New Connections**).
- Connection of residential (B3) and small commercial customers (B2) in new subdivisions bordering existing areas of our network (**Greenfield New Connections**). This program also includes associated network expansion (mains extensions and mains in new subdivisions) necessary to facilitate the connection of new customers.
- Connection of new commercial customers (**AL18 connections** and **Customer Initiated (CIC) Metersets**).
- Commercial customers requiring a mains extension or bespoke gas metering facilities are termed **Growth Development** projects. These typically have a high level of customer capex contribution to ensure the connection cost has a positive present value.

Expenditure on all customer initiated growth programs is shown in Table 5.15.

Table 5.15: Customer Initiated Growth Programs, AA5 Actual Capex ($million real as at 31 December 2023)

	2020	2021	2022	2023 (F)	2024 (F)	TOTAL
Brownfield & Greenfields New Connection programs	23.4	26.9	28.1	25.7	25.2	129.2
Commercial connections (CIC Metersets & AL18)	2.0	2.8	2.3	2.9	3.2	13.2
Growth Development Projects	2.1	1.4	1.7	5.4	4.1	14.8
Other Growth programs	0.9	0.8	0.0	1.0	0.4	3.2
Sub Total	**28.4**	**31.9**	**32.1**	**35.0**	**32.9**	**160.4**
Less Capital Contribution	-2.0	-3.1	-2.0	-6.0	-5.8	-18.9
TOTAL	**26.4**	**28.8**	**30.2**	**29.1**	**27.1**	**141.5**

5.9.1.1 BROWNFIELD AND GREENFIELD NEW CONNECTIONS PROGRAMS

Most of our new connections are customers in new subdivisions bordering existing areas of our network.

In AA5, we expect to install:

- **5,423** new Brownfield customer connections: These are made up of both B2 & B3 connections
- **53,899** new Greenfield customer connections: These are made up of both B2 & B3 connections

- **638 km** of mains in and to new subdivisions.

Network expansion mains are installed predominantly in new subdivisions by 'common trenching' techniques - where reticulated gas mains are laid in an open trench while other utilities are being laid. Mains extensions are required where the new mains are required to connect gas from an existing area to a new sub-division.

Feeders are new mains within a large sub-divided block of land to supply gas to a number of units. This volume of work increases as residential areas are rezoned.

CONNECTION VOLUMES

The comparison of our new connection growth compared to the forecast included in the AA5 FD is shown in Table 5.16.

Over AA5, there has been a material variation in the volume of new connections because it is dependent on external factors that include changes in the housing market, property zonings and population growth; and more significantly, the impacts of the COVID-19 pandemic could not have been reasonably foreseen, nor predicted in forecasting models.

Brownfield B3 New Connections exceeded the AA5 FD forecast. A main contributor to this is a high volume of *Meter Only* connections. This activity involves the connection of a Brownfield customer where the gas service infrastructure is still active to the property. This occurs in instances where the gas meter has been previously removed at a retailer's request but the gas service pipe remains live but safely capped. This allows for a more cost effective connection in the future when a customer at the property wishes to obtain gas.

This activity was not included in the AA5 FD as the increased volume of these activities has only been realised in AA5, where there has been a high number of new connections following large-scale retailer requests for meter removals towards the end of AA4. The removal of these meters ensured retailers received no further standing charges for the gas connections. Meter removal is generally requested by retailers following several years of no gas usage.

The volume of **Greenfield New Connections** is below what was forecast in the AA5 FD. This is mainly attributed to COVID-19 affected resourcing challenges and construction delays in the building industry.

Network expansion is highly variable as it depends on the location of new connections or subdivisions compared to our existing network and property lot sizes.

The largest reduction in this category has been common trench installation in new subdivisions. In 2022, Greenfield growth lot sales were seen to begin to decline. This was impacted by rising interest rates and the normalisation of the property market following government stimuli in 2020 and 2021. These factors resulted in reduced network expansion in AA5.

Connection of **small commercial B2** customers in both Greenfield and Brownfield areas was lower than the forecasts included as part of the AA5 FD. This reflects the impacts and challenges faced following the COVID-19 pandemic.

Table 5.16: New Brownfield & Greenfield Connection volumes, AA5 Performance against FD

PROGRAM	TYPE OF CONNECTION	2020-2024 ACTUAL	AA5 FD	VAR.
Brownfield Connections (no. of connections)	Residential Customer (B3)	5,053	3,701	30%
	Small Commercial Customer (B2)	370	472	
Greenfield Connections (no. of connections)	Residential Customer (B3)	53,168	61,462	-14%
	Small Commercial Customer (B2)	731	1,377	
Network Expansion (metres)	Mains Extensions	15,058	10,328	-20%
	Common Trench	445,225	549,246	
	Feeders	177,354	240,549	

EXPENDITURE

The expenditure for these programs compared against the AA5 FD is given in Table 5.17.

ATCO has continued to facilitate the connection of new customers at the lowest sustainable cost, and the connection cost maintains a positive net present value. This is achieved by collaborating with service delivery contractors through long-term agreements, thereby guaranteeing a consistent supply and advantageous rates by leveraging their economies of scale.

The average unit rate for the Brownfield New Connections is lower than predicted in the AA5 FD. The contributor to this is that a high portion of the B3 connections have been Meter Only activities (as mentioned previously). The cost of these connections is significantly lower than standard residential connections as the gas service pipework is already installed.

Greenfield New Connections have increased over the period. An increase to the contractor rates was negotiated in 2022 due to higher than predicted inflation in 2022, affecting multiple components of all construction industries (labour, materials, consumables). The unit rate for installation of these mains has been in line with the AA5 FD forecast.

Table 5.17: AA5 Brownfield & Greenfield New Connections, Expenditure compared to AA5 FD ($real as at 31 December 2023)

PROGRAM	TYPE OF CONNECTION	EXPENDITURE ($M)*			[redacted]
		ACTUAL	AA5 FD	VAR.	[redacted]
Brownfield Connections	Residential Customer (B3)	6.8	9.0	-25%	[redacted]
	Small Commercial Customer (B2)	2.0	2.7		[redacted]
Greenfield Connections	Residential Customer (B3)	67.4	69.0	-6%	[redacted]
	Small Commercial Customer (B2)	3.3	5.9		[redacted]

PROGRAM	TYPE OF CONNECTION	EXPENDITURE ($M)*			[redacted]	
		ACTUAL	AA5 FD	VAR.	[redacted]	[redacted]
Network Expansion	Mains Extensions	2.1	2.4		[redacted]	[redacted]
	Common Trench	37.0	42.2	-21%	[redacted]	[redacted]
	Feeders	10.1	17.7		[redacted]	[redacted]

* Capex less capital contributions

** $ PER ACTIVITY

5.9.1.2 GROWTH DEVELOPMENT PROJECTS AND COMMERICIAL NEW CONNECTIONS

We have continued to work on network growth through the connection of new commercial customers requiring an AL18 meter or larger. We plan to install 213 metersets and 126 new AL18 meter connections to new commercial customers in AA5.

We will be undertaking 86 growth development projects, which typically involve network mains extensions for new commercial customers or residential subdivisions. The duration and costs of these projects are difficult to forecast as they are highly variable and dependent on the number, capacity, and location of new connections in relation to the existing network.

The cost of commercial new connections compared to the AA5 FD is shown in Table 5.18. Both programs are significantly lower than the AA5 FD due to the variability in cost of these activities and effects of the COVID-19 pandemic.

Table 5.18: Commercial Connection programs, AA5 Performance against ERA FD

PROGRAM	EXPENDITURE* ($M 2023)	
	ACTUAL	AA5 FD
Growth Development Projects	3.1	12.3
Commercial Connections (CIC Metersets & AL18)	8.2	12.5

* Capex less capital contributions

5.9.2 DEMAND INITIATED GROWTH

The distribution network must maintain adequate capacity to deliver gas safely to customers. In areas of the network experiencing high growth and increasing new customer connections, the ability of the network to maintain capacity may diminish. ATCO has an obligation under its distribution licence to offer to connect certain residential customers in existing network areas[19]. Minimum network pressures are required for service regulators to function and allow the safe supply of gas to appliances. Weak areas of the network are identified through annual hydraulic modelling and forecast network growth.

[19] Clause 3, Schedule 1 of ATCO's Distribution Licence requires ATCO to offer to connect certain residential customers within ATCO's licence area. The obligation applies only for connections requiring 20 meters of less of service pipe and where the gas main is so located that it is practicable in accordance with good industry practice to connect the relevant premises to the main.

In AA5, we undertook three reinforcement projects to support the networks in Doubleview, Hamilton Hill and the North Metro area. These projects involved mains extensions and capacity upgrades to one regulating facility in the North Metro.

As part of the AA5 FD, we identified several reinforcement projects. The status of these projects is given in Table 5.19

Reinforcement projects have historically been classified as Growth, Demand Capex and this was the case in the AA5 FD. However, on review of the drivers for projects of this nature, from 2023, these are classified as Sustaining, Performance capex. This is being done as the key driver for these projects is safety risk reduction (See also 5.8.2).

Table 5.19: Reinforcement Projects, AA5 Performance against FD ($million real as at 31 December 2023)

PROJECT	EXPENDITURE ($M)		STATUS
	ACTUAL	AA5 FD	
Reinforcement - HPR Capacity Upgrade	0	0.4	Not required following updated network modelling
Reinforcement - MPR Capacity upgrade	0	0.3	Not required following updated network modelling
Reinforcement Doubleview	1	0	Requirement identified after AA5 submission
Reinforcement (North Metro)	0.4	0.4	Completed
Reinforcement Hamilton Hill	0.1	0	Requirement identified after AA5 submission
Growth Capex Total	***1.5***		
Reinforcement - Secret Harbour (HPR)	0.5	0.4	Planned for 2024. Reclassified as Sustaining capex.
Reinforcement – Queens Park	0.4	0.1	
(mains extension)			
Reinforcement - Atwell (HPR)	0.5	0.4	
Sustaining Capex Total	***1.4***		
TOTAL	**2.9**	**2.0**	**All AA5 FD was classified as Growth Capex**

5.10 INFORMATION TECHNOLOGY CAPEX

5.10.1 DELIVERABLES

Our IT strategy has been centred around digital transformation while delivering significant upgrades to our critical business applications necessary to:

- **Reduce operations costs** by digitalisation of manual tasks and access to analytical tools.
- **Enhance asset performance management** by process automation to optimise and predict asset performance, operation, and replacement.
- **Improve workforce safety and environmental management** by automation of processes that improve safety and enable ease and secure access to information. We have integrated an improved HSE risk management software (*eSafe*), which provides improved data capturing and analytics capability.
- **Optimise and simplify workforce mobility** through *Project NEO,* which aims to improve the efficiency and autonomy of field workers by upgrading our field mobility system. This project commenced in 2023.
- One of the major IT projects undertaken in AA5 that has enabled the objectives mentioned above, is the **upgrade of our Geographic Information Systems** (**GIS**) through Project *Lantis*. This upgrade has improved the ease of accessibility to gas network information. These improvements include mapping, analysis and tracing, and the ability to integrate with other organisations' publicly available mapping services. It also allows for improved operations management that includes integration with our work management systems (e.g. SAP) and fleet management applications.
- **Modernise IT services and solutions** through digitalisation, application modernisation, and cloud integration.
- **Better connection with our customers** by providing digital solutions that enable more timely and easy access to information. Examples include upgrades to our telephony system, Integration Platform and Customer Care & Billing system (*NMIS*), online Alter Meter Position applications, online disconnection and removal of gas service request form, and Prelaid Service requests.
- **Employee engagement** by deploying a digital workplace that supports modern work modes, better collaboration, self-service, and improved productivity. Examples include improvements made to our time-sheeting and payroll integration and the roll-out of MS Teams to support remote working during the pandemic.

5.10.2 EXPENDITURE PERFORMANCE

Our AA5 IT expenditure is forecast to be lower (-$6.3M, -15%) than what was include in the AA5 FD. This is mainly due to:

- A smaller than projected number of continuous improvement projects.
- Deferral of projects in 2020-2021 due to lack of resources (largely affected by the pandemic) to manage the projects. Resources were focused on critical end of life projects and application upgrades.

5.11 STRUCTURES & EQUIPMENT CAPEX

The key deliverables under this category are detailed in the following sections and shown in Table 5.20

Table 5.20: Structures & Equipment Programs, AA5 Expenditure against AA5 FD ($M real as at 31 December 2023)

PROGRAMS	ACTUAL EXPENDITURE ($M 2023)
Fleet	12.0
Property, Plant & Equipment (PP&E)	4.8
Depots	4.2
Clean Energy Innovation Hub (CEIH)	0.2
Hydrogen Blending Pilot Project	0.4
TOTAL	**21.6**

5.11.1 FLEET ($12.0M)

Whilst our Fleet expenditure is forecast to be lower than our AA5 FD, we have replaced and upgraded our fleet in line with good industry practice. The lower-than-forecast investment is due to:

- The lifecycle of light vehicles was amended from 5 to 6-year replacement intervals due to vehicle utilisation and condition information.
- The shortage of available heavy vehicle body builders, and capacity constraints on those that were available between 2021 and 2023.

5.11.2 PROPERTY, PLANT & EQUIPMENT ($4.8M)

ATCO has had ongoing expenditure to ensure PP&E remains fit for purpose, fully functional and in a good condition. PP&E assets are essential to ensure personnel are using safe equipment, undertake network projects with the appropriate tooling and carry out maintenance activities effectively.

5.11.3 DEPOTS ($4.2M)

ATCO has continued to operate our metro operations facilities in Jandakot, Mandurah, and Joondalup and our regional depots in Geraldton, Bunbury, and Busselton. ATCO is also establishing a new depot in the Perth North Metro area.

We have ongoing investment in the maintenance and improvement of ATCO facilities to ensure they remain safe, fully operational, and fit for purpose for employees. The expenditure for all our depot projects is given in Table 5.21. Further details of these projects are provided in our Compliance Summary supporting documentation.

Table 5.21: Depot Projects, AA5 Expenditure against AA5 FD ($M real as at 31 December 2023)

	ACTUAL	AA5 FD
New Depot (Land)	0.0	0.0
New Depot (Building)	0.2	2.1
Jandakot Redevelopment Phase 3	1.1	0.0
Minor Capital works	1.8	0.6
Other Depot and structure works	0.4	0.0
Fencing	0.7	0.5
TOTAL	**4.2**	**3.2**

The AA5 FD included the setup of **new depot** facilities in Balcatta and Osborne Park. A more suitable location for a depot was found in Malaga, and this land was purchased in 2019. The building of the new depot was postponed from 2020 in response to the COVID-19 pandemic, which substantially changed the way ATCO operated. Within a short time, ATCO accelerated its adoption of technology to transition most of its workforce to remote working. As a result of the changing environment, ATCO considered it prudent to defer the Malaga Depot construction.

ATCO re-initiated the Malaga depot construction project in 2022. However, on further review, the decision was taken to defer construction by 3 years due to current market constraints in the WA construction sector, which has lead to significantly inflated construction costs.

As was the case for many industries, the COVID-19 pandemic altered how we operate. As a result, **minor capital depot works** have increased to ensure we can continue to operate reliably, ensure the well-being of our personnel, and to comply with government public health restrictions.

Examples of depot works undertaken during AA5 are:

- Additional traffic management works at the Jandakot depot to ensure safety of our workforce
- Reconfiguration of workspaces to allow for shared work areas and hot-desking in line with providing flexible work opportunities during COVID-19
- Modification of operating facilities to split our Control Room operations
- Replacement of our server room uninterruptible power supply (UPS)
- Installation of Solar Power Systems and EV charging facilities in line with our sustainability ambitions to reduce carbon emissions.

5.11.4 HYDROGEN BLENDING PILOT PROJECT ($0.4M)

As the first stage of our hydrogen blending initiative, ATCO invested in a project to design and construct a blending facility that enables up to 10% renewable hydrogen from our Clean Energy Innovation Hub (CEIH) to be blended into a discrete area of our network (2,700 residential and small commercial customers in Glen Iris, Treeby and Calleya). This pilot project facilitates a trial of hydrogen blending into the gas network; with the aim of increasing blends and moving towards a partially decarbonised gas network in line with the WA Government Renewable Hydrogen Strategy.

The majority of capital investment in this project was provided by a Department of Jobs, Tourism, Science, and Innovation (JTSI) grant, and ATCO invested the remaining capital investment. ATCO is only seeking the recovery of expenditure net of any government grant ($0.4M).

Further details on this project are provided in our Compliance Summary supporting documentation.

PART B | Our Proposal

ATCO

6. PIPELINE SERVICES

CHAPTER HIGHLIGHTS

1. We conducted stakeholder consultation to develop our Reference Services Proposal, which was submitted to the ERA on 1 September 2022.
2. The ERA has since approved our Reference Services Proposal.
3. Our Haulage reference services remain unchanged from AA5 and are proposed as reference services for AA6.
4. Our Ancillary reference services will remain mostly unchanged in the AA6 period, with the addition of the previous non-reference service '*Permanent Disconnection*' (referred to as 'Cut and cap service pipe at the main' in our Reference Services Proposal).

6.1 INTRODUCTION

On 1 September 2022, we submitted a Reference Services Proposal to the ERA for the Mid-West and South-West Gas Distribution Network (GDS) in accordance with NGR 47A. The ERA's Reference Service Proposal Decision, which was published on 14 November 2022, approved the reference services set out in our Reference Services Proposal. In accordance with NGR 48, our proposed reference services for this access arrangement are consistent with the ERA's decision.

6.1.1 PIPELINE SERVICES OVERVIEW

Reference and *non-reference* services are together called *pipeline services,* which are defined in the NGL, see Figure 6.1. The classification of a service as either a reference or a non-reference service is considered at the beginning of the access arrangement review having regard to the *reference service factors* outlined in the NGR.

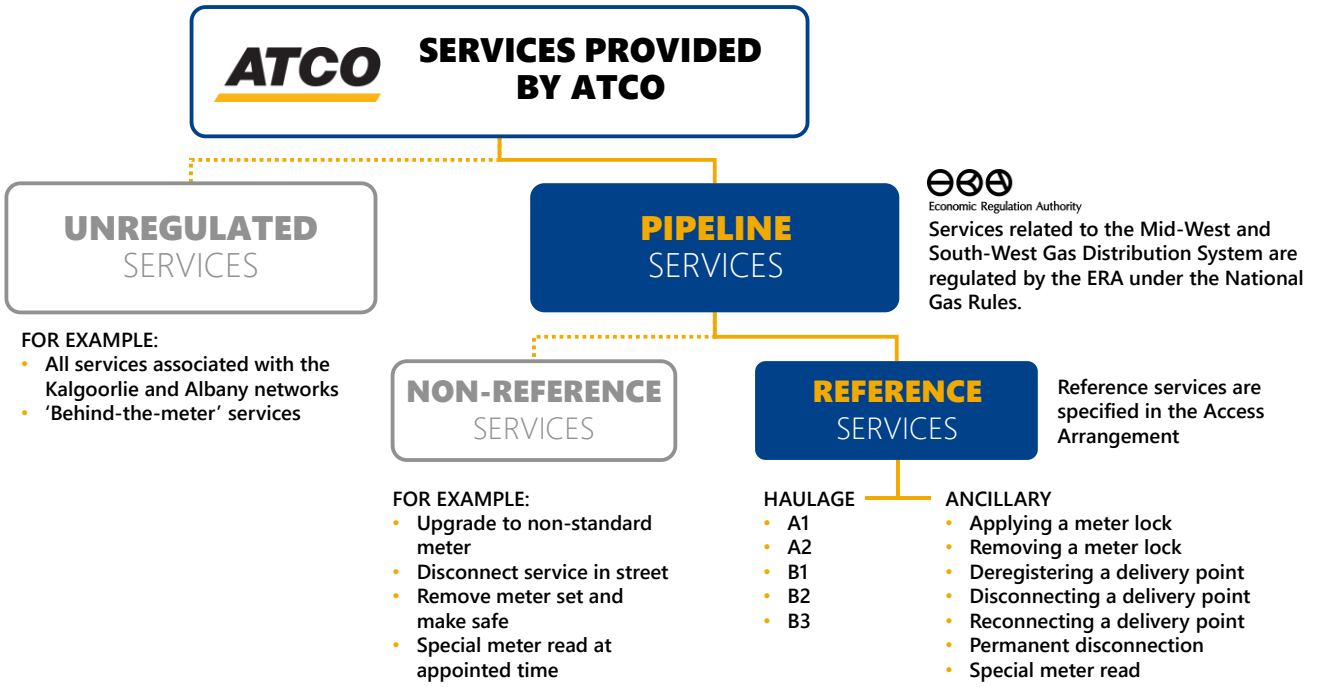
Reference services are pipeline services that form the basis of the prices and terms and conditions for the access arrangement period. The corresponding tariffs for our reference services are proposed in *Section 16*. We group reference services into two categories:

- **Haulage Reference Services**: For the transportation of gas to residential, commercial, and industrial customers. Haulage reference services are used by all users of the GDS, and all gas delivered through our network is delivered under these services. These services cover the full range of activities involved in receiving, transporting, and delivering gas to our customers.
- **Ancillary Reference Services**: Non-haulage pipeline services that are predominantly used by retailers in conjunction with providing a haulage service.

Non-reference services are those services with low or infrequent demand and are typically negotiated on a case-by-case basis with our customers. In the current access arrangement period, non-reference services make up approximately 2% of our revenue from pipeline services. Tariffs, terms, and conditions for these non-reference services are not required to be approved by the ERA, and therefore

the forecast costs and demand associated with providing non-reference services are not included within the forecasts presented in this document.

Figure 6.1: AA6 service classification



6.2 Haulage Reference Services for AA6

The haulage reference services that we will offer in AA6 are the services detailed in the ERA's Reference Service Proposal Decision. These services cover the full range of activities involved in receiving, transporting, and delivering gas to our customers.

Haulage reference services for AA6 are outlined in Table 6.1.

Table 6.1: AA6 Haulage Reference Services

REFERENCE SERVICE	DESCRIPTION
A1	A1 is a pipeline service under which ATCO delivers gas to a user at a delivery point on the network, where the following preconditions were met at the time the user (then a prospective user), submitted an application for the service: • It was reasonably anticipated that the prospective user would take delivery of 35 TJ or more of gas during each year of the haulage contract; and • The prospective user requested a contracted peak rate of 10 GJ or more per hour; and • The prospective user requests user-specific delivery facilities.

REFERENCE SERVICE	DESCRIPTION

A2	A2 is a pipeline service under which ATCO delivers gas to a user at a delivery point on the network, where the following preconditions were met at the time the user (then a prospective user), submitted an application for the service:
	• Either (or both):
	  ○ it was reasonably anticipated that the prospective user would take delivery of 10 TJ or more of gas, but less than 35 TJ of gas, during each year of the haulage contract, or they requested a contracted peak rate of less than 10 GJ per hour; and
	  ○ an Above 10 TJ Determination was, or was likely to have been, made under the Retail Market Procedures (WA); and
	• The prospective user requests user-specific delivery facilities.

B1	B1 is a pipeline service under which ATCO delivers gas to a user at a delivery point on the network, where the following preconditions were met at the time the user (then a prospective user), submitted an application for the service:
	• Either:
	  ○ it was reasonably anticipated that the prospective user would take delivery of less than 10 TJ of gas during each year of the haulage contract; or
	  ○ requested a contracted peak rate of less than 10 GJ per hour; and
	• The prospective user requests user-specific delivery facilities or standard delivery facilities that include a standard meter with a badged capacity of 18 cubic meters per hour (m^3/h) or more.

B2	B2 is a pipeline service under which ATCO delivers gas to a user at a delivery point on the medium pressure/low pressure parts of the network using standard delivery facilities that include a standard meter with a badged capacity greater than or equal to 12 m^3/h and of less than 18 m^3/h.
B3	B3 is a pipeline service under which ATCO delivers gas to customers with a standard meter with a badged capacity of less than 12 m^3/h, typically residential or small business customers, supplied at medium or low pressures. End use customers who receive B3 reference services and who consume less than 1 TJ of gas per year are small-use customers as defined in the *National Gas Access (WA) (Local Provisions) Regulations 2009*.

6.3 Ancillary Reference Services for AA6

The ancillary reference services that we will offer in AA6 are the ancillary services detailed in the ERA's Reference Service Proposal Decision.

In AA6, we will make the 'Permanent Disconnection' service (referred to as the 'cut and cap service pipe at main' in the Reference Service Proposal and explained further below) a reference service.

Ancillary reference services for AA6 are outlined in Table 6.2.

Table 6.2: AA6 Ancillary Reference Services

REFERENCE SERVICE	DESCRIPTION
DISCONNECTIONS FOR RETAILER CREDIT CONTROL	
Applying a Meter Lock	Attaching a lock to the valve that comprises part of the standard delivery facilities to prevent gas from being received at the delivery point. This service is available at delivery points receiving the B2 or B3 haulage service.
Disconnecting a Delivery Point[20]	Physically disconnecting a delivery point to prevent gas from being delivered to the delivery point. This service is available at delivery points receiving the B2 or B3 haulage service.
RECONNECTIONS FOR RETAILER CREDIT CONTROL	
Removing a Meter Lock	Removing the lock that was applied to a valve comprising part of the standard delivery facilities to prevent gas from being received at the delivery point. This service is available at delivery points receiving the B2 or B3 haulage service.
Reconnecting a Delivery Point[21]	Reconnecting a delivery point to allow gas to be delivered to the delivery point. This service is available at delivery points receiving the B2 or B3 haulage service.
DISCONNECTIONS	
Deregistering a Delivery Point (or 'Deregistration')	A delivery point is permanently deregistered by: i) removing the delivery point (as per the Retail Market Procedures), ii) removing the delivery point from the Delivery Point Register and iii) for delivery points receiving the B2 or B3 haulage service, removing the meter (where ATCO considers necessary). For delivery points receiving the A1, A2 or B1 haulage service, removal of the meter set is a separate non-reference service ("Remove meter set and make safe service").
Permanent Disconnection[22] *(further information provided in Section 6.3.1)*	This service is for the permanent disconnection of the property from the GDS, generally by cutting and capping the service pipe at the main, under standard site conditions. This service is only available where there is no meter at the property or for delivery points that previously received the B2 or B3 haulage service and have also sought the "Deregistering a delivery point" service. This service is available to end users, property owners and those authorised on behalf of property owners. Where there is a meter present, the "Deregistering a delivery point" service is also required.
METER READING SERVICES	
Special Read	Request to perform a special read on a basic meter. This service is available at delivery points receiving the B1, B2 or B3 haulage service.

6.3.1 DISCONNECTIONS FOR B2 AND B3 CUSTOMERS

With the reclassification of the 'Permanent Disconnection' as a reference service, ATCO has sought to provide further clarity around the disconnection process for B2 and B3 customers and the role ATCO

[20] The service has been renamed from 'Remove Regulator' in the reference service proposal to retain the reference service name from AA5 and provide clarity on the nature of the service

[21] The service has been renamed from 'Re-install Regulator' in the reference service proposal to retain the reference service name from AA5 and to provide clarity on the nature of the service

[22] The service has been renamed from 'Cut and cap' in the reference service proposal to provide clarity on the nature of the service

plays. Historically, this service has been called the demolition service because it has primarily been sought when a property is to be demolished due to the subdivision of a block or the construction of a new building.

The process for disconnecting a gas customer from the network involves both the retailer and ATCO. As the distributor, ATCO is only directly involved if the customer wishes to permanently remove their gas connection. If a customer only wishes to stop *receiving* gas and does not require the gas connection to be permanently removed, the customer can deal with this solely through their retailer.

6.3.1.1 INFORMATION ABOUT THE DISCONNECTION SERVICES THAT ATCO PROVIDES

The disconnection services that ATCO provides for B2 and B3 customers are:

1. **Deregistering a Delivery Point** ('Deregistration') reference service (to retailers)
2. **Permanent Disconnection** reference service (to end users and property owners).

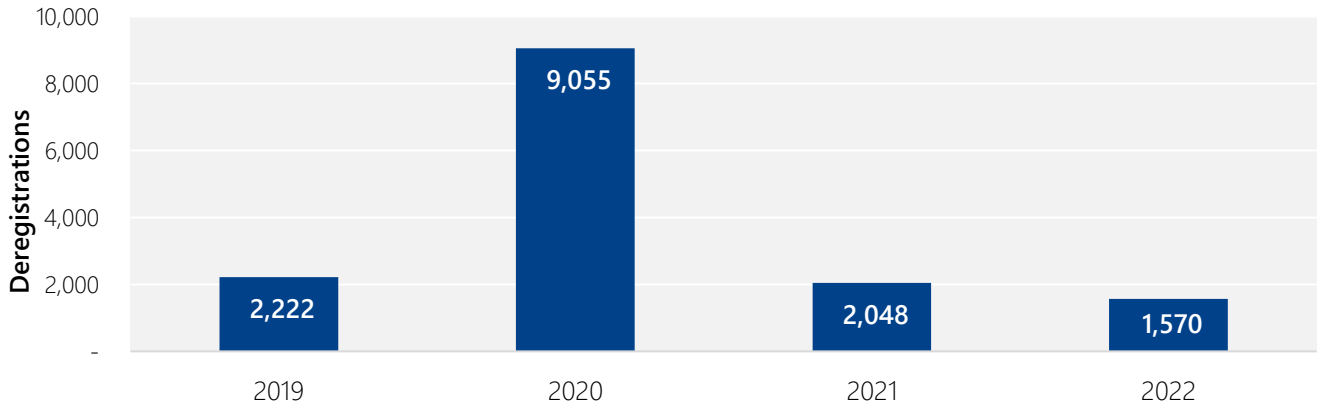
These are explained further in the following sections.

DEREGISTERING A DELIVERY POINT REFERENCE SERVICE

The Deregistration service involves ATCO deregistering the Meter Identification Reference Number (**MIRN**) and, for B2 and B3 customers, physically removing the meter (where it considers appropriate). This ensures no further charges are issued to the retailer for the gas connection. The Deregistration service is provided by ATCO on the request of a retailer. ATCO charges the Deregistration reference service tariff to the retailer (it is up to the retailer whether it charges its customer).

The Deregistration service has been sought 1,570 times in 2022, as shown in Figure 6.2

Figure 6.2: Deregistration volumes (2019-2022)[23]



The Deregistration service is to ensure that the retailer no longer receives a standing charge when it no longer holds a customer account for the gas connection. Historically that has been when the property is vacant or not expected to use gas for an extended period. By only removing the meter, once a new retail account is opened for the gas connection it allows the efficient reconnection of gas in the future.

[23] [redacted]

In relation to safety, we have had minimal strikes (~25 per annum) on services pipes that have had their meter removed. In Western Australia, the meter box location against the house and the visible riser helps to minimise accidental strikes on service pipes. Over the past five years, the rate of strikes on service pipes where the meter had been removed is comparable to strikes where the meter is present. We therefore propose there is no additional safety risk associated with live service pipes where meters have been removed.

PERMANENT DISCONNECTION FROM THE GAS NETWORK

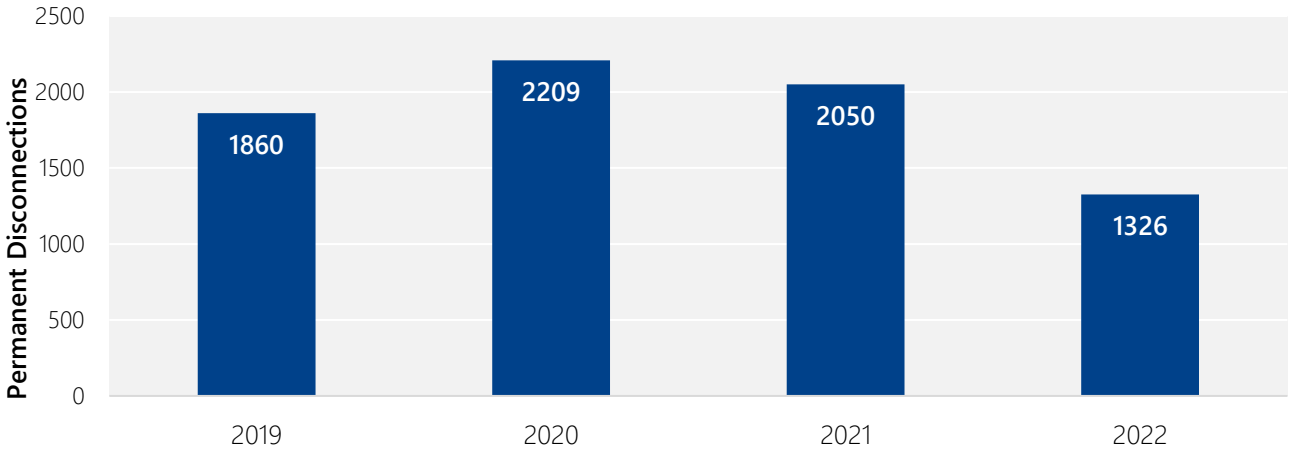
The Permanent Disconnection service involves ATCO permanently disconnecting the property from the gas network, which we generally do by cutting and capping the service pipe at the main and reinstating the footpath and verge. This ensures the gas connection is permanently removed from the property.

The Permanent Disconnection service is sought:

1. Most often, for a property that will be demolished. The property owner (or party authorised on behalf of the property owner, generally a demolition company) will request the service to ensure there is no longer a gas connection and the demolition can proceed safely.
2. By a customer that is seeking to permanently remove their gas connection.

While this service is sought by a significant portion of the market (the service is delivered approximately 2,000 times per year), the majority of these are in the context of demolition. The 'Permanent Disconnection' has been sought 1,326 times in 2022, as shown in Figure 6.3.

Figure 6.3: Permanent Disconnection volumes (2019-2022)



The Permanent Disconnection service is provided by ATCO on request of a customer or property owner, or with the property owner's consent, usually demolition companies (each an "applicant"). The Permanent Disconnection service can be requested using an online form available on ATCO's website similar to how this service is currently requested: https://www.atco.com/en-au/self-service/gas/disconnection-request.html[24].

[24] The current webpage and online form will be updated to reflect the reclassification of this as a reference service and to incorporate the approved Permanent Disconnection Agreement.

The Permanent Disconnection service can only be provided where there is no meter at the property. If there is a meter, the Deregistration service must also be obtained. This can either be sought by the applicant through the retailer, or if necessary, ATCO can contact the retailer for authorisation. Either way, ATCO will charge the retailer for the Deregistration service (it is up to the retailer whether they charge the customer). ATCO can perform the Permanent Disconnection at the same time as the Deregistration.

ATCO charges the Permanent Disconnection reference service tariff upfront to the applicant through the online portal and, if a meter exists, the Deregistration reference service tariff to the retailer.

INFORMATION FOR B2 AND B3 CUSTOMERS ABOUT HOW TO DISCONNECT

CLOSE GAS ACCOUNT

If a customer only wishes to stop receiving gas and does not wish to permanently remove the gas connection, the customer should discuss this with their retailer. The retailer may, either at its own discretion or if requested by the customer, also obtain the Deregistration reference service from ATCO to ensure no further charges are received in relation to the property.

PERMANENTLY DISCONNECT

If a gas customer wishes to permanently disconnect from the gas network, the following steps are required:

1. Contact the retailer to:
   a) close their retail account; and
   b) deregister the MIRN and remove the meter – the retailer obtains this from ATCO ("Deregistration" service)
2. Contact ATCO to permanently disconnect the property from the network ("Permanent Disconnection" service). The applicant will need to complete ATCO's online application form and pay the upfront fee. The form is available on ATCO's website. Where a meter is present, and the Deregistration service has not already been sought, ATCO will contact the retailer for authorisation to Deregister (and charge the retailer).

DEMOLITION

If a property is to be demolished, it must first be permanently disconnected from the gas network.

An applicant can contact ATCO to permanently disconnect the property from the network, ("Permanent Disconnection" service) provided they are the property owner or have the property owner's written consent. The applicant will need to complete ATCO's online application form and pay the upfront fee. The form is available on ATCO's website. Where a meter is present, and the Deregistration service has not already been sought, ATCO will contact the retailer for authorisation to Deregister (and charge the retailer for this).

7. DEMAND FORECAST

CHAPTER HIGHLIGHTS

1. ATCO has utilised historical consumption and connection information to 2022 in conjunction with external expert advice from CORE Energy Group to forecast gas demand for the AA6 period.
2. Since the Draft Plan we have refined our forecast to incorporate a more recent Housing Industry Association (**HIA**) report projecting housing commencements for the B3 demand forecast.
3. During AA6, the number of customers is forecast to grow at 1.1% pa. Consumption per customer during AA6 is forecast to decline, resulting in overall forecast consumption decreasing at 0.8% pa.
4. We continue to normalise the effect of weather on demand using an effective degree day (**EDD**) method as adopted in AA5. The EDD method incorporates several climatic variables affecting consumption and behaviour of Western Australian gas users, thus achieving increased consumption forecasting accuracy.

7.1 INTRODUCTION

This chapter outlines our forecast of customer numbers and demand volumes for the AA6 period for reference services. The forecasts inform our capex, opex, and reference tariffs for AA6.

Our demand forecasts are based on historical consumption and connection information to 2022. The 2025-29 demand forecast in this chapter is based on expert advice from Core Energy Group (**CORE**).

7.2 STAKEHOLDER FEEDBACK

Table 7.1 summarises the feedback received from our stakeholders and our respective responses.

Table 7.1: Consideration of stakeholder feedback on the Demand Forecast

STAKEHOLDER FEEDBACK	OUR RESPONSE
More detail was requested about our forecast demand, including:	
• Which of the four future scenarios ATCO Gas used to build its demand forecasts.	The four Future of Gas scenarios (see *Chapter 3*) were developed for longer-term planning. We have not chosen a *preferred* scenario but rather a 'path of least regret' in the short to medium term based on plausible possible futures. Although in the short-term, the scenarios are relatively consistent with the forecasts for AA6, they were not part of the Demand Forecast Scope for AA6.

STAKEHOLDER FEEDBACK	OUR RESPONSE
• The assumptions it has made about consumers' electrification intentions and their take-up of energy efficiency measures (including in response to policy interventions at the Commonwealth and State level). • The assumptions it has made about forecast population growth and new dwelling approvals and completions, and how it has factored in the unusual circumstances impacting both these variables over the past three years (some of which, for example strain in the building and construction sector, will persist in coming years).	Demand is forecast by an expert third party (CORE Energy), which is based on historical analysis and industry data and forecasts, including an analysis of all material factors that were not evident in historical trends but which are expected to influence future demand. Inclusions in the analysis: • Economic circumstances • Business mix – as it relates to types of business that will favour all electricity or electricity and gas • Government policy (preference between electricity and gas) • Cost/price considerations – capital cost of appliances and operating costs • Economic, demographic, and other factors expected to influence future demand per connection (including HIA dwelling commencements and population growth forecasts) • A full description of the forecast methodology and underlying assumptions is provided in *'Core Energy - Gas Demand Forecast', see Attachment 07.001*.
An identification and explanation of any differences between ATCO Gas' forecast of different categories of demand and AEMO's forecasts.	ATCO provide a forecast consumption to the gas retail market to develop the GSOO. Validation against the forecast presented by AEMO within its 2023 GSOO is contained in section 2.5 of the CORE Energy Forecast.
How the impacts of policy changes since the 2022 WA Gas Statement of Opportunities (**GSOO**) forecast was developed have been accounted for	Several policy changes are underway including examples such as the Safeguard Mechanism, incorporation of renewable gas targets and changes in the NGL to account for energy transition. ATCO is involved in the change process and are adopting an approach to incorporate forecasts and expenditure programs based on likely outcomes.
Would also like to see sensitivity analysis of varying demand profiles on forecast expenditure and tariffs.	ATCO has an obligation to continue offering a safe and reliable gas supply, and the expenditure in our AA6 submission reflects this obligation. Although the demand profile affects *growth-driven* elements of our costs, not all our costs fall with demand. The expenditure in our AA6 submission is based on what is required to maintain a safe and reliable distribution network. We are submitting one demand profile that reflects our expectations for AA6. This profile includes an assumption on continued customer growth through new connections, which reduces tariff increases to all customers across the AA6 period.

STAKEHOLDER FEEDBACK	OUR RESPONSE
~78K connections forecast – how does that compare with 60k in the demand forecast section?	In our Draft Plan, we projected our average customer base to increase by approximately 60,000 (804,145 in 2024 to 866,559 in 2029). The reference to 78,000 connections represented new connections only.
Demand estimates are shown as relatively flat – unsure if this is valid in the new environment.	Information provided by the HIA and Oxford Economics point to increasing housing completions in Perth. While it is always difficult to predict how the future economic environment and environmental policies may impact the number of gas connections, we are optimistic about this, and our projections result in lower tariffs to existing customers.
New connections more likely to be slower in the coming 5 years due to interest rates and failure of construction companies.	We acknowledge that there have been several building company failures recently that have mostly impacted the Eastern States. However, some have affected WA. We will continue to monitor this and aim to receive updated HIA and Oxford Economics information for the Draft Decision response. Our forecast of new connections has been updated since the publication of the Draft Plan based on May 2023 projections from the HIA on new housing commencements.
A question raised about the increase in AML services and the disparity with RML services. At present AML may be used for various reasons (although new SO elements should allow differentiation) between debt/move out and unknown consumer. Given the increased interest in retailers supporting vulnerable customers, AGL questions this expected growth.	Retailers have recommenced their credit control activities since late 2022, and services appear to be increasing in 2023.

7.3 FORECAST METHOD AND FORECAST ACCURACY

ATCO engaged CORE to provide an expert gas demand forecast. The gas demand forecast was developed consistent with AA5 methodology adjusting for the ERA's comments, changes in circumstances, including the impact of COVID-19 and the changing Government policy stance regarding GHG emissions, including future gas use. The gas demand forecast has been developed using regression models that forecast the number of connections by tariff class (A1 to B3) and determine the expected average consumption per connection in each tariff class. The A1 and A2 customer survey was used to help inform the gas demand forecast.

Our forecast is based on actual data up to and including 2022. In relation to gas demand forecasting, 2020 and 2021 were not typical years for demand, primarily due to the impacts of COVID-19 that

affected commercial and residential consumption. The COVID-19 years (2020-2021) have been excluded from our historical data set in developing our gas demand forecast.

The CORE forecast method is a transparent approach, including a demand forecast model that examines all factors that could affect normalised demand. CORE took reasonable steps to ensure the approach to deriving the demand forecast complies with Part 9, Division 2 of the NGR.

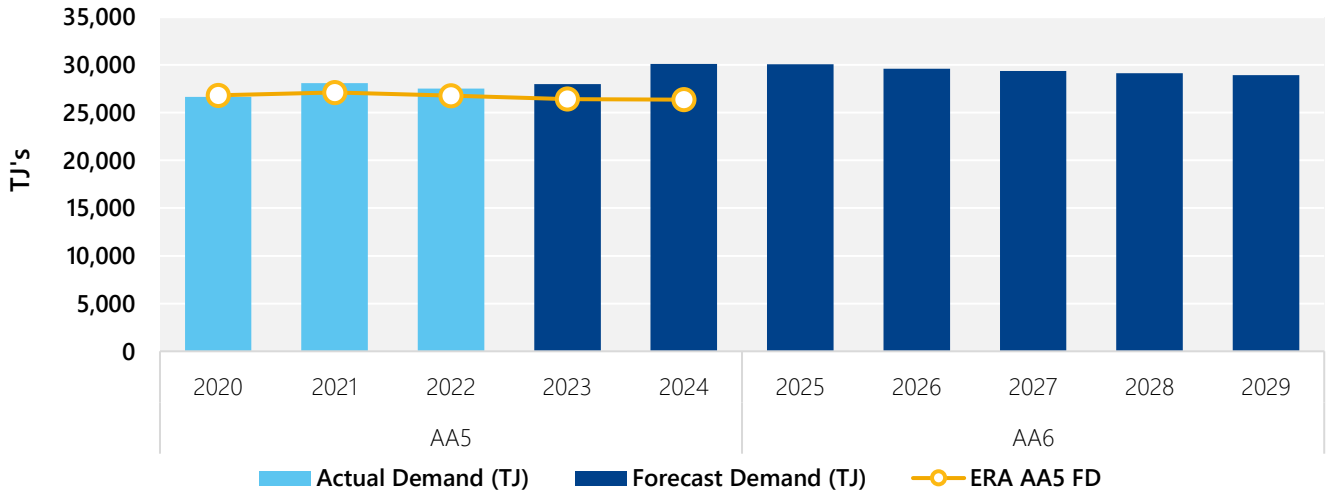
We have continued to normalise the effect of weather on demand using an Effective Degree Day (**EDD**) method as adopted in AA5. The EDD method results in historical demand being 'normalised', making it comparable to forecast demand, which assumes no weather impact. The EDD method also incorporates several climatic variables affecting the consumption and behaviour of Western Australian gas users to improve consumption forecasting accuracy.

For a detailed description of the method adopted for each tariff class, refer to the CORE Gas Demand Forecast in *(see Attachment 07.001*) The gas demand forecast by tariff class is discussed further in the sections below.

7.4 HISTORICAL & FORECAST DEMAND

Historical demand is one of the factors considered in the AA6 gas demand forecasts. Total demand is forecast to decrease from 30,094 TJ in 2024 to 28,915 TJ by 2029. Figure 7.1 illustrates the AA6 forecast compared to AA5 and the ERA AA5 Final Decision.

Figure 7.1: Actual and forecast volumes for all customers



7.5 A1 AND A2 DEMAND FORECAST

-0.3%
DEMAND

A1 and A2 demand is expected to decrease from 16,960 TJ in 2024 to 16,747 TJ in 2029.

Two approaches have been used to forecast A1 and A2 gas demand.

1. The completion and analysis of individual customer surveys. In total, 88 customers were surveyed (40 A1s and 48 A2s, who represent 55% and 47% of volumes respectively at the end of 2022).
2. For non-surveyed customers, we analysed historical trends at both the customer and industry segment level.

A summary of these two approaches is presented in Table 7.2.

Table 7.2: Survey approaches

SURVEY TYPE	DESCRIPTION	A1 FORECAST	A2 FORECAST	COMBINED
Surveyed customers	GJ Maximum Hourly Quantity (**MHQ**) and Annual Contract Quantity (**ACQ**) is forecast according to known load changes obtained via responses received from a direct survey of customers.	40 survey responses were received representing 55% of our A1 customer base and 78% of their volume.	48 survey responses were received representing 47% of our A2 customer base and 41% volume.	73% volume
Average Trend Customers	For customers who were not surveyed, ACQ was forecast according to observed historical trends and consideration of other factors.	45% of our customer base representing 22% of volume.	53% of our customer base representing 59% of volume.	27% volume

Our historical and forecast demand for A1 and A2 customers is shown in Figure 7.2 and Table 7.3.

Figure 7.2: Historical and forecast total A1 and A2 demand

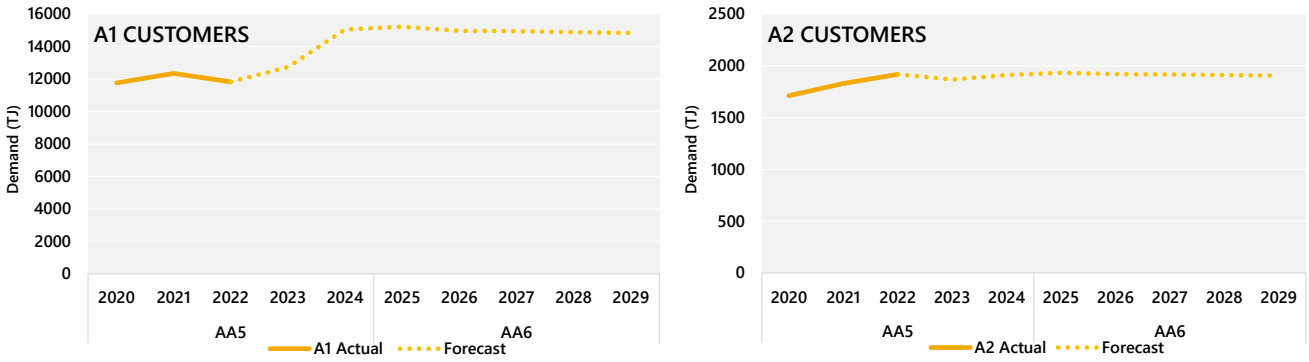


Table 7.3: AA6 Forecast average customer base and demand for A1 & A2 (industrial) customers

TARIFF CLASS	2024	2025	2026	2027	2028	2029	CAGR*
A1 TARIFF							
Average Customer Base	76	76	76	76	76	76	0.00%
Demand (TJ)	15,048	15,221	14,973	14,950	14,884	14,841	-0.28%

TARIFF CLASS	2024	2025	2026	2027	2028	2029	CAGR*
A2 TARIFF							
Average Customer Base	105	105	105	105	105	105	0.10%
Demand (TJ)	1,912	1,933	1,920	1,916	1,911	1,906	-0.06%
TOTAL							
Average Customer Base	**14,954**	**15,259**	**15,570**	**15,887**	**16,212**	**16,543**	**2.04%**
Demand (TJ)	**3,347**	**3,323**	**3,299**	**3,275**	**3,252**	**3,229**	**-0.71%**

* Compound Annual Growth Rate

7.6 B1 AND B2 DEMAND FORECAST

-0.7%
DEMAND

B1 and B2 demand is forecast to decrease from 3,347TJ in 2024 to 3,229TJ in 2029.

B1 and B2 gas demand forecast is derived using a bottom-up approach as the product of forecast *connections* and *demand per connection*. We have considered historical trends and best estimates of future drivers of demand not observed in the historic data trends, but which are expected to influence future demand. Such factors include the following:

Economic circumstances as they relate to business formation.

- Business mix – as it relates to types of business that will favour all electricity or electricity and gas.
- Government policy, including Government preference to favour electricity over gas.
- Cost/price considerations – capital cost of appliances and operating costs

The analysis indicates that no single factor provides a statistically reliable basis for forecasting purposes. For this reason, analysis of historical actual trends is favoured and adjusting these as appropriate to account for future influences that vary from history.

- **Connections**
  Our total connections forecast is based on historical statistics and trends. One factor considered in detail is Western Australia's Gross State Product (**GSP**). While average GSP rates over time indicate a degree of relationship with growth in connections – the relationship varies between B1 and B2 and between years. Correlation analysis indicates the absence of a statistically robust relationship that can be relied upon for forecasting purposes (the B1 coefficient is low and the B2 is modestly negative). The forecast connection growth rate is slower than the historical period due to a lower GSP growth forecast in 2024-25 as per the WA Government budget projection.

- **Demand per connection**
  Demand per connection is forecast to remain relatively flat to slightly declining over AA6. The B1 and B2 forecast includes weather normalisation, price elasticity effects (gas and electricity), and consideration of the policy environment. This policy environment is favouring reductions in fossil fuel usage, including gas, and an increasing tendency of businesses to promote programs that reduce emissions intensity.

Our demand forecast for B1 and B2 customers is shown in Figure 7.3 and Table 7.4.

Figure 7.3: Historical and forecast total B1 and B2 demand

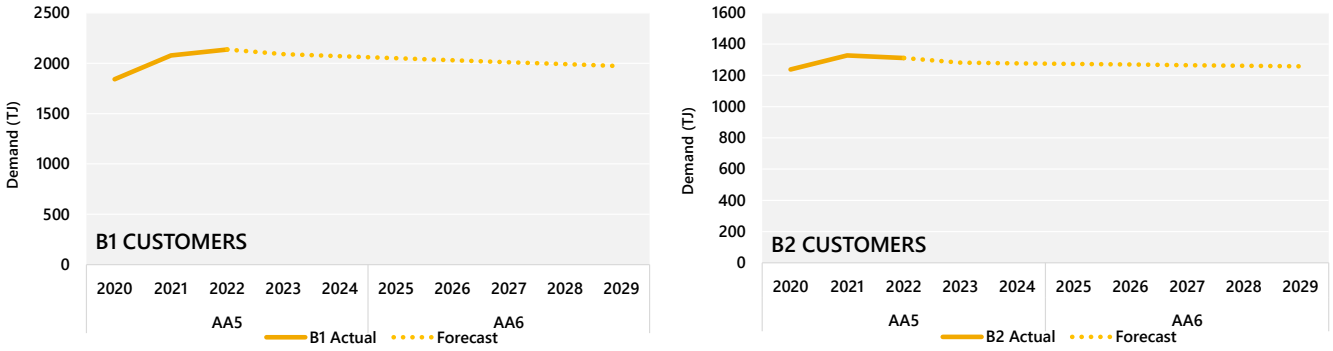


Table 7.4: Forecast connection numbers and demand for B1 & B2 (Commercial) customers

TARIFF CLASS	2024	2025	2026	2027	2028	2029	CAGR*
B1 TARIFF							
Average Customer Base	2,055	2,114	2,175	2,238	2,303	2,370	2.90%
Demand (TJ)	2,070	2,050	2,030	2,010	1,990	1,971	-0.97%
B2 TARIFF							
Average Customer Base	12,899	13,145	13,395	13,649	13,909	14,173	1.90%
Demand (TJ)	1,277	1,273	1,269	1,265	1,261	1,258	-0.30%
TOTAL							
Average Customer Base	**14,954**	**15,259**	**15,570**	**15,887**	**16,212**	**16,543**	**2.04%**
Demand (TJ)	**3,347**	**3,323**	**3,299**	**3,275**	**3,252**	**3,229**	**-0.71%**

* Compound Annual Growth Rate

7.7 B3 DEMAND FORECAST

-1.8%
DEMAND

B3 demand is forecast to decrease from 9,787 TJ in 2024 to 8,939 TJ in 2029.

Our demand forecast for B3 customers is shown in Figure 7.5 and Table 7.5.

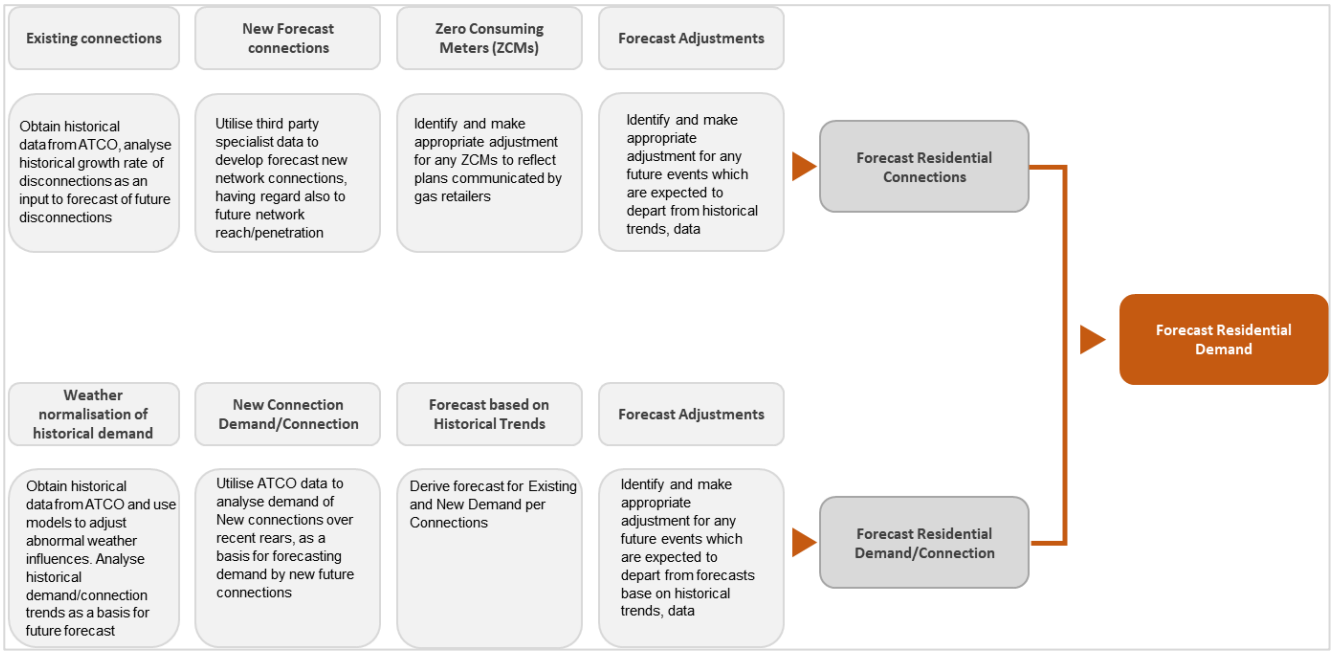
We have derived our B3 demand using a bottom-up approach as the product of forecast connections and demand per connection. We have considered historical trends and expectations of future drivers of demand, which are not present in the historical data trends – both macro and micro in nature. The approach used to derive the B3 demand forecast is outlined in Figure 6.3.

Projections on B3 connections use HIA information on housing commencements to forecast WA dwellings completion over AA6 and apply a Network Penetration rate. It is assumed that the HIA projections include the impact of interest rate movements reflective at that time on housing commencements.

The forecast of WA dwelling completions is based on HIA forecast commencement data dated May 2023 which is lagged by one year with adjustment after 2023 for a further two months lag reflective of persisting resourcing constraints.

The network penetration rate is based on historical actual penetration and trends, which has been adjusted for additional factors expected to influence future connections, not reflected in historical trends.

Figure 7.4: B3 demand forecast method[25]



25 *Source:* Core Energy

- **Connections**

  The customer base is expected to grow at 1.1% p.a. This growth rate is reflective of forecast population growth and dwelling completions for Perth through to 2029.

- **Demand per connection**

  On a 'weather-normalised' basis, average demand per connection is forecast to decline from 12.17 GJ per customer in 2025 to 10.86 GJ per customer in 2029 at a rate of 2.8%[26]. This rate is a moderately higher rate of decline than experienced pre COVID-19 (2.4% between 2008 and 2019). It is consistent with a materially lower rate in average demand observed for new customers. This decline can be attributed to improved gas appliance efficiency, improved dwelling energy efficiency, changes in consumer behaviour and price response along with trend in substitution away from gas heating to Reverse-Cycle air-conditioning and some substitution toward solar water heating – impacting both new dwellings and replacements in other dwellings.

The reduction in our B3 demand forecast results from a decline in average usage as explained above.

Figure 7.5: Historical and forecast total B3 demand

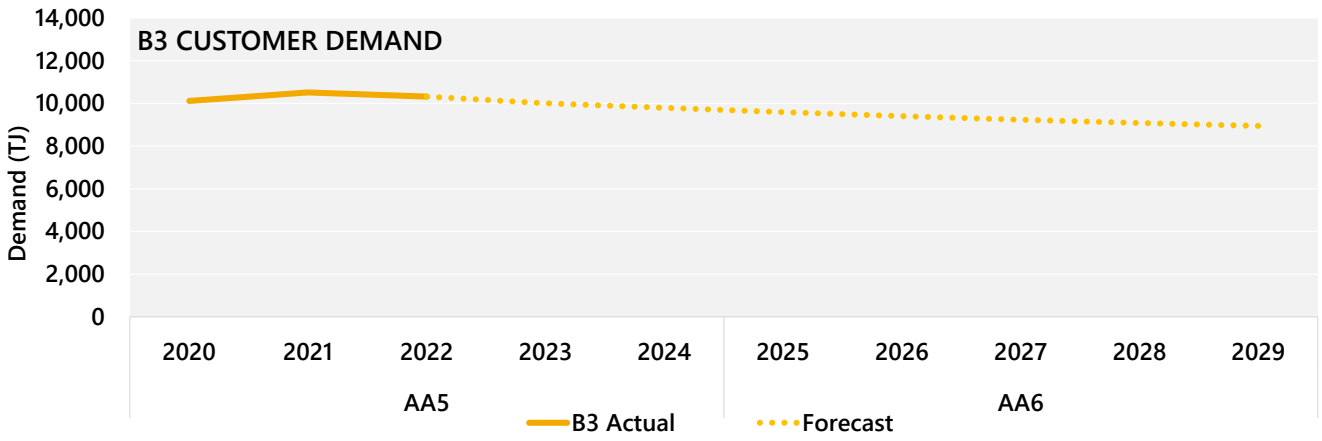


Table 7.5: Forecast connection numbers and demand for B3 customers

TARIFF CLASS	2024	2025	2026	2027	2028	2029	CAGR*
B3 TARIFF							
Average Customer Base	779,503	786,470	794,293	803,215	812,819	822,736	1.09%
Demand (TJ)	9,787	9,585	9,397	9,226	9,074	8,939	-1.80%

* Compound Annual Growth Rate

7.8 OVERALL DEMAND FORECAST

The AA6 overall demand forecast is shown in Table 7.6.

[26] Based on Core report data, which uses end of period customer numbers to calculate average consumption.

Table 7.6: AA6 Total Demand Forecast

TARIFF CLASS	2024	2025	2026	2027	2028	2029	CAGR*
A1 TARIFF							
Average Customer Base	76	76	76	76	76	76	0.00%
Demand (TJ)	15,048	15,221	14,973	14,950	14,884	14,841	-0.28%
A2 TARIFF							
Average Customer Base	105	105	105	105	105	105	0.10%
Demand (TJ)	1,912	1,933	1,920	1,916	1,911	1,906	-0.06%
B1 TARIFF							
Average Customer Base	2,055	2,114	2,175	2,238	2,303	2,370	2.90%
Demand (TJ)	2,070	2,050	2,030	2,010	1,990	1,971	-0.97%
B2 TARIFF							
Average Customer Base	12,899	13,145	13,395	13,649	13,909	14,173	1.90%
Demand (TJ)	1,277	1,273	1,269	1,265	1,261	1,258	-0.30%
B3 TARIFF							
Average Customer Base	779,503	786,470	794,293	803,215	812,819	822,736	1.09%
Demand (TJ)	9,787	9,575	9,389	9,220	9,070	8,937	-1.76%
TOTAL							
Average Customer Base	**794,637**	**801,909**	**810,043**	**819,283**	**829,211**	**839,460**	**1.10%**
Demand (TJ)	**30,094**	**30,062**	**29,589**	**29,367**	**29,112**	**28,915**	**-0.80%**

* Compound Annual Growth Rate

7.9 FORECAST DEMAND FOR ANCILLARY SERVICES

Our volume forecast for ancillary reference services is shown in Table 7.7. Ancillary services across all categories relate mainly to B3 connections, and as a result, the forecast level of ancillary services is correlated to the forecast growth in B3 customers.

During the COVID-19 period, there was a moratorium on disconnections by retailers. Disconnections are assumed to slowly ramp up in AA6 as Retailers gradually revert to pre-COVID-19 business practices for credit control. Demand for ancillary services is forecasted to take longer to reach the pre-

COVID-19 level. Although hardship cases are at the highest recorded level due to the debts accrued during the disconnection pause (2021/22), there appears to be more success by customers completing hardship plans including the use of instalment plans leading to a reduction in disconnections due to non-payment.

Table 7.7: Forecast demand for ancillary services

ANCILLARY SERVICE	*2024*	2025	2026	2027	2028	2029	CAGR*
Applying a Meter Lock	*6,024*	8,651	8,737	8,835	8,941	9,050	8.5%
Removing a Meter Lock	*5,457*	8,454	8,544	8,645	8,750	8,857	10.2%
Deregistering a delivery point	*3,477*	3,508	3,543	3,582	3,625	3,669	1.1%
Disconnecting a Delivery Point	*2,423*	3,696	3,733	3,775	3,820	3,867	9.8%
Reconnecting a Delivery Point	*1,678*	3,067	3,098	3,133	3,170	3,209	13.8%
Permanent disconnection	*1,379*	1,671	2,047	2,120	2,180	2,217	5.8%
Special meter reads	*101,335*	102,241	103,258	104,418	105,666	106,956	1.1%

* Compound Annual Growth Rate – from 2024 to 2029

7.10 PIPELINE USAGE

The actual and forecast average, minimum, and maximum demand per day for AA6 is shown in Figure 7.6 and Table 7.8 below.

Figure 7.6: Actual and AA6 forecast average, minimum, and maximum demand per day

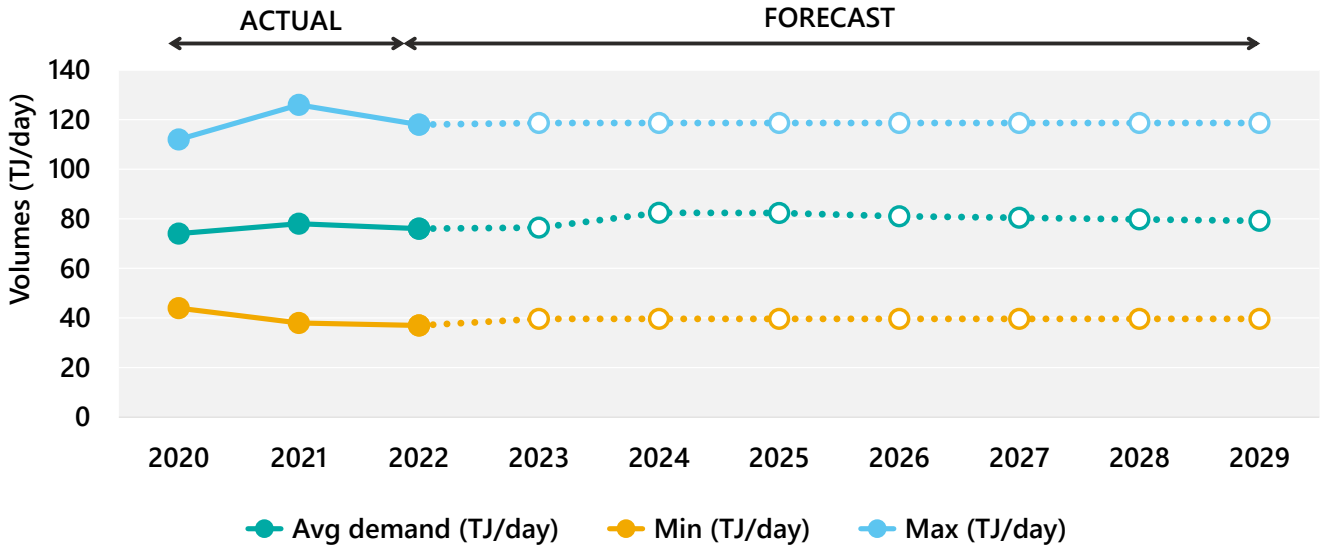


Table 7.8: Minimum, maximum, and average demand forecast for AA6 (TJ / day)

DEMAND AA6	2024	2025	2026	2027	2028	2029	CAGR*
Average	82	82	81	80	80	79	-0.80%
Minimum	40	40	40	40	40	40	0.00%
Maximum	119	119	119	119	119	119	0.00%

7.11 FORECAST LENGTH OF MAINS

The growth in the length of mains relates primarily to the growth in B3 customer connections. As a result, the forecast length of mains is correlated to the forecast growth in B3 customers (1.09% p.a.) as shown in Table 7.9.

Table 7.9: Length of mains forecast for AA6 (km)

	2024	2025	2026	2027	2028	2029	CAGR*
Mains Length	14,535	14,664	14,808	14,961	15,121	15,282	1.00%

* Compound Annual Growth Rate

8. KEY PERFORMANCE INDICATORS

CHAPTER HIGHLIGHTS

1. Although there is no requirement to state our key performance indicators (KPIs) within this Access Arrangement Information, we are including KPIs within our 2025-29 Plan to enable stakeholders to understand the key metrics we use to judge our performance.
2. ATCO has selected 11 KPIs that align with our strategic pillars of safe, reliable, affordable, and sustainable.

8.1 INTRODUCTION

ATCO has selected 11 KPIs that align with our strategic pillars of safe, reliable, affordable, and sustainable. These KPIs reflect our performance and are important drivers for AA6 network investment.

8.2 STAKEHOLDER FEEDBACK

In preparing this 2025-29 Plan, we have sought feedback through our AA6 Engagement program. Through these sessions, we have recognised that our service requirements and network reliability, with a focus on future initiatives, are important, and therefore, worth maintaining our strong baseline from AA5 into AA6. The engagement activities we have completed to date, as outlined in Chapter 4, support our expenditure plans that underpin our KPIs.

Table 8.1 summarises the feedback received from our stakeholders and our respective responses.

Table 8.1: Consideration of stakeholder feedback on our AA6 KPIs

STAKEHOLDER FEEDBACK	OUR RESPONSE
Clearer explanation of decarbonisation plans and implications for expenditure, along with info about emissions reductions to date.	We have provided further information related to our Sustainability KPIs, including UAFG rates and reduction in carbon emissions. In support of Table 8.2, we have added Section 8.8 to explain our calculation methodologies and specific values. Supporting these KPIs are two distinct strategies that provide further detail in the building blocks and our plans to meet our targets: • Our UAFG Strategy Forecast (*see Attachment 09.008*) • Renewable Gas Delivery Strategy (*see Attachment 03.004*)
Consider an annual productivity improvement to total OPEX, aligned with other gas networks (as is best practice)	We have provided two KPIs related to our opex efficiency to utilise as a benchmark against our industry peers. We have sought expert analysis of how we benchmark against other gas distribution businesses in Australia (*see Attachment 09.003*), and our forecast of opex per customer and opex per km of main shown in Section 8.7 provides a view of our future productivity.

STAKEHOLDER FEEDBACK	OUR RESPONSE
How does PVC Replacement program assist with addressing UAFG challenges?	The components of UAFG and the reasons that UAFG is a factor in gas distribution are outlined in *Attachment 09.008*. A contribution to UAFG in the network is leak sources on PVC piping. Replacing PVC mains and services reduces leakage points within the network, thus reducing UAFG and the associated emissions as presented in Section 8.8.1.
Generally supportive of decarbonisation efforts, despite some uncertainty around renewable future and how an access arrangement can accommodate these types of ambitions before policy is set	We have detailed our future of gas plans in Chapter 3, however, our expenditure plans outlined in Chapter 9 and Chapter 10 provide the plans to support decarbonisation and the KPIs outlined in Section 8.8 are the outcome of our strategies detailed in the Renewable Gas Delivery Strategy (*see Attachment 03.004*).
Asset KPIs seem reasonable, however the affordability KPIs may be low, given interest rate increases and supply chain issues. It's most likely the targets ensure that ATCO maintains its current performance.	Our Safety and Reliability KPIs are outlined in Table 8.2 with further detail provided in Sections 8.5 and 8.6, respectively. Our KPIs related to affordability are based on our forecast expenditure plans as detailed within the 2025-29 Plan with alignment to these KPIs in Chapter 9 and Chapter 10.

8.3 RECENT REGULATORY CHANGES

In 2018, the Australian Energy Market Commission (AEMC) recommended[27] several changes regarding the scope of economic regulation for covered pipelines (this includes the ATCO Gas distribution network). One of these recommendations was to remove KPIs from the Access Arrangement Information requirements, reasoning that service level outcomes related to pricing determination were better managed through existing mechanisms.

Although the requirement to state our KPIs within AA6 has been removed[28], we have included KPIs in our 2025-29 Plan to enable stakeholders to understand the metrics we use to judge our performance. We believe stakeholders should be clear on ATCO's priorities and how capex and opex are influenced and driven by our various service levels.

Table 8.2 describes the AA6 KPIs and target performance level.

[27] AEMC, Review into the scope of economic regulation applied to covered pipelines, Final Report, 3 July 2018.

[28] Through the deletion of Rule 72(1)(f) in the NGR.

Table 8.2: AA6 Key Performance Indicators and Targets

KPI	DESCRIPTION	*AA5 TARGET*	AA6 TARGET 2025	2026	2027	2028	2029
SAFETY							
Total public reported gas leaks per 100 kilometres of main	Total number of confirmed gas leaks reported by the public (excluding third party damage) per 100 kilometres of main per year. This indicator is included in our Safety Case *(see Attachment 02.002)* and supported in our People targets within our Sustainability Strategy *(see Attachment 03.003)*.	*<0.65*			<0.62		
Attendance to broken mains and services within one hour	The % of attendance to broken mains and services within one hour of the service request being received. This indicator is included in our Safety Case and supported in our People targets within our Sustainability Strategy.	*>99.9%*			>99.9%		
Attendance to loss of supply within three hours	The percentage of attendance to loss of gas supply within three hours of the service request being received. This indicator is included in our Strategic Asset Management Plan (SAMP) *(see Attachment 10.012)*.	*>99.9%*			>99.9%		
Total Recordable Injury Frequency Rate (TRIFR)	The number of incidents that result in an employee receiving medical treatment, restricted work or losing time. This indicator is included in our People targets within our Sustainability Strategy *(see Attachment 03.003)*.	*<1.2*			<1		
RELIABILITY							
Asset Health Index	Based on unplanned SAIDI & SAIFI, and mains, service, and meter leaks.	*100*			100		
SAIFI	The **number** of supply interruptions experienced by the average customer as a result of sustained unplanned interruptions, calculated as (sum of the number of customers interrupted) / (number of customers served). This indicator is included in our SAMP.	*<0.0041*			<0.0035		

KPI	DESCRIPTION	*AA5 TARGET*	AA6 TARGET 2025	2026	2027	2028	2029
SAIDI	The **duration** of supply interruptions experienced by the average customer as a result of sustained unplanned interruptions, calculated as (sum of the duration of customer outages) / (number of customers served). This indicator is included in our SAMP.	*<2.00*			<1.60		
AFFORDABILITY							
Opex per km of main	The total opex per year divided by the total km of main. This indicator is based on our opex forecast and demand forecast provided in Chapters 9 and 7 respectively.	*$5,226**	$5,853	$6,554	$6,597	$6,033	$5,983
Opex per customer connection	The total opex per year divided by the total number of customer connections. This indicator is based on our opex forecast and demand forecast provided in in Chapters 9 and 7 respectively.	*$98**	$106	$118	$118	$108	$106
SUSTAINABILITY							
UAFG Rate	UAFG is the difference between the measurement of the quantity of gas *delivered into* the gas distribution system in each period, and the measurement of the quantity of gas *delivered from* the gas distribution system during that period. This indicator is included in our UAFG Forecast and Pricing Strategy *(see Attachment 09.008)*.	*2.37%**	1.67%	1.67%	1.65%	1.65%	1.64%
Carbon Emissions	Net emissions (scope 1) due to ATCO operations measured in tonnes of CO_2-e (carbon dioxide equivalent). This indicator is included in our Renewable Gas Delivery Strategy and supported in our environmental targets outlined in our Sustainability Strategy.	*76,991**	68,987	60,342	59,504	55,156	54,482

**Targets are shown for 2024, the final year of the AA5 period*

8.4 METHOD TO SET AA6 TARGETS

We have set our AA6 KPI targets by:

- Aligning our new set of KPIs to the AA6 strategic pillars. This included updating our existing KPIs to reflect the changing energy landscape and introducing new KPIs (including TRIFR, SAIFI and carbon emissions).
- Using an average of our service performance over the past five years for those KPIs retained from AA5. This provides a basis for analysis and moderates external environmental effects that may have influenced results in any year.
- Aligning with AA6 forecast expenditure, customer numbers, and length of mains.
- Setting UAFG targets based on volume demand forecasts and historical information overlayed with our commitment to greenhouse gas reduction.

The sections below provide further detail regarding each KPI:

- Historical context
- Alignment to the plans outlined in the 2025-29 Plan for AA6
- Further detail on the methodology for forecasting and technical definitions.

8.5 SAFETY

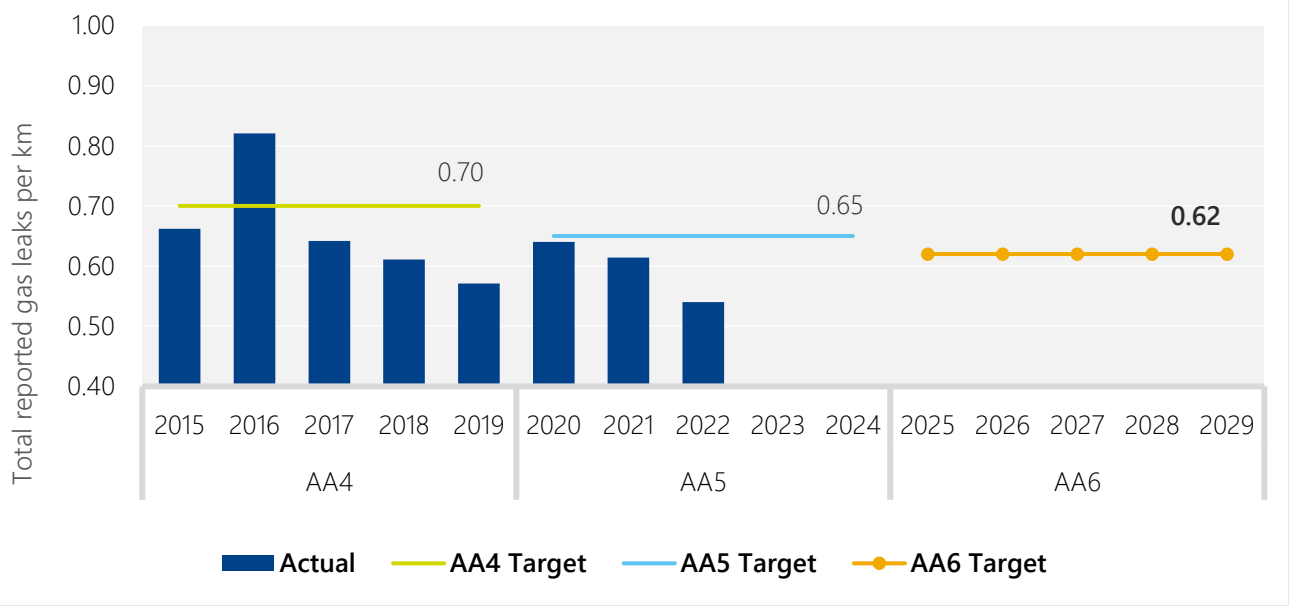
Safety is fundamental to who we are and what we do and is one of our values. The three Safety KPIs we propose are:

- Total public reported gas leaks per km of main
- Attendance to broken mains and services within one hour (%) and attendance to loss of gas supply within three hours (%)
- Total recordable injury frequency rate.

8.5.1 TOTAL PUBLIC REPORTED GAS LEAKS PER KM OF MAIN

'Public reported gas leaks' is an existing KPI that reflects the performance of the network and our maintenance activities. Figure 8.1 shows our AA4 and AA5 performance and target for AA6.

Figure 8.1: Total public reported gas leaks per kilometre main



8.5.2 ATTENDANCE TO BROKEN MAINS AND SERVICES AND ATTENDANCE TO LOSS OF GAS SUPPLY

Timely emergency response to asset damage is important for the safety of the network, the people working on site, and the public. We must respond to broken mains and services and loss of gas supply promptly and within the prescribed KPI timeframes. We propose to maintain our emergency response capability against these two KPIs, ensuring that a high standard of fault response and safety performance is maintained.

Figure 8.2 and Figure 8.3 show our AA4 and AA5 performance and target for AA6.

Figure 8.2: Attendance to broken mains and services within one hour

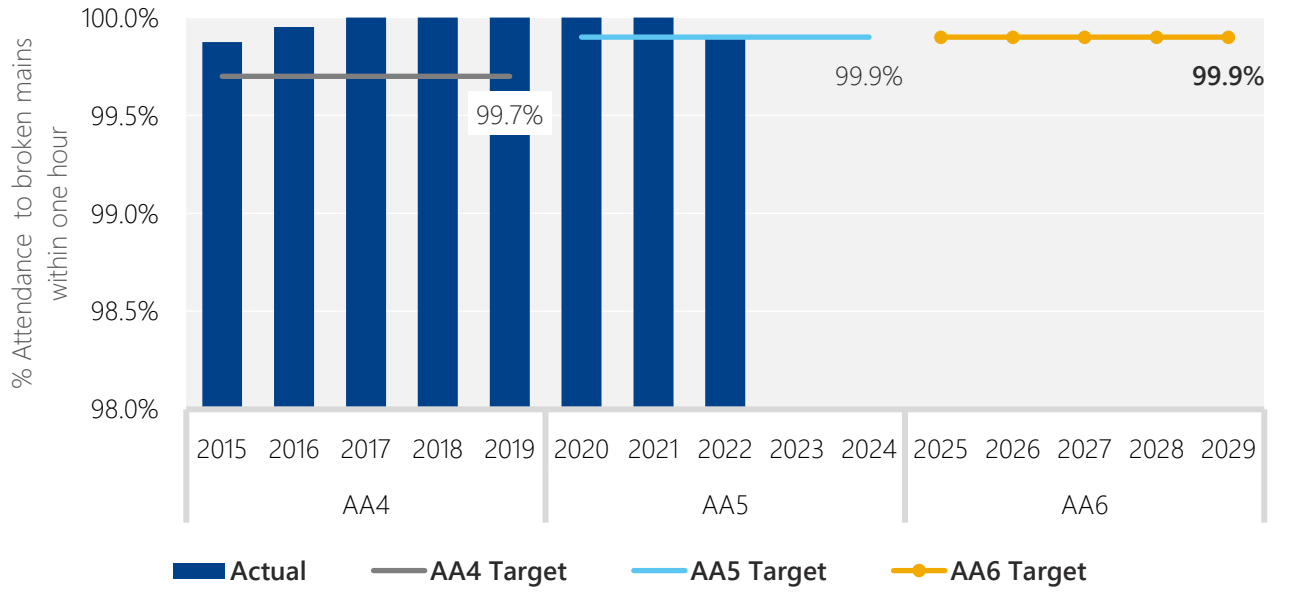
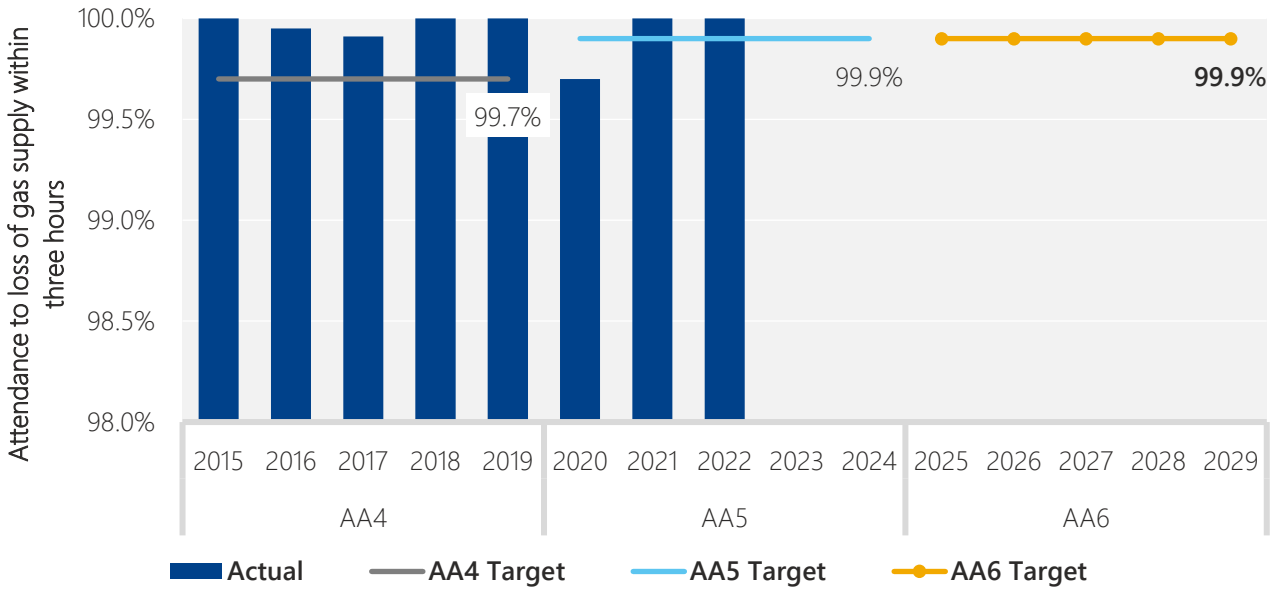


Figure 8.3: Attendance to loss of gas supply within three hours

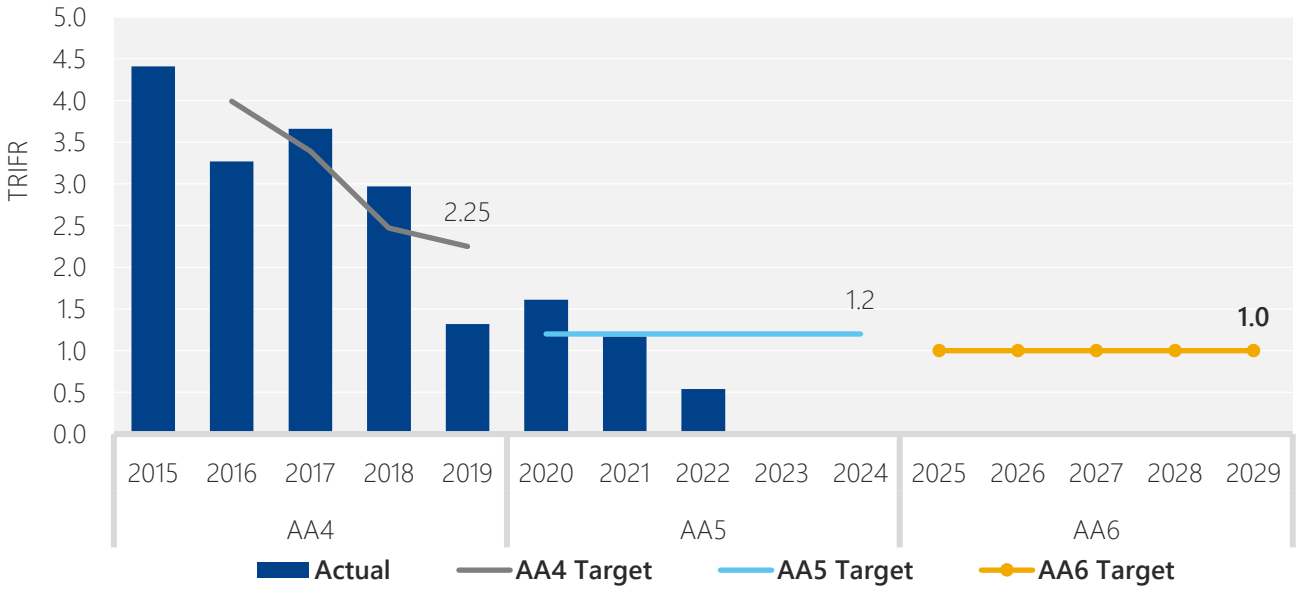


8.5.3 TOTAL RECORDABLE INJURY FREQUENCY RATE (TRIFR)

ATCO is responsible for providing a safe working environment and has policies and procedures in place to prevent incidents. Total Recordable Injury Frequency Rate (TRIFR) refers to the frequency of recordable work-related injuries or illness for each 200,000 hours worked. TRIFR captures work-related injuries or illnesses where the outcome resulted in medical treatment/medical aid, restricted work, lost time, or a fatality. ATCO will continue to drive for a TRIFR consistently less than 1.0 and build on our recent safety performance in AA5.

Figure 8.4 shows our AA4 and AA5 performance and target for AA6.

Figure 8.4: Total Recordable Injury Frequency Rate



8.6 RELIABILITY

Reliability refers to the consistency and dependability of the network to deliver gas to customers. ATCO continues to work to maintain reliability levels through upgrading and maintaining our infrastructure, monitoring and controlling the flow of natural gas, and implementing emergency response plans.

The three KPIs for reliability we propose are:

- Asset Health Index
- SAIFI (System Average Interruption Frequency Index)
- SAIDI (System Average Interruption Duration Index).

8.6.1 ASSET HEALTH INDEX

Asset Health Index (**AHI**) is a metric used to measure the overall health of ATCO's assets, considering various factors, including asset age, condition, performance, and the likelihood of failure. The AHI is represented as a ratio, with a ratio higher than 100 indicating a higher level of asset health. The AHI assists in prioritising maintenance activities, helping to improve reliability and reduce costs and risk.

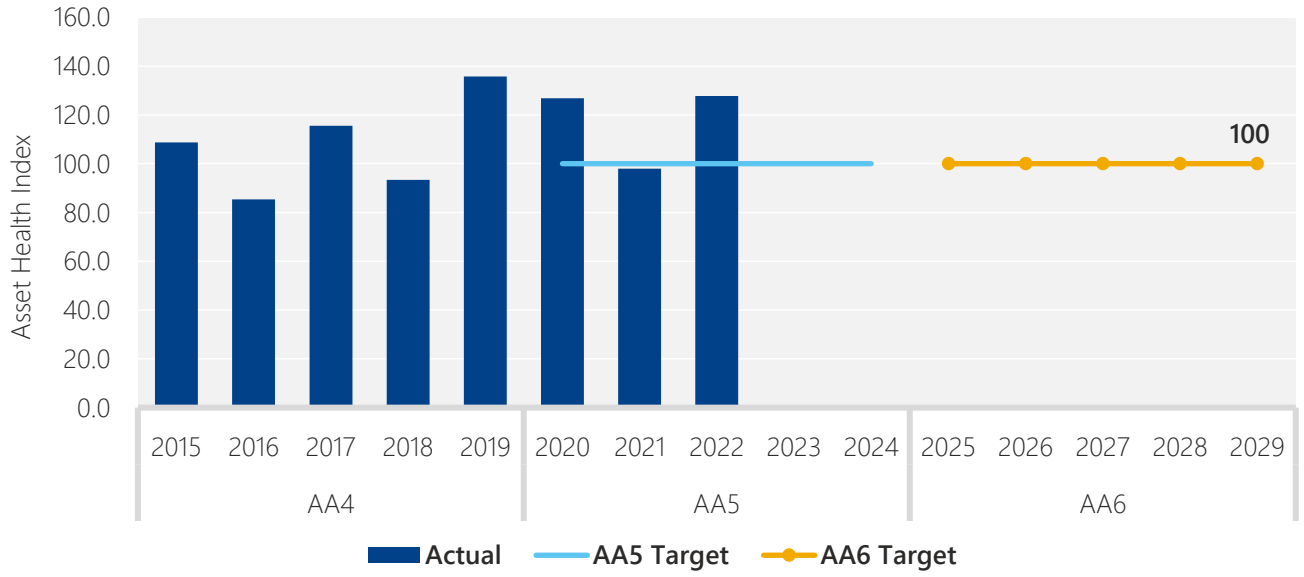
The AHI was first adopted as a KPI for AA5, and we propose to continue with AHI for AA6. The index is based on the weighted average of the index scores for unplanned SAIDI, unplanned SAIFI, mains leaks, service leaks, and meter leaks. Each index score is calculated as follows:

$$Index_n = 200 - \left(\frac{Actual_n}{Target_{2029}}\right) \cdot 100$$

We have set the target performance for each parameter to reflect the expected level of performance in 2029 to enable the AHI to demonstrate the value of the proposed asset expenditure over AA6.

Figure 8.5 shows our AA4 and AA5 performance and target for AA6.

Figure 8.5: Asset Health Index



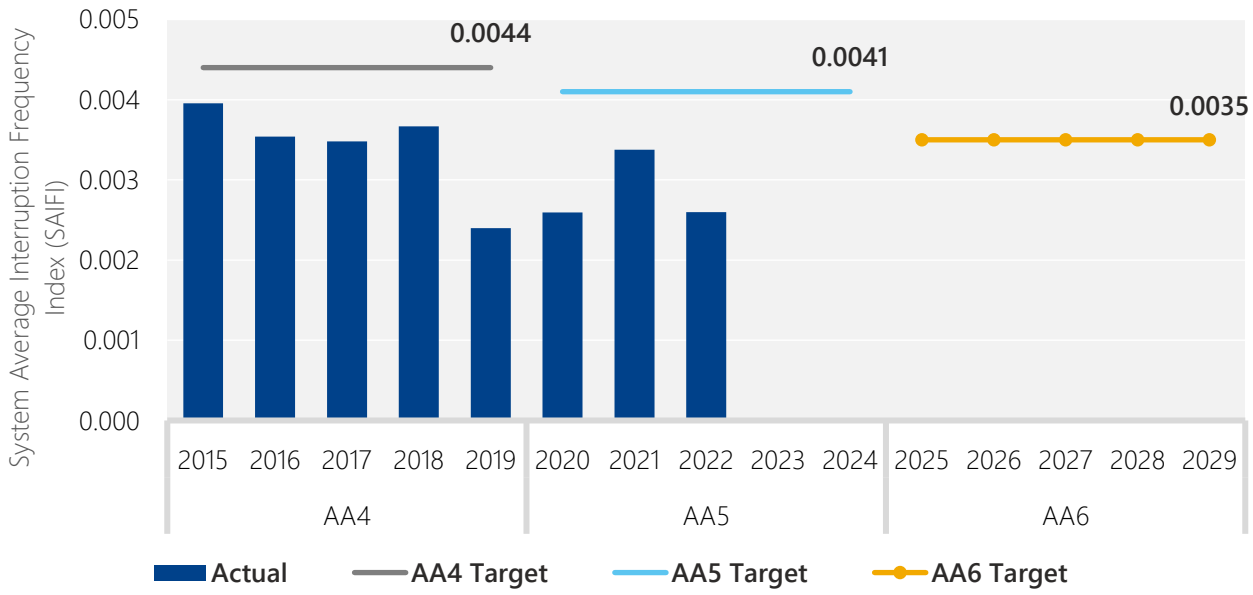
8.6.2 SAIFI (SYSTEM AVERAGE INTERRUPTION FREQUENCY INDEX)

System Average Interruption Frequency Index (SAIFI) is an industry-accepted measure for reliability, indicating the average number system of interruptions a customer would experience in a year. The lower the SAIFI, the more reliable the distribution system is considered to be. SAIFI (and the closely related SAIDI) is easily benchmarked against peers and assists with comparing performance amongst peers.

During AA6, we will continue to invest in the network to maintain reliability for customers and improve 'at risk' areas of the network.

Figure 8.6 shows our AA4 and AA5 performance and target for AA6.

Figure 8.6: System average interruption frequency index (SAIFI)



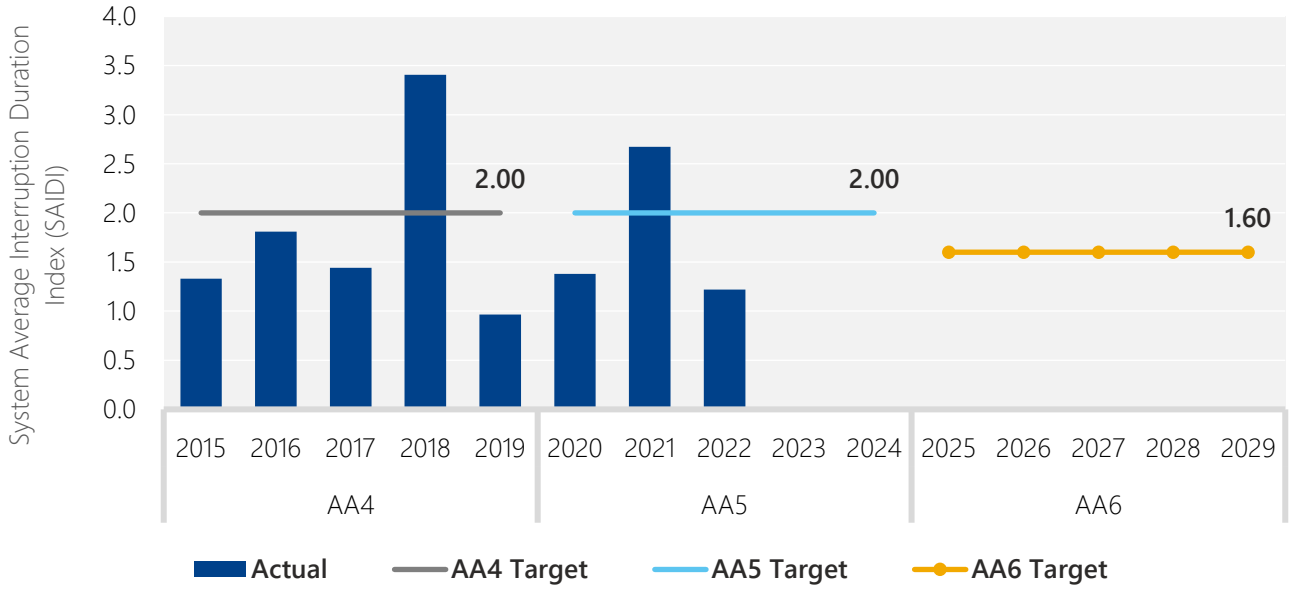
8.6.3 SAIDI (SYSTEM AVERAGE INTERRUPTION DURATION INDEX)

SAIDI, or System Average Interruption Duration Index is an industry accepted measure for reliability; indicating the average time for a system outage that a customer would experience in a year. The lower the SAIDI value, the greater the reliability of the network.

We are introducing SAIDI as a KPI in AA6 to provide a complete picture of the reliability of our network. During AA6, we will continue to invest in the network, including reinforcement of areas (backing up supply) to maintain reliability for customers.

Figure 8.7 shows our performance against this indicator during AA6 and our target performance over AA4 and AA5.

Figure 8.7: System average interruption duration index (SAIDI)



8.7 AFFORDABILITY

Affordability is a concern for customers, and we are committed to ensuring that customers are receiving service at an efficient cost. As with AA5, we have continued 'opex per km of main' and 'opex per customer connection' as affordability KPIs for AA6. Each of these KPIs can be used as a historical benchmark or used as a benchmark against industry peers.

8.7.1 OPEX PER KILOMETRE (KM) OF MAIN

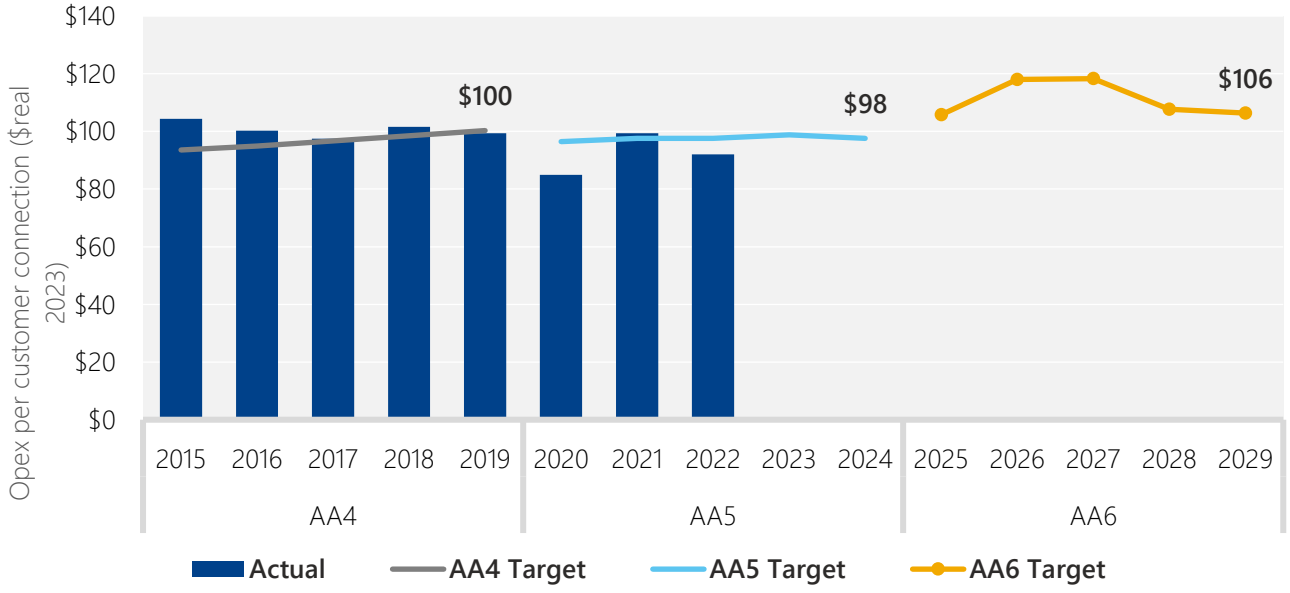
Opex per km is an existing KPI that normalises performance and demonstrates the level of operational spend against our existing asset base. Our historical and forecast opex per km over AA4 and AA5 and our expected performance for AA6 is shown in Figure 8.8. Our forecast opex per km includes the impact of the changes to the accounting treatment for software as a service, which is not included in the historical data.

Figure 8.8: Opex per km of main ($real as at 31 December 2023)

8.7.2 OPEX PER CUSTOMER CONNECTION

The opex per customer connection is an existing KPI that normalises performance and demonstrates the level of operational spend against our customer base. The opex per customer connection over AA4 and AA5 and our expected performance for AA6 are shown in Figure 8.9. Our forecast opex per customer connection includes the impact of the changes to the accounting treatment for software as a service which is not included in the historical data.

Figure 8.9: Opex per customer connection ($real as at 31 December 2023)



8.8 SUSTAINABILITY

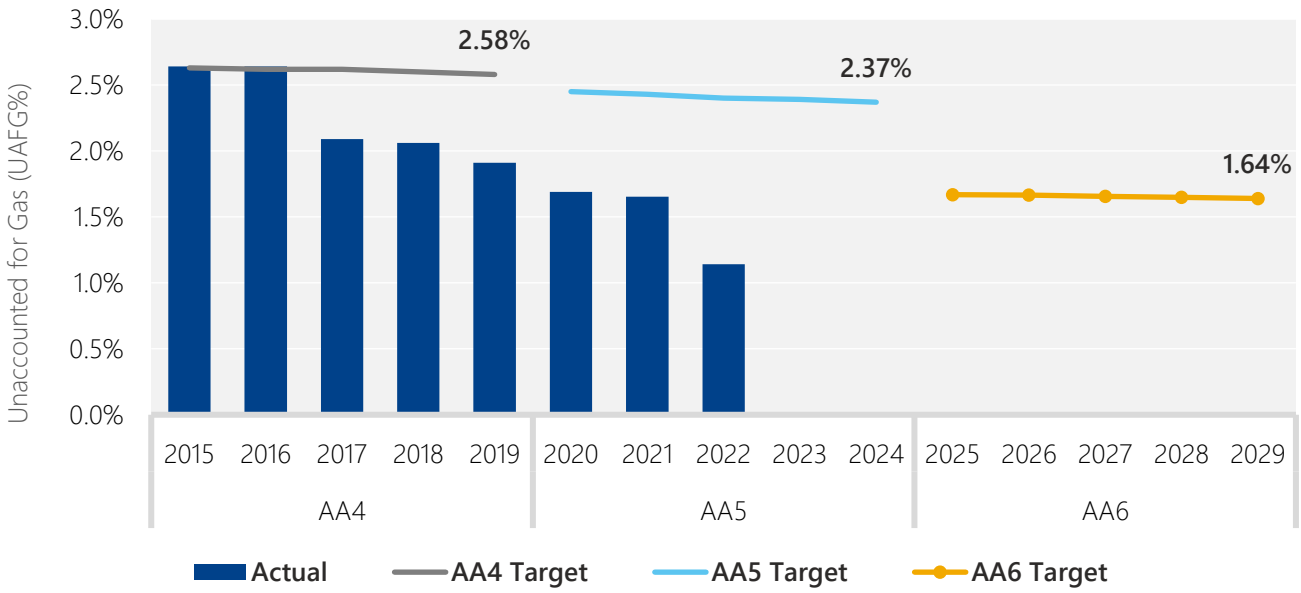
In January 2022, ATCO Group announced an initial set of 2030 sustainability targets.[29] In response, we developed a Sustainability Strategy for ATCO Gas Australia *(see Attachment 03.003)*. Sustainability involves balancing environmental, social and governance considerations in decision-making processes and ensuring resources are used responsibly and equitably. Sustainability is an important societal issue and we recognise that we have a role to play to achieve a sustainable future.

Our Sustainability Strategy includes a KPI for reduction of net emissions (Scope 1) that we are introducing in AA6.

8.8.1 UNACCOUNTED FOR GAS (UAFG) ROLLING 12 MONTHS (%)

UAFG is an existing KPI calculated as the difference between the amount of gas that is supplied into our network and the amount that is delivered to end users through metering and billing. ATCO needs to monitor and reduce UAFG as it represents a cost to both customers and the environment. Figure 8.10 shows our performance against this indicator during AA4 and AA5, and our AA6 forecast. It should be noted that the calculated value of UAFG in 2022 was significantly below the forecast value due to higher than expected ambient temperature effect on end user meters.

Figure 8.10: Unaccounted for gas (UAFG)



8.8.2 NET EMISSIONS (SCOPE 1):

Net emissions (Scope 1) is a new KPI for AA6. Scope 1 emissions refer to the greenhouse gases released into the atmosphere directly due to ATCO's operational activities (the majority of these emissions are due to UAFG). By monitoring carbon emissions, we can take steps to reduce our emissions and adopt more sustainable practices, consistent with our Sustainability Strategy. ATCO currently reports its scope 1 emissions to the Clean Energy Regulator as part of the National

[29] Available here - https://www.atco.com/en-ca/our-commitment/sustainability/esg-targets.html

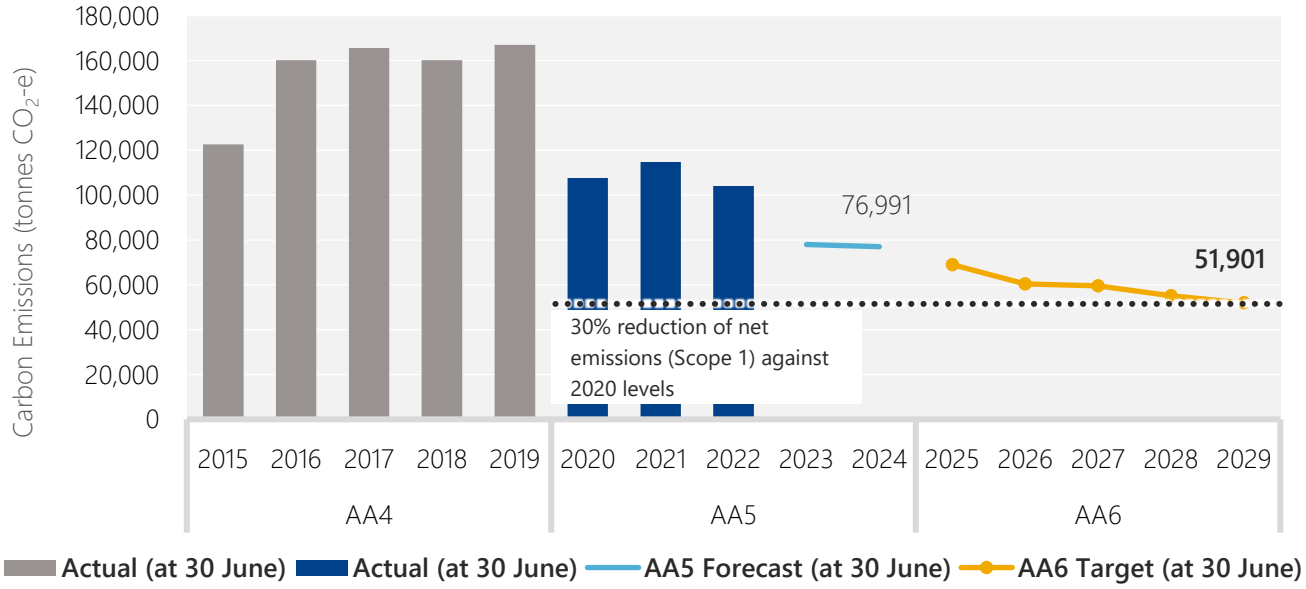
Greenhouse and Energy Reporting (**NGER**) Scheme and Safeguard Mechanism requirements on a tonnes of carbon dioxide equivalent (**t CO2-e**) basis.[30] For consistency with our reporting with the Clean Energy Regulator, this KPI is measured on a financial year basis rather than a calendar year basis.

The calculation of this AA6 KPI incorporates two components:

- Amendments to the calculation method, including a change to the reporting method in 2019 and a formula change in the *National Greenhouse and Energy Reporting Regulations 2008* in 2023.
- Reduction in net emissions (Scope 1) to 30% below 2020 figures by 2030. Our Renewable Gas Delivery Strategy *(see Attachment 03.004)* provides further detail on our plans and investments to meet this target.

Figure 8.11 shows our performance against this indicator during AA4, AA5, and our AA6 forecast.

Figure 8.11: Net emissions (Scope 1) (tonnes CO_2-e)



[30] In measuring scope 1 emissions for this KPI we will be consistent with the greenhouse gases and definitions on the National Greenhouse and Energy Reporting Scheme (NGERS), available at: https://www.cleanenergyregulator.gov.au/NGER/About-the-National-Greenhouse-and-Energy-Reporting-scheme/Greenhouse-gases-and-energy.

9. FORECAST OPERATING EXPENDITURE

CHAPTER HIGHLIGHTS

1. Our opex forecast has been developed using both the base-step-trend method and specific forecasting methods.
2. We forecast opex of $455.9 million during AA6, compared to the ERA's Final Decision of $378 million by the end of AA5.

9.1 INTRODUCTION

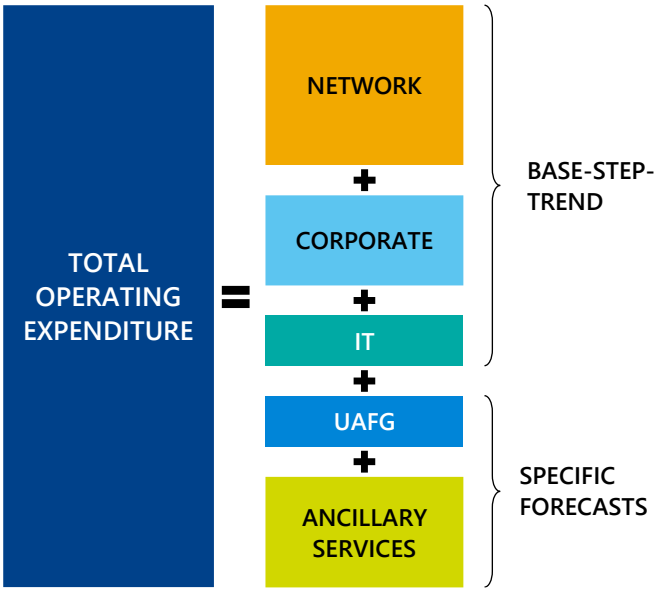
Our AA6 opex forecast will allow ATCO to operate and maintain the network for our customers, respond to publicly reported gas leaks, and read customer meters.

Our opex categories are outlined in Figure 9.1 and consist of Network, Corporate, IT, UAFG, and Ancillary Services expenditure.

We have applied the base-step-trend (**BST**) approach to forecasting opex for the network, corporate, and IT categories. Regulators commonly apply the BST method. *Section 9.4* provides further details of this method.

We have included two 'specific forecasts' in our submission for opex relating to UAFG and proposed Ancillary Services in AA6.

Figure 9.1: Opex categories



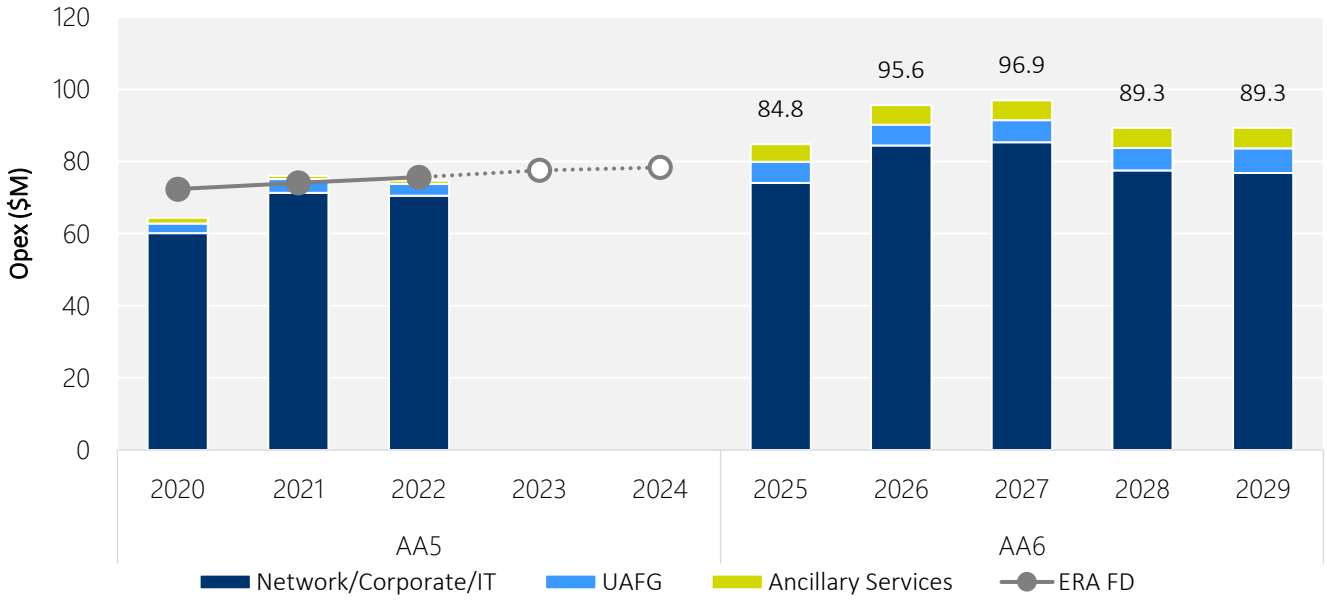
This chapter outlines our opex forecasts, forecasting approach, and the primary drivers of AA6 opex. Our forecasts incorporate stakeholder feedback and our approach to safety, reliability, affordability, and sustainability.

9.2 OVERVIEW

Consistent with the BST approach, our actual opex from the most recent complete calendar year (2022) is used as representative of our AA6 opex levels.

Figure 9.2 shows the comparison between actual and forecast opex. The AA6 forecast opex is $78 million higher than the ERA AA5 Final Decision. A portion of this increase is due to the Permanent Disconnection service becoming an ancillary reference service and changes to Intangible assets accounting standards - 'Software-as-a-Service' (**SaaS**). On a like-for-like basis, the AA6 forecast opex is $39 million higher than the AA5 Final Decision.

Figure 9.2: Opex per category – AA5 vs AA6 ($million real as at 31 December 2023)



Our AA6 opex forecast is detailed in Table 9.1:

Table 9.1: Forecast AA6 opex summary ($million real as at 31 December 2023)

OPEX CATEGORY	2025	2026	2027	2028	2029	TOTAL
Network/Corporate/IT	74.1	84.4	85.3	77.5	76.8	**398.1**
UAFG	5.8	5.8	6.1	6.2	6.8	**30.8**
Ancillary	4.9	5.4	5.5	5.6	5.7	**27.1**
TOTAL	**84.8**	**95.6**	**96.9**	**89.3**	**89.3**	**455.9**

9.3 REGULATORY FRAMEWORK

Consistent with Rule 91 of the NGR, our opex forecast is required to reflect that required by a prudent distributor, acting efficiently and in accordance with good industry practice to achieve the lowest sustainable cost of providing Reference Services to customers. Any forecast or estimate must be arrived at on a reasonable basis and must represent the best forecast or estimate possible in the circumstances.

9.4 FORECAST METHOD

We have developed our forecasts on a reasonable basis, based on the best available information. Our AA6 opex forecasting used two methods:

1. The **base-step-trend method** (BST).
2. **Specific forecasts** using volume-based activities multiplied by a unit rate to calculate total annual expenditure.

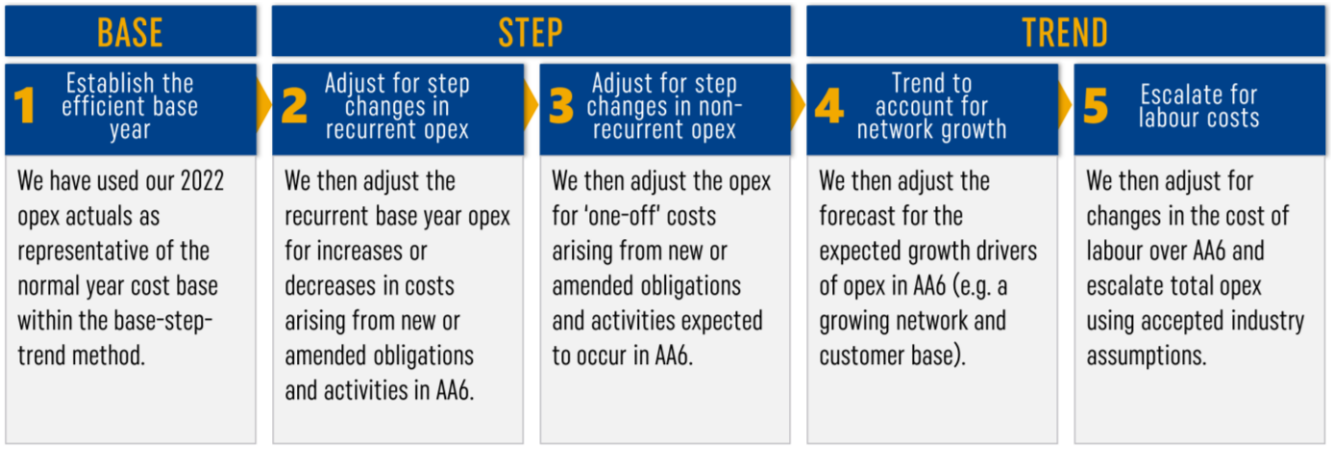
9.4.1 BASE-STEP-TREND METHOD

Forecasting opex using the BST method takes the efficient costs incurred in the base year and uses the assumption that opex is mostly recurrent.[31] BST forecasting starts by establishing our base opex, then adjusting for:

- any expenditure not reflective of the recurrent cost base
- categories of opex affected by discrete step changes
- changes in output and cost input trends over the period.

The BST method of forecasting opex is a commonly accepted method and is summarised in Figure 9.3.

Figure 9.3: BST Method



9.4.2 SPECIFIC FORECASTS

We have applied *specific forecasts* to UAFG and Ancillary Services as the forecast expenditure profile for these categories. We consider this method represents a better and more reasonable forecast than using the BST method.

For example, we forecast that the UAFG percentage will reduce over AA6, which is disproportionate to the method of growth as per the BST method. Further detail is provided in Sections 0 and 0.

9.5 FORECAST OPERATING EXPENDITURE

This section explains each component of our forecast and how we arrived at our final opex forecast.

We forecast opex of $456 million during AA6, which is $78 million higher than the ERA's Final Decision of $378 million by the end of AA5. The main drivers of the increase include our new ancillary reference service ('Permanent Disconnection'), a greater focus on sustainability initiatives, and a shift in how SaaS expenditure is accounted for.

Table 9.2, Figure 9.4 and Figure 9.5 provide a summary of the AA6 forecast total opex.

[31] AER (2013) "Expenditure Forecast Assessment Guideline – Distribution – November 2013", pg. 9. Available at https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/expenditure-forecast-assessment-guideline-2013

Table 9.2: Forecast AA6 opex ($million real as at 31 December 2023)

FORECAST OPEX	2025	2026	2027	2028	2029	TOTAL
Base year opex	62.5	62.5	62.5	62.5	62.5	**312.6**
Step changes	9.0	18.1	18.0	9.6	7.9	**62.6**
Input cost escalation	1.4	2.1	2.7	2.9	3.3	**12.4**
Output growth escalation	1.2	1.6	2.1	2.5	3.0	**10.4**
UAFG	5.8	5.8	6.1	6.2	6.8	**30.8**
Ancillary services	4.9	5.4	5.5	5.6	5.7	**27.1**
TOTAL	**84.8**	**95.6**	**96.9**	**89.3**	**89.3**	**455.9**

Figure 9.4: Forecast AA6 opex ($million real as at 31 December 2023)

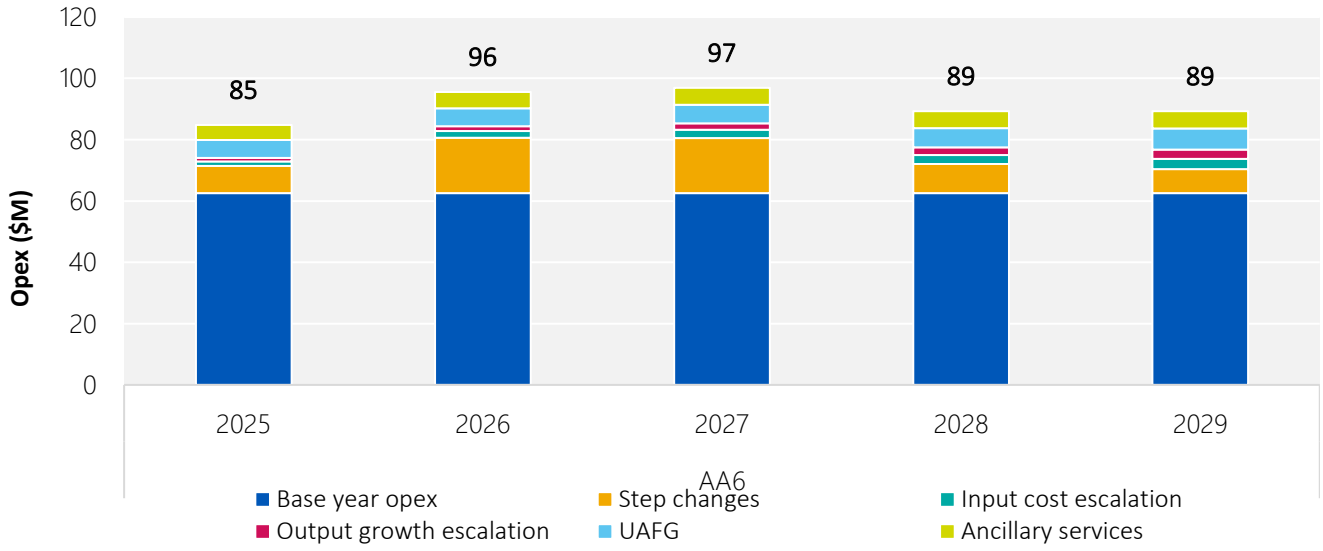
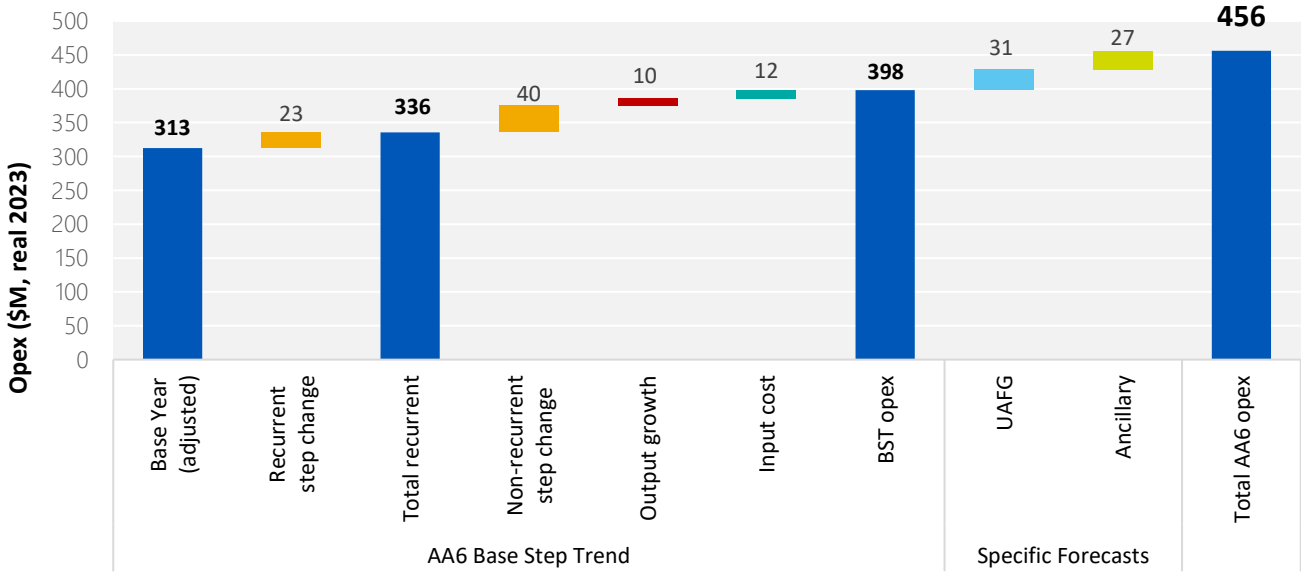


Figure 9.5: Forecast AA6 opex (using BST and Specific Forecasts) ($million real as at 31 December 2023)



9.5.1 ESTABLISH THE EFFICIENT BASE YEAR

ATCO proposes using 2022 actual opex as the starting point to derive the efficient base year for network, corporate, and IT opex, as the 2022 calendar year is the most recent year of actual expenditure.

ATCO asserts that the 2022 actual opex best represents ATCO's expected future costs. We have incurred these costs prudently and efficiently, and they reflect the recurrent expenditure to be incurred in AA6.

However, some adjustment is required to the base year costs to ensure only recurrent costs are reflected in the base year. Five adjustments were made to the base year opex, removing:

[redacted]

- **$1.2** million in 2022 relating to the preparation of the AA6 submission. A separate step has been recorded from 2026 to 2029 for regulatory preparation costs relating to AA7.
- **$0.8** million non-recurrent cost for corporate restructuring.
- **$0.6** million non-recurrent cost in relation to an inline pipeline inspection program initiated in 2022. A separate step change has been recorded from 2025 to 2029 for inline pipeline inspection based on the number of inspections required each year.

[redacted]

Benchmarking of our opex performance against similar businesses confirms that we are acting efficiently. ATCO commissioned Quantonomics, an expert benchmarking service provider, to measure ATCO's productivity and benchmark its gas distribution network operations (See attachment 09.003). This benchmarking report examined our efficiency performance from 2000 to 2022 within a group of nine gas distribution businesses in Australia (see Section 2.6). The benchmarking enabled a comparison of our efficiency against the six other gas distribution network service providers with similar customer density.

This benchmarking analysis shows that ATCO is an efficient business, with the second lowest opex per customer, and the lowest opex per km of main compared with our industry peers, as shown in Figure 2.7 and Figure 2.8, respectively. This analysis provides evidence that our base year reflects efficient costs and supports our forecast method and BST outcome.

We expect that at the time of our response to the ERA's Draft Decision, we will have 2023 calendar year opex actuals available. We will assess the suitability of adopting the 2023 actuals for the base year at that time.

9.5.2 ADJUSTING FOR STEP CHANGES IN RECURRENT OPEX

The next step in the BST approach is to review future opex obligations that fall outside the base year. These opex costs are for additional costs *not incurred within the base year (i.e., beginning after 2022)*, for example, due to a capital project shifting from construction to operation or a change in legislation. Costs can be ongoing from a particular time, one-off expenditure, or have a non-annual ongoing frequency that falls outside the base year (e.g., every three years).

During our analysis of our forecasts, we identified obligations driving changes to our costs that are considered immaterial and have not been included in the forecast.

The justification for these step changes is summarised below, with further information provided in relevant business cases and project briefs as referenced against each description.

9.5.2.1 SUMMARY

Activities during AA6 not reflected in our base year are known as 'step changes'. Step changes include the additional costs of associated safety, compliance, and regulatory activities typically driven by a change in obligation. The step changes for AA6 are detailed in Table 9.3.

Table 9.3: Adjustments for step changes ($million real as at 31 December 2023)

RECURRENT STEP CHANGES	2025	2026	2027	2028	2029	AA6 TOTAL
Enabling renewable gases	1.4	1.5	1.5	1.4	1.5	**7.3**
Superannuation Guarantee rate increase	0.5	0.5	0.5	0.5	0.5	**2.6**
Cyber security	1.3	0.9	0.9	0.7	0.7	**4.5**
Gas inspection – safety changes	0.2	0.2	0.2	0.2	0.2	**1.0**
Property Plant and Equipment opex threshold increase	0.2	0.2	0.2	0.2	0.2	**0.9**
Enterprise Resource Planning (**ERP**) Replacement	-	1.0	1.0	1.0	1.0	**4.1**
Economic regulatory changes	0.5	0.5	0.3	0.3	0.3	**2.0**
TOTAL	**4.0**	**4.9**	**4.7**	**4.4**	**4.5**	**22.5**

The justification for each of these step changes is outlined in the sections below.

9.5.2.2 ENABLING RENEWABLE GASES ($7.3M)

BACKGROUND

This initiative aims to support the energy transition and help reduce GHG emissions. It is linked to the six renewable gas injection stations (to inject around 100-200 TJ per site) that are proposed for AA6 *(See Section 10.7.2 for expenditure details)* as detailed in the Renewable Gas Delivery Strategy (See attachment 03.004).

This expenditure is necessary to ensure our activities are consistent with good industry practice, including meeting our emissions reduction targets detailed in our Sustainability Strategy (See attachment 03.003) and regulatory compliance, including reporting requirements under the NGER Scheme.

ACTIVITY

Each initiative planned under this program is detailed in the following sub-sections.

Renewable gas injection points ($1.5M)

To support the new renewable gas injection points, $1.5 million opex is proposed for operation and maintenance activities, as shown in Table 9.4. These activities include inspection labour, replacement parts, calibration of gas chromatographs, meters and regulators, control systems to shut off supply, and telemetry for billing and reporting purposes. Both hydrogen and biomethane have similar opex cost per injection point.

Further detail is provided in *Section 10.7.2* and the Renewable Gas Delivery Strategy (See attachment 03.004).

Table 9.4: Renewable gas injection points, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
Number of injection points (cumulative)	2	3	4	5	6	**6**
Expenditure ($M)	0.1	0.2	0.3	0.4	0.5	**1.5**

Sustainability Reporting System ($0.4M)

We will incur new licencing fees and running costs for the Sustainability Reporting System software, as shown in Table 9.5. This back-office system project will support ATCO's reporting obligations under the NGER Scheme and against our Sustainability Strategy, providing fit-for-purpose systems and tools to monitor, measure, and report on sustainability performance. This program is detailed further in *Section 10.7.2*.

Table 9.5: Sustainability Reporting System, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
Sustainability Reporting System	0.1	0.1	0.1	0.1	0.1	**0.4**

Industry and Community Consultation Program ($3.7M)

This consultation program aims to work with our stakeholders to discuss and provide feedback on issues related to renewable gas development, production, and utilisation. The program will cover various topics, including the policy and regulatory framework, technology development, market trends, supply chain issues, and environmental considerations.

Our approach to community and stakeholder consultation, engagement and communications will span the AA6 period – including general community communications, safety messaging, awareness and localised individual project (gate station) community consultation. We aim to achieve this through the following:

- Providing transparent, consistent, and timely information regarding our renewable gas transition journey through various communication channels.
- Educating and informing the community about the future of the network and our transition to renewables, thus increasing awareness and understanding.
- Identifying and engaging in proactive community consultation with impacted areas around the potential benefits and implications of renewable gas blending.

- Raising awareness of renewable gas safety messages to accompany our Natural Gas Safety Engagement public campaign.

Developing a mix of additional consultation activities that allow us to reach multiple end-users.

Increasing our focus in this area was raised during our AA6 Engagement program. This program will also create awareness about the decarbonisation pathway for gas networks, the introduction of renewable gases, and provide essential information to customers regarding their energy and sustainability choices. This program is detailed further in the Renewable Gas Delivery Strategy (attachment 03.004), and costs are shown in Table 9.6.

Table 9.6: Industry and Community Consultation Program, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
Direct Project Community Consultation	0.3	0.3	0.3	0.3	0.3	1.3
Safety and Education	0.2	0.2	0.2	0.2	0.2	1.0
Supporting Material and Research	0.1	0.1	0.1	0.1	0.1	0.4
Resourcing Support	0.2	0.2	0.2	0.2	0.2	0.9
TOTAL	**0.7**	**0.7**	**0.7**	**0.7**	**0.7**	**3.7**

Renewable Gas Supporting Programs ($1.7M)

To support our Sustainability Strategy (attachment 03.003), our Renewable Gas Delivery Strategy (attachment 03.004) highlights several supporting areas to enable renewable gas to be transported in the network. Additional opex to support the distribution of renewable gases includes:

- **Renewable Gas Compatibility and Safety:** We will complete one-off projects to review the compatibility of renewable gas infrastructure and ensure compliance with our safety obligations through:
  - Completing a network study to determine compatible equipment for blending projects. The study will evaluate existing asset compatibility, including metering, piping and location information that informs meter replacement and choice of site and blending network.
  - Conduct assessments and produce drawings for the facilities, showing the changes to hazardous area zones as the introduction of hydrogen poses significant challenges and risks to the existing hazardous area assessments, facility compound sizes, and exclusion zones, which are currently based on environmental conditions, physical locations, and natural gas properties. This information will then be utilised to determine the replacement or relocation of infrastructure as required and establish a basis for hazardous zones for infrastructure installation before or after the introduction of hydrogen to minimise future modification costs.
  - Desktop assessment to ensure system hazardous areas are compatible with varying proportions of hydrogen to prevent any potential incidents resulting from the presence of hydrogen in enclosed spaces. We will utilise existing research and review our existing asset installations and remediate where required.

- Complete a desktop feasibility study analysis of the technical, economic, environmental, and social aspects of increasing hydrogen blends from 10% to higher proportions. This project will provide valuable insights and recommendations for designing, implementing and evaluating a large-scale hydrogen conversion program that will enable a lower-carbon future for the gas sector and its customers.

- **Renewable Gas Injection Point Security and Compliance:** We propose ongoing investment to enable the safe and secure operation of our injection points, designed in a standardised way with the appropriate security and remote monitoring, blending control and safety systems employed:
  - Safety case amendments to ensure that the GDS is approved to accept hydrogen at higher blend ratios and in new system areas. The existing GDS Safety Case has been developed for natural gas, with an additional Safety Case already developed for the existing hydrogen trial blend system with a 2% maximum blend ratio. This is a vital step to enable the transition to a low-carbon energy system and to meet the future demand for renewable hydrogen and biomethane.
  - Security of Critical Infrastructure (**SOCI**) Act implementation. To ensure that the new infrastructure meets the SOCI Act requirements, we will conduct a comprehensive review and implementation of the SOCI control standards to the renewable gas injection points. The SOCI control standards are a set of best practices and guidelines for enhancing the security and resilience of critical infrastructure. They cover various aspects of security management, such as governance, risk assessment, physical security, cyber security, personnel security, and incident response.
  - Blending network control systems ensure the smooth and efficient operation of our blending facilities. They enable us to monitor and adjust the blending process remotely from our Jandakot operational site, ensuring optimal quality and safety standards. This project covers the ongoing maintenance and verification of the network connections between the blending facilities and ATCO's systems, which is essential for the reliability and security of the data transmission.

Table 9.7 provides a cost summary of the above activities.

Table 9.7: Renewable Gas Supporting Programs, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
Renewable Gas Compatibility Safety	0.3	0.2	0.2	-	-	0.7
Renewable Gas Injection Point Security and Compliance	0.2	0.2	0.2	0.2	0.2	1.0
TOTAL	**0.5**	**0.5**	**0.4**	**0.2**	**0.2**	**1.7**

FORECAST EXPENDITURE

The AA6 forecast opex for the Enabling Renewable Gases step change is detailed in Table 9.8. Further detail on cost breakdown is provided in the "Enabling Renewables - Cost Estimate" (See attachment 09.012.00).

Table 9.8: Enabling renewable gases step change, AA6 Forecast Opex ($m real as at 31 December 2023)

PROJECTS	2025	2026	2027	2028	2029	TOTAL
Renewable gas injection points	0.1	0.2	0.3	0.4	0.5	**1.5**
Sustainability Reporting System	0.1	0.1	0.1	0.1	0.1	**0.4**
Industry and Community Consultation Program	0.7	0.8	0.7	0.8	0.7	**3.7**
Renewable Gas Supporting Programs	0.5	0.5	0.3	0.2	0.2	**1.7**
TOTAL	**1.4**	**1.5**	**1.5**	**1.4**	**1.5**	**7.3**

9.5.2.3 SUPERANNUATION GUARANTEE RATE INCREASE ($2.6M)

BACKGROUND

The Superannuation Guarantee is part of an employee's statutory remuneration entitlement. The amount is a percentage of an employee's gross salary or wages set by the Australian Government, which has been legislated to change over time. Further details of how it affects opex is provided in the Superannuation Increase Memorandum (See attachment 09.013.01).

The percentage rate for Superannuation Guarantee contribution payments is currently 11%. The Superannuation Guarantee is set to rise again to 11.5% on 1 July 2024 for the 2024/25 financial year. The Superannuation Guarantee percentage rate will continue increasing by 0.5% every year until it reaches 12% on 1 July 2025. This rate increase is driven by the *Superannuation Guarantee (Administration) Act 1992,* which is in addition to the real labour cost escalation rate forecast by *'Synergies Economic Consulting – Consumer price index and wage price index forecasts'* (see attachment 09.001).

DRIVER

ATCO is obliged to pass on the superannuation increase to approximately 85 employees on contracts covered by an enterprise bargaining agreement (**EBA**), which includes the following obligation in clause 19(a):

> *"The Company will contribute, on the Employee's behalf, an amount prescribed by the Superannuation Guarantee (Administration) Act 1992 (Cth) into a complying superannuation fund of the Employee's choice."*

The employment contracts not covered by the EBA (approximately 350 employees), include standard employment conditions and a general clause on superannuation. ATCO will increase the contribution to employees' superannuation based on the percentage increase forecasted as a step change within the BST that is incorporated in AA6.

For all employment contracts, we are increasing the Superannuation Guarantee contribution as an incremental forecast cost in compliance with NGR 91(1) as a prudent operator acting efficiently. This is by adding the Superannuation Guarantee contribution increase to the total remuneration amount for an employee, instead of offsetting the Superannuation Guarantee contribution increase against salary

or wages (as permitted under the applicable legislation). This incremental cost is efficient and prudent because:

- The changes to the Superannuation Guarantee percentage are a legal obligation.
- Any reduction in take-home-pay (from offsetting the Superannuation Guarantee contribution increase against salary or wages) will very likely result in increased turnover in skilled personnel, along with a loss of staff morale, including the following flow on impacts:
  - Our ability to provide required services safely and efficiently due to the lack of experienced personnel.
  - Additional costs of recruitment, training, and administration to replace personnel and build experience and skill.

It is in the long-term interests of consumers for ATCO to retain experienced personnel to provide safe and reliable services at the lowest sustainable cost.

FORECAST EXPENDITURE

Our AA6 forecast opex for the Superannuation Guarantee Rate Increase is detailed in Table 9.9. Further detail on cost breakdown is provided in the *Superannuation Rate Increase- Cost Estimate* (see attachment 09.013.00).

Table 9.9: Superannuation Guarantee Rate Increase, AA6 Forecast Opex ($million real as at 31 December 2023)

FORECAST	2025	2026	2027	2028	2029	TOTAL
Network	0.3	0.3	0.3	0.3	0.3	1.6
Corporate	0.2	0.2	0.2	0.2	0.2	0.9
Information Technology	0.0	0.0	0.0	0.0	0.0	0.1
	0.5	**0.5**	**0.5**	**0.5**	**0.5**	**2.6**

9.5.2.4 CYBER SECURITY ($4.5M)

BACKGROUND

As a critical infrastructure owner, we acknowledge that cyber security risk is one of our priority risks, with the potential to impact delivery of our function. This means any significant cyber risk affecting ATCO Gas will also likely affect upstream and downstream external parties. This is further reinforced by ATCO's high risk rating based on the Australia Energy Cyber Security Framework (AESCSF) Gas Criticality Assessment Tool.

To address this growing threat and comply with increasing regulatory requirements, ATCO has implemented enhanced cyber security controls and continues to uplift its cyber security program as per the Cyber Security Business Case (See attachment 09.014.00). Our cyber security strategy is designed to protect critical IT and OT systems and data, ensure regulatory compliance, and enhance our overall cyber security posture. Further detail is provided in our IT Strategic Plan (see attachment 09.004).

DRIVERS

Risk reduction

ATCO's investment in cyber security is aimed at continuing to implement a combination of policies, processes, and technologies to cost-effectively achieve and maintain an acceptable level of loss exposure or an optimal risk position.

Compliance

In addition to the internal investment driver, ATCO is subject to Critical Infrastructure Risk Management Program obligations. As a critical infrastructure entity, ATCO must take reasonable steps to comply with these obligations, through implementing controls and mitigations.

This includes meeting the cyber security framework requirements to mitigate cyber and information security hazards. To accomplish this, ATCO has adopted two frameworks as part of the *Security of Critical Infrastructure Act 2018* and *Security Legislation Amendment (Critical Infrastructure Protection) Act 2022*. These are the Australia Energy Sector Cyber Security Framework (AESCSF) as ATCO's primary framework, and the National Institute for Standards and Technology Cybersecurity Framework (NISTCSF) as a secondary framework to align with ATCO's related entities in different jurisdictions.

While ATCO is required to achieve AESCSF Security Profile 1 (SP-1) before AA6, additional investment is required to achieve and maintain Security Profile 2 (SP-2) and 3 (SP-3).

A target state of Security Profile 3 (SP-3) is recommended for organisations with an overall criticality of 'high' based on the AESCSF Gas Criticality Assessment Tool, which provides criticality bands by market role. This will help mature ATCO's cyber security posture with an outcome of making ATCO Gas cyber resilient. This will be completed during the AA6 period.

ACTIVITY

ATCO aims to effectively manage cyber security risk and comply with regulatory requirements by implementing additional risk management controls and tools. In AA6, ATCO will focus on developing its cyber security posture in alignment with the AESCSF and government-mandated obligations. This includes dedicating opex to ensure that necessary capability standards are met and adapting existing practices to meet new regulatory obligations. ATCO's cyber security work program for the AA6 period encompasses activities in four key areas:

1. **Compliance Activities ($1.5M):** ATCO estimates an additional $300,000 per year for extra employees. This is to comply with the risk management program reforms proposed by the Department of Home Affairs in its submission to the Review of the Security Legislation Amendment (Critical Infrastructure Protection) Bill 2022. The Department estimated that critical gas assets entities would need to spend an average of $10.4 million initially and $2.1 million annually to implement and maintain the reforms. ATCO forecast to hire one FTE in cyber security and one FTE in compliance (either Risk and Compliance, or Technical Compliance) to address physical threats to the network.
2. **Prevention Activities ($0.9M):** These are security control initiatives that are designed to prevent a cyber event from occurring:

- **Privileged Access Management** (PAM) - ATCO has already implemented Identity and Access Management (IAM) to have one digital identity per individual. To continue to strengthen the identity domain, ATCO needs to invest in the implementation of Privileged Access Management (PAM), which is part of IAM. This will help manage entitlements, for individual users, and shared accounts such as super user, administrator, and service accounts. The objective is for ATCO to reduce cyber risk by removing unknown or unmanaged privileged accounts in the ATCO technology environment.
- **Identity Governance and Administration** - In addition to PAM, ATCO needs to implement an IAM platform, which is designed to regulate data and access for an organisation's users and machine accounts, using a suite of risk-based controls for accurate reporting. It will also improve the current user identity lifecycle management by automating the process of provisioning and de-provisioning user access.
- **OT network security assessment** - This is a proactive approach to security aimed at identifying and remediating gaps in the Operational Technology (**OT**) network.
- **Network segmentation for sites** – This is to build on the investment that ATCO has already made by moving towards zero trust architecture, which leads to simpler network infrastructure, a better user experience, and improved cyber threat defence.

3. **Protection Activities ($1.5M)**: These initiatives aim to provide support to limit or contain the impact of a potential cyber security event. These initiatives include:
   - Improving the resilience of ATCO's supply chain and external dependencies as part of supply chain risk management.
   - Strengthening ATCO's network perimeter defence.
   - Uplifting Vulnerability Management Services – to include data validation, vulnerability ranking, remediation management and scan management.
4. **Incident Preparedness Activities ($0.7M)**: These are initiatives to strengthen incident detection, response, and recovery controls. Detective controls are designed to detect, log, and alert after an event. Responsive controls are designed to drive remediation of adverse events. The investment in loss magnitude mitigation will strengthen and focus on the following initiatives:
   - Incident detection response to assist with incident response activities.
   - Adversary simulation (Penetration Testing) – The objective is to test control efficacy by simulating an adversary's activities. These include white box penetration testing, which is useful for simulating a targeted attack on a specific system, utilising as many attack vectors as possible; black box penetration testing where no information is provided to the tester at all; grey box penetration testing which is useful to help understand the level of access a privileged user could gain and the potential damage they could cause.
   - Playbooks, use case development and incident recovery simulations.

FORECAST EXPENDITURE

The AA6 forecast expenditure for this step change is detailed in Table 9.10. Further detail on the cost breakdown is provided in our Cyber Security Business Case (Opex) (see attachment 09.014.00) and "Cyber Security - Cost Estimate" (See attachment 09.014.00).

Table 9.10: Cyber security, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
Compliance Activities	0.3	0.3	0.3	0.3	0.3	1.5
Prevention Activities	0.5	0.2	0.2	-	-	0.9
Protection Activities	0.3	0.3	0.3	0.3	0.3	1.5
Incident Preparedness Activities	0.1	0.1	0.1	0.1	0.1	0.7
	1.3	**0.9**	**0.9**	**0.7**	**0.7**	**4.5**

9.5.2.5 GAS INSPECTION – BUILDING & ENERGY REQUIREMENTS ($1.0M)

BACKGROUND

In May 2023, the Department of Mines, Industry Regulation and Safety (**DMIRS**), Building and Energy division, informed ATCO that, to avoid actual or perceived conflicts of interest, ATCO Gas Inspectors must not operate as gas fitters for consumer gas installations or related gas fitting work (See attachment 09.015.01).

DRIVER

The Director of Building and Energy, DMIRS, has authorised ATCO personnel to be designated as Inspectors to undertake Inspection Policy Statement and Plan activities as their primary function. This is to avoid conflicts of interest with gas fitting-related activities that may be undertaken by Gas Distribution Officers (**GDO**s) conducting prescribed activities on ATCO's GDS. As such, the Gas Inspection team has expanded to accommodate specific inspection tasks previously conducted by GDOs, which has resulted in a cost increase to the team within AA5 (from 2023).

The discontinuation of the Inspector's Designation for GDOs is planned to come into effect from 1 January 2024. It requires developing and implementing an alternative model in lieu of Inspectors Orders, for alerting customers and making consumer gas installations safe if defects are identified while conducting prescribed activities on the gas network. Additional costs will be incurred in AA5 and AA6 to develop a suitable IT platform to issue compliance information to customers.

The following additional expenditure is required to meet the obligations under the *Gas Standards Act 1972* and ensure the safety of consumer gas installations:

- Additional Inspectors to conduct Class G Inspections in accordance with ISP requirements in Metro and Regional areas
- Utility Vehicles for the additional Inspectors to conduct inspections
- Additional travel to regions for Inspection Policy Statement and Plan activities, such as inspections and investigations
- Training costs for the new Inspectors, including Government Investigation, and upskilling of G-Class Inspectors to Industrial (I) Class Inspectors required to address critical industry skill shortages
- Motor vehicle-related expenses increase due increased travel for inspections in metro and regional areas.

FORECAST EXPENDITURE

The forecast expenditure for this step change over AA6 is detailed in Table 9.11 below:

Table 9.11: Gas Inspection Team, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
Gas Inspection Team (2 FTEs)	0.2	0.2	0.2	0.2	0.2	1.0
TOTAL	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**1.0**

9.5.2.6 PROPERTY PLANT AND EQUIPMENT- THRESHOLD INCREASE ($0.9M)

BACKGROUND

From 1 January 2025, ATCO will change its approach to capitalising low-value assets. A review of the capex process revealed that the policy threshold for capitalising assets had not been increased from $300 for several years *(See attachment 09.015.00 "Capital Expenditure Procedure"*). We reviewed the number of low-value assets purchased annually to determine the associated administrative burden of purchasing, managing, and reporting these low-value assets.

DRIVER

We determined that increasing the threshold from $300 to $1,000 would have significant benefits that would drive administrative, governance and cost efficiencies and would not adversely affect the tax treatment of low-value asset pool deductions. A summary of the benefits anticipated for making this change include:

- Creates greater flexibility, autonomy, and empowerment for cost-centre managers to manage their budgets to cover their specific needs.
- Reduced administrative time and cost: Raising the threshold reduces the number of low-value assets that need to be individually recorded, tracked, and depreciated. This streamlines administrative tasks, saving time and effort.
- Focus on high-value assets: With a higher threshold, resources can be directed towards managing higher-value assets.
- Consistency: A higher threshold can lead to a more consistent treatment of assets and reduce discrepancies in how smaller assets are handled.
- An increase of the threshold would have an equal and opposite amount moving from capex to opex, and therefore, there is no overall increase in expenditure in AA6. The increase in opex is offset by an equal reduction to capex for low-cost assets whose useful life is traditionally lower than five years, thereby assets would typically be fully depreciated within an AA period.

FORECAST EXPENDITURE

The forecast opex for this step change over AA6 is detailed in Table 9.12.

Table 9.12: Property, Plant and Equipment, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
Property, Plant and Equipment	0.2	0.2	0.2	0.2	0.2	0.9
TOTAL	**0.2**	**0.2**	**0.2**	**0.2**	**0.2**	**0.9**

9.5.2.7 ENTERPRISE RESOURCE PLANNING (ERP) REPLACEMENT PROGRAM ($4.1M)

BACKGROUND

ATCO's ERP replacement program includes opex of $4.1 million for the incremental cost of the annual SaaS licencing fees of the new ERP solution compared to our current SAP licencing and support cost. The new ERP is expected to be a cloud-based solution based on a SaaS agreement, which will see a significant move from ATCO's current on-premises systems.

While the new ERP solution is expected to require an increase in IT opex, future upgrades are included in the annual licencing fee and are performed and supported by the service provider. This will help avoid future upgrade costs and disruption to the business and potentially gas market participants whenever changes are made to the solution.

Overall, the ERP replacement program is a significant investment that will benefit ATCO and its customers in the long term. Further details on this program are included in Section 10.8.1 and the *'IT-ERP Replacement - Business Case* (*See attachment 10.052.00*).

FORECAST EXPENDITURE

The forecast expenditure for this step change over AA6 is detailed in Table 9.13. Further details on the cost breakdown are provided in the Business Case noted above.

Table 9.13: ERP Replacement, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
ERP annual licencing fee	-	1.3	1.3	1.3	1.3	**5.3**
Less: current maintenance fee	-	-0.3	-0.3	-0.3	-0.3	**-1.2**
	-	**1.0**	**1.0**	**1.0**	**1.0**	**4.1**

9.5.2.8 ECONOMIC REGULATORY CHANGES ($2.0M)

BACKGROUND

On 31 March 2022, Energy Ministers agreed to the final package of changes to the legal and regulatory framework required to give effect to the reforms to gas pipeline regulation. The changes to the NGL and NGR have been implemented in other jurisdictions but are yet to be implemented in Western Australia.

We expect these obligations to be implemented in Western Australia through amendments to the national gas regulatory framework during 2024.

DRIVER

ATCO will have new obligations under these reforms that will require additional costs to be incurred. The obligations include:

- Common prohibitions and safeguards (including ring-fencing, pipeline interconnection principles, and prohibition against increasing charges to subsidise particular developments)
- Information disclosure (including prescribed transparency information for pipelines, access information standards, publishing information and timing requirements and exemptions from publishing) including:
  - Basic information relating to pipeline assets, pipeline services, the standing terms for each service offered, service availability, and service usage
  - Historical financial and demand information and the cost allocation methodology employed by the service provider, which must comply with NGR principles
- Information on the individual prices paid by shippers
- Access negotiation framework (including user access guides, access requests, and access offers)
- Compliance approach – monitoring and surveillance (including self-reporting of non-compliance, compliance and enforcement, ERA compliance, and procedures guidelines).

The new obligations will require resourcing across the legal, regulatory, compliance, and communication teams to implement the changes and ensure business compliance. We estimate that an additional two FTE would be needed initially to help review and set up systems to meet the obligations, and ongoing compliance would require one FTE to manage these new regulatory obligations. Further detail is provided in the document '*Resourcing Requirement' (See attachment 09.017.01)*.

FORECAST EXPENDITURE

The forecast expenditure for this step change over AA6 is detailed in Table 9.14. Further detail on the cost breakdown is provided in *'Regulatory Changes - Cost Estimate' (See Attachment 09.017.00)*.

Table 9.14: Economic Regulatory Changes, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
FTE	2	2	1	1	1	
Expenditure ($ million)	0.5	0.5	0.3	0.3	0.3	**2.0**

9.5.3 ADJUSTING FOR STEP CHANGES IN NON-RECURRENT EXPENDITURE

There are four non-recurrent step change adjustments for AA6, detailed in Table 9.15.

Table 9.15: Adjustments for non-recurrent step changes ($million real as at 31 December 2023)

NON-RECURRENT STEP CHANGES	YEAR	AA6 TOTAL
Pipeline Inline Inspections	2025 to 2029	**6.3**
Access Arrangement 7 Regulatory Preparation and RORI review	2026 to 2029	**6.2**
Software as a Service' (SaaS) arrangements	2025 to 2029	**27.3**
IT Managed Services	2025 to 2026	**0.5**
	TOTAL	**40.3**

The justification for each of the non-recurrent step changes is detailed below.

9.5.3.1 PIPELINE INLINE INSPECTIONS ($6.3M)

BACKGROUND

High-pressure steel pipelines that require internal inline inspections as prescribed in the Australian Standards[32] are undertaken in line with the Gas Regulations[33]. Our formal safety assessment highlighted internal inspections as an important risk control, forming part of our pipeline integrity management plans.

This activity comprises the internal inspection via a pipeline inspection gauge (**PIG**). Pipeline inspections using these PIGs allow detection of internal or external anomalies or pipe wall material loss. Major gas pipelines are inspected at a determined frequency (typically every ten years) as per the standard industry practice.

DRIVER

The pigging of major pipelines continues in AA6 after successful project completions in AA4 and AA5. However, the pipeline inspections in 2022 have been removed from the base year and are therefore included as a non-recurrent step change. We will be undertaking pipeline inline inspections in each year of AA6. Our cost forecast is based on historical averages considering the complexity of the different pipelines that are scheduled to be inspected during AA6. The schedule of pipeline inspections is detailed in the *'Asset Lifecycle Strategy – High Pressure Pipelines' (See attachment 10.011)*. This non-recurrent expenditure is also linked to the capex related to the pipeline inspections, as detailed in Section 10.7.2.2.

[32] AS 2885.3:2001 Pipelines - Gas and liquid petroleum - Operation and maintenance Section 3.4 Threat Mitigation & AS 2885.3:2012 Pipelines - Gas and liquid petroleum - Operation and maintenance Section 6.4.2 Corrosion Mitigation Strategy

[33] As per Gas Standards (Gas Supply and System Safety) Regulations (GSSR) 2000 (Part 4 — Distribution system safety)

FORECAST EXPENDITURE

The forecast expenditure for this step change over AA6 is detailed in Table 9.16.

Table 9.16: Pipeline Inline Inspections, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
No. of Inspections	1	3	2	3	2	11
Expenditure ($ million)	1.0	1.6	1.0	1.6	1.0	**6.3**

9.5.3.2 ACCESS ARRANGEMENT 7 AND RORI REGULATORY PREPARATION ($6.2M)

BACKGROUND

Four previous access arrangement revisions (AA2, AA3, AA4 and AA5) were undertaken by the ERA. The next access arrangement, AA6, covers 1 January 2025 to 31 December 2029. A subsequent access arrangement revision (AA7) is required for the period commencing 1 January 2030.

AA7 regulatory preparation in 2027, 2028 and 2029 will require AA6 expenditure to ensure ATCO's reference service proposal and access arrangement proposal are compliant with the NGR, the ERA's Access Arrangement Guidelines, and to ensure we present the best possible submission that is supported by stakeholders. Expenditure has been based on the forecast costs for the AA6 preparation, including consultancy fees, project management fees and additional resources.

Furthermore, this step change includes an incremental cost for ATCO to participate in the ERA's 2026 Rate of Return Instrument (RORI) review. Expenditure has been based on forecast costs for relevant experts to assist ATCO to participate in this process.

FORECAST EXPENDITURE

The forecast expenditure for this step change over AA6 is detailed in Table 9.17. Further detail on the cost breakdown is provided in *'Access Arrangement 7 Regulatory Preparation - Cost Estimate / Budget' (See Attachment 09.019).*

Table 9.17: Regulatory preparation, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
RORI review costs	-	0.2	-	-	-	0.2
AA7 Preparation costs	-	-	1.0	3.0	1.8	5.8
		0.2	**1.0**	**3.0**	**1.8**	**6.2**

9.5.3.3 SOFTWARE AS A SERVICE (SAAS) ARRANGEMENT ($27.3M)

BACKGROUND

Previously, the Australian Accounting Standards Board (AASB) accounting standard, AASB 138 Intangible Assets, did not provide specific guidance on the treatment of implementation and customisation costs for cloud arrangements. As a result, ATCO historically treated SaaS subscription costs as opex and capitalised the implementation and customisation costs.

The April 2021 Agenda Decision by the International Accounting Standards Board (IASB) has provided explicit guidance that all implementation, customisation, and subscription costs must be treated as opex despite the enduring nature of the benefits provided by the expenditure. This means that previously capitalised implementation and customisation costs are now accounted for as opex.

DRIVER

The recently published interpretation of IAS 38 (Interpretation 21.RU-005: Configuration or Customisation Costs in a Cloud Computing Arrangement) was not available at the time of the AA5 Final Decision, which encompassed the 2022 year. In the AA5 Final Decision, IT system implementation costs were forecast as capex. Whether those costs were incurred in relation to a cloud-based or on-premise-based system would depend on evaluating alternatives at the time of implementation.

Where cloud-based IT system implementation costs have been included in statutory accounts (per IFRS) as operating expenditure, they are reclassified as capital expenditure for regulatory accounting purposes. This adjustment is necessary due to the capital nature of cloud-based IT system implementation costs (based on the enduring benefits of those incurred costs) and for consistency with their treatment in the AA5 final decision.

FORECAST EXPENDITURE

As a result of the abovementioned interpretation of IAS 38, we have reviewed our SaaS projects in AA5 and AA6 and have subsequently reclassified amounts from capex to opex. This reclassification has no net impact on our total expenditure, as the opex costs will be incurred over the same period as the previously capitalised costs.

Table 9.18 summarises the reclassification of costs for our AA6 forecasts:

Table 9.18: SaaS expenditure categorisation from AA5 to AA6

COST CATEGORY	AA5	AA6
SaaS Subscription costs	Opex	Opex
SaaS Configuration costs	Capex	Opex
SaaS Customisation costs	Capex	Opex

ATCO has applied the interpretation of IAS 38 since 2021 and has used this history to assist with forecasting the impact of this change in categorisation on AA6 expenditure. Table 9.19 summarises the reclassification of costs from capex to opex in our Statutory Accounts (IFRS) over AA5.

Table 9.19: SaaS AA5 Opex ($million real as at 31 December 2023)

NOMINAL $	2020	2021	2022	2023 (F)	2024 (F)	TOTAL
SaaS cost	-	1.9	1.9	3.4	2.3	**9.5**

We believe that now is the time for ATCO to adopt the IASB's guidance in forecasting expenditure for AA6. This ensures that our forecast expenditure aligns with current accounting standards and interpretations. This reclassification will provide a more transparent and accurate representation of our financial performance.

Please refer to the ATCO *'IT Project Accounting Treatment'* (*See Attachment 09.009.01*).

The forecast expenditure for this step change over AA6 is detailed in Table 9.20. Further detail on cost breakdowns and the SaaS split is provided in *'Software as a Service (SaaS) - Cost Estimate' (See Attachment 09.009)*.

Table 9.20: Software as a Service, AA6 Forecast Opex ($million real as at 31 December 2023)

PROJECT	2025	2026	2027	2028	2029	TOTAL
HR and Payroll Upgrade	0.7	-	-	-	-	0.7
Enterprise Resource Planning (ERP) Replacement	2.5	10.8	10.8	-	-	24.0
IT Continuous Improvements Program	0.2	0.2	0.2	0.2	0.3	1.1
Data and Analytics Program	0.0	0.0	0.0	0.0	0.0	0.2
Digital Improvement Program	0.1	0.1	0.1	0.1	0.1	0.4
IT Sustainability Programs	0.2	0.2	0.2	0.2	0.2	1.0
TOTAL	**3.7**	**11.2**	**11.3**	**0.6**	**0.6**	**27.3**

9.5.3.4 MANAGED IT SERVICES TENDER RENEWAL ($0.5M)

BACKGROUND

ATCO receives managed IT Services from IBM Australia under a Master Services Agreement (MSA), the term of which expires on 18 August 2026. Irrespective of whether ATCO decides to renew the contract by exercising any options to extend the contract or go to tender for these services, there will be costs associated with reviewing the managed IT Services contracting strategy before the expiry of the contract term. Below is a high-level summary of the tasks that will need to be completed with the assistance of experts. The base assumption is that ATCO will continue to outsource IT services similarly to the current model.

The activity to strategically assess managed IT Services contract options and, if determined, execute a tender process and transition to a new contract by 18 August 2026, will commence in January 2025. The total estimated opex is $0.5 million.

DRIVER

The IBM MSA includes Managed Services, Project Services, and Consulting Services. To undertake a tender process, the following additional activities will need to be completed:

- **Define objectives, services, SLAs, and risks.** A team of experts will be assigned to define the contract's objectives, the services that will be provided, the service level agreements (SLAs), and the contract's risks. The SLAs will define the performance standards that the vendor must meet. The associated risks will be identified and analysed so that they can be mitigated or managed.
- **Identify and prequalify vendors.** The expert team will identify and prequalify vendors who can meet the contract's objectives and SLAs. The vendors will be evaluated on their experience, capabilities, and financial stability.
- **Develop a tender with a contract and price model.** The expert team, with the assistance of an external legal team, will develop a comprehensive tender that includes the contract and price model. The contract will define the terms and conditions of the agreement, such as the scope of work, the payment terms, and the dispute resolution process. A highly specialised price model will define how the vendor will be compensated.
- **Develop contract agreement and SLAs.** The expert team will develop the final contract agreement and SLAs with legal assistance. The contract agreement will incorporate the terms and conditions of the tender, and the SLAs will define the performance standards that the vendor must meet.
- **Conduct Q&A sessions with Vendors.** Following the issue of the tender to up to 5 vendors, the expert team will conduct Q&A sessions with the vendors to clarify any questions they may have about the tender. It may also include product demos and presentations by the Vendors, which would require expert opinion on the functionality of the products.
- **Evaluate tender responses.** The expert team will evaluate the tender responses from the vendors. The evaluation will be based on the criteria defined in the tender.
- **Select preferred vendor.** The expert team, in line with steering committee approval, will select the preferred vendor. The preferred vendor will be the vendor who best meets the contract objectives and SLAs.
- **Negotiate contract.** The expert team will negotiate the contract with the preferred vendor. The negotiations will focus on the terms and conditions of the contract, such as the scope of work, the payment terms, and the dispute resolution process.
- **Prepare for the transition to a new vendor.** The expert team will develop a detailed transition plan outlining the steps involved in migrating to a new vendor (if necessary), which also identifies and mitigates any risks associated with the transition. The transition plan will be communicated to the stakeholders along with a change management and training program for staff on the new contract and contract services.
- **Undertake transition from current to new vendor (6 months).** This process will require experts to migrate data and applications to the new vendor, test the new environment to ensure everything is functional, cut over to the new vendor and monitor the new environment for any issues.

FORECAST EXPENDITURE

The forecast expenditure for this step change over AA6 is detailed in Table 9.21. Further detail is provided in '*IT Managed Services Market Review*' (*See Attachment 09.010*).

Table 9.21: Managed IT Services Renewal, AA6 Forecast Opex ($million real as at 31 December 2023)

ACTIVITY	2025	2026	2027	2028	2029	TOTAL
Managed IT services tender renewal	**0.2**	**0.3**	**-**	**-**	**-**	**0.5**

9.5.4 ADDITIONAL COSTS IDENTIFIED BUT NO ALLOWANCE MADE FOR IN AA6

We have identified several other obligations driving changes to our costs. At this time these changes are not considered material and have not been included as step changes in the forecast.

9.5.5 TREND TO ACCOUNT FOR FORECAST GROWTH

We incur additional expenditure as the number of customers connected to our network and the size of our network increases. Examples of this expenditure include meter reading, leak surveys, network maintenance, and incremental facility costs to maintain network pressures within the GDS. Our base year opex is escalated by forecast growth in customer numbers and the physical size of our distribution network (measured in km of mains).

There are several ways that growth escalation can be determined, which are based on the growth escalation factors used in gas distribution businesses. Recent submissions to the AER have used customers and network size[34], customers and throughput[35], or customer growth only[36]. ACIL Allen[37] conducted analysis for Australian Gas Networks (AGN), showing that customers and network size drive operating costs in gas distribution networks[38]. The ACIL Allen analysis concluded that *energy throughput is not a key driver of increasing operating expenses.*

Our approach is consistent with the method approved by the AER in recent gas distributor submissions: adopting a weighted average of 1.08% per annum growth between customers and network size using a weighting of 55% and 45%, respectively[39]. Our growth forecasts (shown in Table 9.22) result in a total increase of $10.4 million in opex over AA6 (shown in Table 9.23).

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34 AusNet Services (2022) "AusNet Services - Access Arrangement 2023-2028 Proposal". Available at https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/ausnet-services-access-arrangement-2023%E2%80%9328/proposal

35 Multinet Gas (2022) "Multinet Gas - Access Arrangement 2023-28 Proposal". Available at https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/multinet-gas-access-arrangement-2023%E2%80%9328/proposal

36 Australian Gas Networks (2022) "Australian Gas Networks (Victoria and Albury) - Access Arrangement 2023-28 Proposal". Available at https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/australian-gas-networks-victoria-and-albury-access-arrangement-2023%E2%80%9328/proposal

37 ACIL Allen 2022, Opex partial productivity study 2022, Report to Australian Gas Networks (VIC and Albury), Multinet and AusNet, June, pp. 42–7. Available at: https://www.aer.gov.au/system/files/ASG%20-%20GAAR%20-%20Appendix%2025%20-%20Acil%20Allen%20Opex%20partial%20productivity%20study%20-%201%20July%202022%20-%20PUBLIC.pdf

38 ACIL Allen 2022, Opex partial productivity study 2022, Report to Australian Gas Networks (VIC and Albury), Multinet and AusNet, June, pp. 42–7. Available at: https://www.aer.gov.au/system/files/ASG%20-%20GAAR%20-%20Appendix%2025%20-%20Acil%20Allen%20Opex%20partial%20productivity%20study%20-%201%20July%202022%20-%20PUBLIC.pdf

39 AER - Draft decision - Multinet Gas access arrangement 2023-28 - Attachment 7 - Operating expenditure, 9 Dec 2022

Table 9.22: Forecast output growth factors for AA6

FORECAST GROWTH FACTORS	WEIGHTING	2025	2026	2027	2028	2029
Net growth in the average customer base	55%	7,272	8,134	9,240	9,928	10,248
Net growth in the size of the network (km)	45%	141	148	157	167	164
Weighted annual output growth rate		0.94%	1.01%	1.10%	1.17%	1.16%

Table 9.23: Forecast output growth for AA6 ($million real as at 31 December 2023)

FORECAST OUTPUT GROWTH	2025	2026	2027	2028	2029	TOTAL
Forecast output growth	1.2	1.6	2.1	2.5	3.0	10.4

9.5.6 TREND TO ACCOUNT FOR FORECAST PRICE GROWTH (INPUT COST)

Forecast price growth typically accounts for price increases in labour and non-labour (e.g., materials). Our forecast price growth results in an additional $12.4 million of opex in AA6.

Our approach to escalating input costs is based on:

- An opex resource mix of 62% labour and 38% non-labour costs based on benchmark weights. These weights are consistent with AA5, and similar to the AER's recent decisions for AGN's (SA) 2021-26 Access Arrangement, Evoenergy's 2021-26 Access Arrangement, and AusNet's 2022-26 Final Decision.
- Labour cost escalation in AA6 is based on the forecast annual growth rate in the wage price index for Western Australian electricity, gas, water, and waste services. The AA6 average annual growth in labour escalation is 1.06%, with further information provided in Attachment 09.001: *'Synergies Economic Consulting – Consumer price index and wage price index forecasts'*.
- Currently, we have applied no real cost escalation for non-labour costs, meaning we have forecast that materials do not incur any additional price rises over and above inflation. External pressures, such as those from the COVID-19 pandemic and logistical and supply chain constraints during AA5, put pressure on material costs. However, we now expect a 'normalisation' of material costs in AA6 based on the information provided in *'Synergies - AA6 Labour and Cost Escalation Forecast', (see Attachment 09.001)*.

Table 9.24: Forecast input growth factors for AA6

INPUT GROWTH FACTOR	WEIGHTING	2025	2026	2027	2028	2029
Labour	62%	1.06%	1.06%	1.06%	1.06%	1.06%
Materials	38%	-	-	-	-	-
Weighted annual input growth rate		**0.66%**	**0.66%**	**0.66%**	**0.66%**	**0.66%**

Table 9.25: Forecast input growth for AA6 ($M real as at 31 December 2023)

FORECAST INPUT GROWTH	2025	2026	2027	2028	2029	TOTAL
Forecast input growth	**1.4**	**2.1**	**2.7**	**2.9**	**3.3**	**12.4**

9.5.7 PRODUCTIVITY GROWTH

Benchmarking of our opex performance confirms that we are efficient against our industry peers. ATCO commissioned Quantonomics, an expert benchmarking service provider, to measure ATCO's productivity and benchmark its gas distribution network operations (*See Attachment 09.003*).

In simple terms, productivity is a measure of the physical output produced from the use of a given quantity of inputs. Productivity is measured by expressing output as a ratio of inputs used. Inputs include things like labour, capital, land, fuel, materials and services, versus outputs that include things like gas throughput, customer numbers, network capacity, and connections numbers.

The analysis completed by Quantonomics found that our 5-year average opex per customer and per km was well below the average for similar gas distribution businesses. Quantonomics concluded that our base-year opex is consistent with that of an efficient operator.

Additional support for our opex performance came from Synergies Economic Consulting (*see Attachment 09.001*), who reviewed our cost escalators, including our productivity growth. Synergies consequently recommended a zero opex productivity growth factor for the AA6 period.

We have not applied a productivity adjustment on the basis that our benchmark performance is already considered efficient compared to our peers (*see Figure 1.1 and Section 9.4.1*). We do not believe that a productivity adjustment is in the long-term interests of customers as it would likely yield adverse implications for our ability to provide a safe and reliable natural gas service. We consider this is the best estimate available with our current information and benchmarked performance.

Furthermore, Synergies concluded that the forecast increase in the scale of our operations and our capex forecast (largely sustaining and network growth) are *unlikely to influence opex productivity in any material way,* given our current operating efficiency. Quantonomics found that our *average technical efficiency scores, estimated as the highest in the sample* of industry peers, *are equal to 1.0, indicating full efficiency.*

We consider that the forecast increase in the scale of ATCO's operations in AA6 does not by itself justify the inclusion of a productivity adjustment in the final decision opex forecast. This is because while we expect an increase in connections over the period, throughput is expected to decline.

Furthermore, ATCO's proposed capex for AA6 is largely for network sustaining and network growth projects and structures and equipment, rather than strategic projects to enhance the productivity and efficiency of its operations or reduce ATCO's operating costs. While our proposal for capex includes upgrades to ATCO's IT systems (including our ERP system), the drivers of these programs are due to end-of-life replacement and to address cyber security risk, rather than for persistent operating efficiency improvements. We do not expect these projects to yield sufficiently large, ongoing productivity improvements that would justify the inclusion of a productivity adjustment in the opex forecast.

9.6 UNACCOUNTED FOR GAS

Our UAFG forecast contributes $30.8 million to AA6 opex. Our UAFG costs have reduced over AA5 due to targeted projects such as mains replacement and enhancements in finding and eliminating leaks.

UAFG is the difference between the measurement of the quantity of gas *delivered **into*** the gas distribution system in a given period and the quantity of gas *delivered **from*** the gas distribution system during that period. We incur costs to purchase gas to replace calculated UAFG, which are recovered through tariffs.

UAFG makes up a material proportion of opex in each access arrangement; therefore, it is in the long-term interests of customers and consistent with good industry practice that we reduce the UAFG rate to as low as reasonably practicable. Our UAFG rates are currently lower than the three Victorian gas distribution networks.[40]

We have achieved further reductions in UAFG by:

- Additional accuracy verification tests at third-party interconnections (gate stations) to minimise metering errors
- Replacement of all unprotected metallic mains (by the end of 2023)
- Maintaining a focus on mains replacement in areas experiencing above-average leakage rates
- Ensuring all values in the billing system are accurate and using the latest data
- Increasing leak survey and leak elimination activities while using better techniques and technology to ensure better sensitivity and precision.

We have separately forecast the costs of UAFG in AA6 through the calculation of:

- Forecast UAFG volumes (using historical UAFG rates as a percentage of total gas throughput, taking into account UAFG reductions)
- *Multiplied by* the forecast unit gas price for UAFG.

Our UAFG forecast percentage is provided in Section 8.8.1.

The forecast unit gas price for UAFG has been estimated based on the most recent publicly available information and predictions. The price per unit of UAFG (GJ) is made up of:

- The cost to purchase a relevant portion of natural gas, including:
  - Wholesale cost (i.e. the wholesale market price).
  - Transmission tariff (i.e. the cost of transportation to the GDS).
  - Retailer charge (i.e. the retail margin to purchase the natural gas).
  - The cost to purchase a relevant portion of renewable gas.[41]
  - The cost to purchase (for surrender) the necessary number of carbon credits, if renewable gas is unavailable.

[40] Essential Services Commission, Unaccounted for gas benchmark review, December 2022. https://www.esc.vic.gov.au/electricity-and-gas/prices-tariffs-and-benchmarks/unaccounted-gas-benchmarks/unaccounted-gas-benchmarks-review-2022

[41] Further information about our plans for enabling renewable gas and replacing UAFG can be found in our Renewable Gas Delivery Strategy (*see Attachment 03.004*)

The forecast unit rate for AA6 will be subject to change via a tender process to begin in late 2023. This tender process will inform us and the ERA of the actual price of UAFG per GJ that will be used as the basis for our response to the Draft Decision. This will allow us to determine the efficient cost of UAFG for AA6. For further information, see *'UAFG Strategy and Forecast', (see Attachment 09.008)*.

Table 9.26: Forecast UAFG cost for AA6 ($M real as at 31 December 2023)

OPEX	2025	2026	2027	2028	2029	TOTAL
Unaccounted for Gas	5.8	5.8	6.1	6.2	6.8	30.8

9.7 ANCILLARY REFERENCE SERVICES

Our ancillary reference services contribute $27.1 million to AA6 opex.

In AA6, we have included opex for the re-classified 'Permanent Disconnection' reference service. We forecast that this new service will account for $11.4 million of the $27.1 million over AA6.

Ancillary service volumes are forecasted based on historical growth and current retailer demands. Ancillary service costs have been forecasted based on the current costs of providing these services.

The specific forecast includes the following Ancillary Services:

- Applying a meter lock
- Removing a meter lock
- Deregistering a delivery point
- Disconnecting a delivery point
- Reconnecting a delivery point
- Special meter reading
- Permanent disconnection.

For further information on these individual reference services, see Section 6.3.1.

Table 9.27: Ancillary Services, AA6 Forecast Opex ($M real as at 31 December 2023)

OPEX	2025	2026	2027	2028	2029	TOTAL
Applying a meter lock	0.4	0.4	0.4	0.4	0.4	2.2
Removing a meter lock	0.2	0.2	0.2	0.2	0.2	0.9
Deregistering a delivery point	0.5	0.5	0.5	0.5	0.5	2.3
Disconnecting a delivery point	0.5	0.5	0.5	0.5	0.5	2.3
Reconnecting a delivery point	0.5	0.5	0.5	0.5	0.5	2.7
Special meter reading	1.0	1.0	1.0	1.1	1.1	5.3
Permanent disconnection	1.9	2.3	2.4	2.4	2.5	11.4
TOTAL	**4.9**	**5.4**	**5.5**	**5.6**	**5.7**	**27.1**

9.8 VALIDATION OF OPEX FORECAST

This section validates our opex forecast for AA6 that has been developed using the BST method, which is the well-accepted method to forecast opex over a regulatory period. The BST method is based on a high-level analysis of opex drivers and trends, and it captures the efficiency gains and cost savings that we have achieved in the AA5 period by rebasing the AA6 opex forecast. To validate our opex forecast from the BST method, we have also performed a detailed and granular analysis of opex components and activities (a bottom-up build).

The bottom-up forecast of opex provides an additional cost category breakdown for AA6, categorised into Network, Corporate, IT, UAFG, and Ancillary Services, and is shown in Table 9.28.

Table 9.28: AA6 forecast opex using the bottom-up method with cost category breakdown ($million real as at 31 December 2023)

OPEX CATEGORY	2025	2026	2027	2028	2029	TOTAL
Network	43.7	43.8	43.4	43.2	42.7	**216.8**
Corporate	24.1	24.1	24.6	26.1	25.0	**123.9**
IT	10.7	22.4	17.4	7.6	7.6	**65.6**
UAFG	5.8	5.8	6.1	6.2	6.8	**30.8**
Ancillary	4.9	5.4	5.5	5.6	5.7	**27.1**
TOTAL: Bottom-up	89.2	101.5	96.9	88.8	87.8	**464.2**
TOTAL: BST	*84.8*	*95.6*	*96.9*	*89.3*	*89.3*	***455.9***
VARIANCE	**4.4**	**5.9**	**0.0**	**(0.5)**	**(1.5)**	**8.3**

We have confirmed the robustness of the top-down opex forecast against our bottom-up opex forecast. Table 9.28 shows the variance between the bottom-up build forecast and our BST forecast. This demonstrates the efficiency of the BST opex forecast for AA6. This analysis shows no material differences between the two forecast methods over the AA6 period. Therefore, our BST opex forecast meets the test in Rule 91 of the NGR. This is further confirmed by our benchmark performance, showing that we are already operating more efficiently than our peers.

We are confident that our opex forecast for AA6 is robust, efficient, and reflects our best estimate of opex requirements and performance in the upcoming regulatory period. The BST approach ensures efficiencies are captured and the adjustments proposed to the base year are robust and efficient, based on reasonable growth and cost assumptions backed by sound justifications.

Using the bottom-up build method, Network, Corporate, and IT opex increased by $14.2 million between 2024 and 2025. Using the BST method, Network, Corporate, and IT opex increased by $9.8 million between 2024 and 2025 due to the efficiencies encompassed in the BST method.

Our UAFG and Ancillary Services are both forecast specifically through a bottom-up method. Our proposed UAFG forecast for AA6 has a lower UAFG rate (%) than our AA5 forecast, however, due to the higher price per unit of UAFG (GJ) (see UAFG Strategy and Forecast) the forecast cost for AA6 is

$5.0 million higher than the AA5 Final Decision forecast. Ancillary Service costs will increase by $2.4 million from 2024 to 2025 due to the inclusion of the Permanent Disconnection service as a reference service.

In the following sections, we have provided additional explanation on the nature of the activities in each cost category and how we will continue to be prudent and efficient over AA6.

9.8.1 NETWORK OPEX

Our AA6 network opex forecast using the bottom-up forecasting method is **$216.8 million**. Network operating costs comprise network maintenance, network control, and operations support (see below for further information).

Our network opex costs are aligned with our Asset Management System (including our ALSs) and Risk Framework (encompassing our GDS and Mandurah Gas Lateral Safety Case). Our AMP and ALSs are designed to reduce the life cycle costs of assets while maximising asset performance and reducing risk to ALARP.

Network opex is forecast using a combination of historical unit costs, market-tested rates and forecast resource requirements to deliver the services to our growing customer base. The works program is delivered using a combination of our internal workforce, external suppliers, and contractors to ensure that efficient and lowest sustainable cost activities, projects and work program resources are maintained over the long term.

Our resource requirements are reviewed annually and are based on operational activities, our works program and projected network growth. The Strategic Delivery and Resource Plan identifies the strategy and outcome for this review, including:

- our plans to address current and emerging issues impacting operational and project delivery
- opportunities for enhancing the delivery of projects and operational activities for safe, reliable, cost-efficient, environmentally sensitive and customer-focused gas service.

Further information on how costs are determined and how program delivery is carried out is provided in our *'Unit Rates Forecast', (see Attachment 10.023)* and *'Strategic Delivery and Resource Plan', (see Attachment 10.025)*.

- **Network maintenance:** Network opex costs include variable volume network maintenance that is forecast using a dedicated unit rate (*See Unit rates Forecast)*. This maintenance involves preventative, corrective and reactive maintenance activities as outlined in the AMP. Network maintenance also includes management, supervision and unallocated costs associated with asset inspections and maintenance, providing 24/7 operations, network emergency response, network repairs, installation inspections, and third-party damage prevention activities. Specific projects not forecast using a dedicated unit rate include our third-party damage prevention programs (such as BYDA), meterset painting, and asset sampling studies.

- **Network control and operations support:** Our Network Control and Operations Support teams ensure that planning, scheduling, customer liaison, and emergency management activities occur in conjunction with current procedures. Network control costs are associated with the operation of the 24/7 control room, planning and dispatch functions, including daily delivery of data to the retail market. Network control opex also includes the additional costs of asset management, engineering and technical compliance functions (including training and health safety and environment management), and operational costs associated with the Jandakot Operations Centre, other operational depots, fleet, and equipment.

9.8.2 CORPORATE OPEX

Our AA6 corporate opex forecast using the bottom-up forecasting method is **$123.9 million**. Our forecast is based on each support function identifying the resources and support required to deliver our network and business objectives for AA6. The costs are estimated based on previous costs and known information about cost changes and business objectives.

Corporate opex includes the costs associated with enterprise-wide needed support functions to serve internal (and sometimes external) customers and business partners. The support functions are provided locally where the expertise and capacity exist or through our corporate support services. Our AA6 opex costs cover the following support functions:

- **Human Resources:** These are the costs associated with employee-related functions, including human resource strategic policy development, recruitment, workforce planning, workforce legislation compliance, industrial relations, payroll, and training and development.
- **Finance:** These are the costs associated with financial-related support, including day-to-day financial transactions, regulatory and legislative compliance, the development and management of financial controls, financial accounting and reporting, accounts payable and receivable, debt collection, financial or treasury advice and the preparation of relevant financial statements.
- **Legal and Regulatory:** Legal and regulatory costs include in-house general legal support across the business and the management of external legal matters. Legal support services include engaging and managing external lawyers as required, commercial disputes, network incident investigation, drafting and reviewing agreements, advice on changes in laws and regulations, legal risk management, and legal advice regarding contract management. Regulatory costs are those associated with managing and reporting on compliance obligations, risk and servicing the access arrangement process (including tariff variations), cost pass through processes, review of business cases and investment decisions, reporting on business performance, managing and reporting on compliance obligations and oversight of regulatory arrangements to ensure appropriate ring-fencing. These costs will increase in 2023 and again in 2024 due to the increased requirements associated with the AA6 process.
- **Executive, Administration, and Governance:** These are the costs associated with the oversight and management of our business. This function includes developing business strategy and delivering business plan objectives, analysing investments and business structures, evaluating performance against annual operating and capital budgets, and Board management and business processes.

- **Risk and Compliance:** These are the costs associated with operational, financial and compliance audits and risk management. A robust internal risk and compliance function is important and a standard component of large organisations. Risk and compliance costs include risk reporting to a dedicated audit director, monitoring of noncompliance or breaches of our obligations, support on security matters, coordination of insurance renewals, crisis and contingency management, and business continuity planning.
- **Fees and Insurance:** Insurance costs and fees involve managing insurance and corporate membership programs. Insurance is important to entities with large capital investments. The purchase of external insurance is a standard corporate practice to mitigate risk and enable the timely repair of property and equipment in the event of damage. This supports the delivery of reliable service.
- **Corporate Affairs, Stakeholder Management and Communication:** Corporate communication costs are for internal and external communication services, website content management, and event and incident communication. Our stakeholder management team supports network operations by delivering safety awareness and education through direct industry-focused initiatives and other targeted and mass media campaigns, including Safety Awareness, community engagement through the Blue Flame Kitchen, and community projects. Furthermore, the stakeholder management team looks for opportunities to improve the customer experience, manage stakeholder expectations, and ensure that ATCO operates efficiently. The team focus on better customer experience, with shorter wait times, more accurate information, and a more responsive customer service team.

9.8.3 INFORMATION TECHNOLOGY OPEX

We have forecasted IT costs of **$65.6 million** in AA6 using the bottom-up forecasting method.

IT opex is developed from the 2025-2029 IT Strategic Plan[42] to manage the maintenance and replacement of IT assets efficiently and effectively. The IT Strategic plan also identifies specific projects to support the growth of the business, meet Safety Case and network asset management requirements, and deliver improved productivity in network and corporate operations.

Our bottom-up IT costs are forecast by reviewing the network and business requirements over the period. As part of our AA6 submission, we developed our IT Strategic Plan to deliver these requirements. Our cost estimates are based on a combination of historical costs, anticipated changes in costs, and new costs relating to technology improvements

Our **IT function** includes developing and delivering the IT strategy, managing IT contracts, ensuring disaster recovery support and business continuity plan requirements are up-to-date, IT investment governance, and storing, archiving, and retrieving business information. To ensure delivery of the IT Strategic Plan, we have recognised that further expertise is required in our IT department. The increase in subject matter expertise will support business analysis of technical solutions and ensure ongoing delivery of system enhancements and new technologies.

Managed services are provided by a third-party service provider. These services include 24/7 telecommunications support, network servers, security monitoring, applications, desktop support of

[42] *Attachment 09.004: '2025 – 2029 IT Strategic Plan'*

ATCO's systems, incident management, back-up, disaster recovery, and business continuity planning readiness. The opex includes the Managed Services Fee that ensures that our IT systems undergo the required lifecycle upgrades and replacements as per agreed service levels.

The **software licences** cover all vendor-provided software. In keeping with industry standards, vendors charge a fee (per user basis) and an annual maintenance fee. We are implementing new applications and integrating these new applications with existing applications (e.g. Geospatial Information System mapping software, Field Mobility and SAP modules). A larger number of employees will access these new applications, and as such, licence fees have increased for AA6.

10. FORECAST CAPITAL EXPENDITURE

CHAPTER HIGHLIGHTS

1. We are proposing to invest $465.8 million of capex over AA6 as we return to a normal activity level following the COVID-19 pandemic. Our AA6 capex is $16.7 million (3.5%) below the ERA's AA5 Final Decision of $482.5 million.
2. Major programs include network expansion, mains replacement, meter replacement, and sustainability initiatives.
3. Customer support for our capex programs was overwhelmingly positive during our AA6 engagement program.
4. Our capex forecasts use a 'bottom-up' forecasting approach for each capex driver category (sustaining the network, growing the network, information technology, and structures and equipment).

10.1 INTRODUCTION

The capital expenditure (capex) forecasts in our 2025-29 Plan align with our strategies and plans that support this submission. We have based our capex forecasts on available information, except for our forecasts related to the proposed changes to extending the national gas regulatory framework to hydrogen and renewable gases. We have assumed that these regulatory changes will be enacted in WA before the ERA's Final Decision.

Capex is incurred to connect new customers to the network and to support the ongoing safe and reliable natural gas supply. The scope, forecasts, expenditures, and justification are detailed within the associated Business Cases.

This Chapter provides an overview of each capex program in AA6 and the method we have used for our forecast. How we have integrated relevant stakeholder feedback in relation to our capex plans is summarised in Section 10.4.

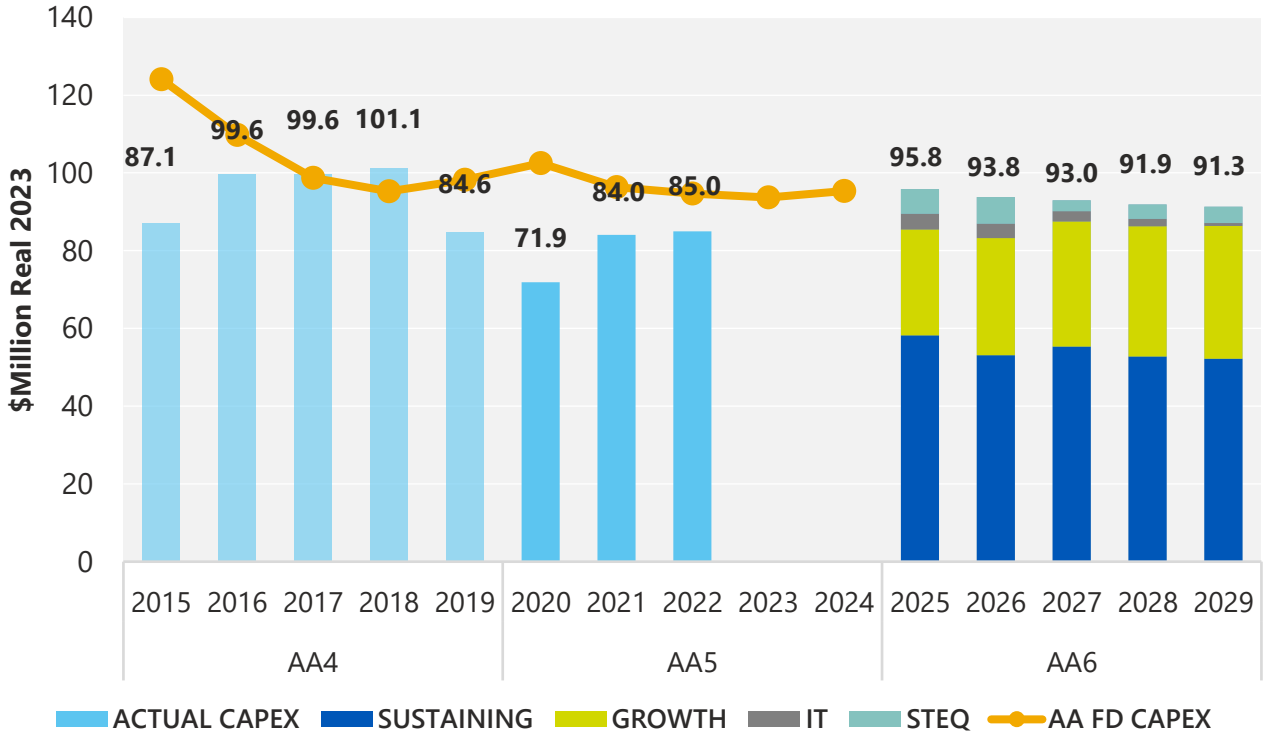
10.2 REGULATORY FRAMEWORK

ATCO is required under the National Gas Rule (NGR) to provide a forecast of '*conforming capital expenditure*' for AA6. Pursuant to NGR 79(1)(a), conforming capital expenditure is expenditure that would be incurred by a prudent service provider acting efficiently and in accordance with accepted good industry practice to achieve the lowest sustainable cost of providing services to its customers. Conforming capex must also be justifiable using the criteria in the NGR, including meeting one or a combination of customer demand, safety performance, compliance, or network reliability. We submit that all the projects detailed in this Chapter will meet the conforming capex test set out in NGR 79.

10.3 OVERVIEW

We are proposing to invest $465.8 million of capex over AA6, which is $16.7 million (3.5%) below the ERA's AA5 Final Decision of $482.5 million and $52.8 million above the projected AA5 actual capex of $413.7 million. Major contributors to the AA6 forecast are a return to a normal activity level following the COVID-19 pandemic, the addition of our sustainability initiatives, and the increase in the real cost of labour and materials due to constrained global supply chains and competition with the mining sector and state infrastructure projects for resources. Figure 10.1 compares our actual and forecast capex across AA5, the ERA AA5 Final Decision, and the AA6 forecast.

Figure 10.1: AA5 vs AA6 capex ($million real as at 31 December 2023)



Our capex is driven by:

- **Sustaining our network assets:** This involves maintaining and improving the safety and integrity of services, complying with regulatory obligations, and ensuring we can meet current demand levels for services from our customers. In addition, it includes programs to enable the distribution of renewable gases to support the energy transition and reduce GHG emissions.
- **Growing our network assets:** This involves investment in network infrastructure to meet forecast growth in demand for service through expanding the gas distribution network and complying with regulatory obligations.
- **Investing in Information Technology (IT):** This involves maintaining and improving IT systems at an operational and corporate level that enable us to provide services to customers and includes more strategic initiatives such as the digital transformation of our business.

- **Investing in our Structures and Equipment (STEQ):** This involves maintaining and replacing fleet vehicles (e.g., heavy and light vehicles), equipment (e.g., trailers, excavators, compressors) and property and plant (e.g., facilities, depots).

Table 10.1 summarises our forecast AA6 capex by category. Further detail on this expenditure is provided in Sections 10.6 to 10.11.

Table 10.1: Forecast AA6 capex by investment driver ($million real as at 31 December 2023)

CATEGORY	2025	2026	2027	2028	2029	TOTAL
NETWORK SUSTAINING	**58.2**	**53.1**	**55.3**	**52.7**	**52.2**	**271.6**
Asset Replacement	45.1	41.9	43.7	42.0	41.3	214.0
Asset Performance and Safety	13.1	11.2	11.7	10.7	10.9	57.6
NETWORK GROWTH	**27.3**	**30.2**	**32.2**	**33.5**	**34.2**	**157.4**
Customer Initiated	27.3	30.2	32.2	33.5	34.2	157.4
Demand Related	-	-	-	-	-	-
INFORMATION TECHNOLOGY	**4.0**	**3.7**	**2.7**	**1.9**	**0.7**	**13.0**
STRUCTURES AND EQUIPMENT	**6.3**	**6.9**	**2.8**	**3.8**	**4.2**	**23.9**
TOTAL	**95.8**	**93.8**	**93.0**	**91.9**	**91.3**	**465.8**

10.4 CUSTOMER AND STAKEHOLDER ENGAGEMENT

Our forecast capex for AA6 considers the insights from the AA6 engagement program. Through these sessions, we have recognised the community sentiments towards natural gas, service requirements, and views on future initiatives, including the use of renewable gases. The engagement activities we have completed to date, as outlined in Chapter 4, show strong support for our capex proposal.

- **Mains Replacement**: 100% support rate in the CRG, with 95% of survey participants considering the investment to be of personal importance.
- **Network Expansion**: 95% support rate in CRG, with 88% of survey participants considering the investment to be of personal importance.
- **Meter Replacement**: 100% support rate in the CRG, with 89% of survey participants considering the investment to be of personal importance.
- **Enabling Renewables**: 100% support rate in the CRG, with 94% of survey participants considering the investment to be of personal importance.

These programs were tested with stakeholders with further detail in our *'AA6 Voice of the Customer Insights Report, (see Attachment 04.001)*.

Our Draft 2025-29 Plan, released for consultation in April 2023, contained several questions about our proposed capex forecasts. Stakeholders were generally positive about our capex programs, with some specific suggestions and requests for more information. Further detail on the stakeholder feedback is discussed in Chapter 4.

Table 10.2 summarises the feedback received from our stakeholders and our respective responses.

Table 10.2: Consideration of stakeholder feedback on the Capex Forecast

STAKEHOLDER FEEDBACK	OUR RESPONSE
General	
Draft Plan explains the context for the expenditure well but it would be good to include a summary table at the end that brings all of the costs together	We have included Table 10.1, which summarises our AA6 capex forecast by category, Table 10.3, which summarises our AA6 capex forecast by driver, and Table 10.33, which summarises our AA6 capex forecast by asset class.
Sustainability	
Clearer explanation of decarbonisation plans and implications for expenditure, along with information about emissions reductions to date.	Our plans for decarbonisation are detailed within this 2025-29 Plan, with further detail on our related capex in Section 10.7.2. These plans are supported by our *'Renewable Gas Delivery Strategy', (see Attachment 03.004)*, Asset Management strategies and plans, our *'Sustainability Strategy', (see Attachment 03.003)*. The Renewable Gas Delivery Strategy also addresses how delivering on the plans will address GHG emission reductions.
Request for more information on the locations and other information associated with the development of the renewable gas injection points, as well as data collection – e.g., pressure, Heating Value, etc.	As the planning and detailed designs for the projects progress, communications to key stakeholders will be provided for feedback and notification.
Generally supportive of decarbonisation efforts, despite some uncertainty around renewable future and how an access arrangement can accommodate these types of ambitions before policy is set	Our expenditure plans are supported through our Renewable Gas Delivery Strategy and underpinned by the goals in our Sustainability Strategy. Our capex forecasts assume that changes to extending the national gas regulatory framework to hydrogen and renewable gases will be enacted in WA ahead of the ERA's Final Decision.
The 'no regrets' pathway is likely the most prudent one in an environment of significant change.	We discuss our 'no-regrets' pathway in Chapter 3, however, as part of this discussion, our enabling renewable gases program provides pathways to future options including use of renewable gas on a larger scale in WA.
Concerns about leakage rates in production, storage and transportation of H_2.	We agree that minimisation of hydrogen leakage is imperative in the energy transition and highlights the role of our Safety Case *(see Attachment 02.002)* to ensure that a considered, safe approach is being adopted.

STAKEHOLDER FEEDBACK	OUR RESPONSE
How does PVC Replacement program assist with addressing UAFG challenges?	The Mains (PVC) Replacement Program is driven by risk reduction. The program reduces current and future leaks by removing mains and services prone to leaking due to the nature of their construction and degradation over time. Our mains replacement forecast described in Section 10.7.1 outlines the scope of the AA6 program, supported by the ALS – Distribution Mains and Services (*see Attachment 10.007*).
Affordability	
More detailed information about which projects/capex not undertaken/incurred during AA5 have been deferred into AA6? And to what extent this drives AA6 capex?	We have addressed past performance feedback within Chapter 5 of this 2025-29 Plan, where we have detailed the programs that we undertook in AA5, These details include the scope completed, programs that were forecast for AA5 but deferred, and new programs completed in AA5 that were unforeseen at the time of the AA5 Final Decision.
Asset Replacement Program – how have we tracked with deliverability over AA5?	Generally, COVID-19 constrained the delivery of programs in early AA5, however, COVID-19 did allow ATCO to replace mains and services in 'harder to access' areas due to business closures from government public health restrictions. Further detail is provided in Chapter 5.
Capex underspend in AA5 – what is driving that? Are undelivered programs considered in the AA6 proposal? Does underspend carry over to next access arrangement?	Our AA5 forecast capex is $413.7 million ($2023), compared to the AA5 Final Decision of $482.5 million ($2023). The $68.8 million 'underspend' was largely due to the COVID-19 pandemic and industry resource constraints. Of this $68.8 million, $19.0 million of programs will be carried over to AA6, The three main components of this include: • Pigging Infrastructure ($7.5 million) • New Depot – Malaga ($4.3 million) • Mains replacement ($2.0 million)

STAKEHOLDER FEEDBACK	OUR RESPONSE
Commended engagement approach, but more information regarding trade-offs should be provided to inform consultation going forward. We are also concerned that ATCO is relying too heavily on 'strong positive customer support' for its gas services to justify continuing to expand the network and new connections. Customers need to be presented with information that enables them to understand the trade-offs of different emissions reduction options in terms of costs (e.g., Impacts on affordability) and benefits (e.g., Potential emissions reduction, health impacts), and the technical realities of technologies such as renewable hydrogen blending. The option that best promotes the long-term interests of consumers might not necessarily be the one that is the most popular in the absence of this information.	We want to ensure that our AA6 submission provides a credible, robust, and informative submission for the ERA and the public and that we have balanced our information in terms of all stakeholders. The supporting strategies and plans provide further evidence of our plans, including our sustainability targets and what we are looking to achieve through our investments. Alongside our forecast capex, our forecast opex (Chapter 9), past performance (Chapter 5), and our forecast KPIs (Chapter 8), provide an overview of our investments and the desired outcomes.
ATCO may wish to consider mechanisms to ensure delivery risk costs are not borne by consumers, i.e., top-down adjustment to bottom-up capex forecasts.	ATCO has undertaken a deliverability assessment of its capex program as part of its top-down challenge. For example, this top-down challenge has resulted in ATCO proposing a lesser amount of PVC replacement than proposed in the Draft Plan. Our approach to delivering the capex program is detailed in the *'Strategic Delivery and Resource Plan', (see Attachment 10.025)*. Our supporting documentation includes business cases to support each program as described in our *'Project Management Manual (PMM)' (see Attachment 05.032)*, with an overview provided on the *'Portfolio and Investment Governance Practice', (see Attachment 10.001)*. Our Investment Governance processes provide a top-down challenge to all our proposals in AA6, testing the scope, cost, risk mitigation, justification and benefits for all projects to ensure forecasts are robust, credible and compliant against current relevant legislation and standards, as outlined in the *'Portfolio Governance Committee Charter' (see Attachment 10.014*).
It is unclear how the overheads for the regulated assets are separated from the overheads for the non-regulated assets.	We have internal processes to ensure unregulated costs are accounted for separately from regulated costs. This is detailed in our *'Regulatory Cost Allocation Method' (see Attachment 01.006)*. Furthermore, Section 10.11 provides further overhead cost information.

STAKEHOLDER FEEDBACK	OUR RESPONSE
ATCO should take on the full asset risk of any expenditure on expanding the gas distribution system from now on.	The cost of expanding the network continues to return a positive financial benefit to all customers, resulting in lower tariffs than would otherwise be the case – the NPV of new connections remains positive. If no network expansion took place the impact would result in higher tariffs across AA6. Further detail about the financial benefit of expanding the network is presented alongside our growth capex forecast, see Section 10.8.
Consideration that the growth forecast may need revision due to recent events (interest rates, construction company failure, tax changes).	Our growth forecasts include revised projections of housing commencement data from HIA dated May 2023. This information points to an increasing number of housing completions in Perth over AA6.

We have reflected the outcomes of our engagement program in our capex proposal. We have challenged, tested, and refined our capex plans, including the completion of a top-down challenge. We were also requested to provide additional information on specific aspects of our capex proposals in the 2025-2029 Draft Plan, such as PVC Mains Replacement, Meter Replacement program and enabling renewables gases programs. Where appropriate, we have included this additional information in this 2025-2029 Plan or linked to supporting documents.

10.5 CAPEX FORECASTING METHOD

Our AA6 capex forecasts use a 'bottom-up' approach for each driver of capex. Our capex forecasts are consistent with our overarching *'Strategic Asset Management Plan'* (**SAMP**) *(see Attachment 10.012),* Asset Lifecycle Strategies (**ALS**), (*see Attachments 10.004 to 10.011*), '*Risk Management Framework*' *(see Attachment 02.001),* and *'Portfolio and Investment Governance Practice', (see Attachment 10.001),* which outline our planning, approval, and governance processes.

10.5.1 CAPEX FORECASTING

Our cost forecasting approach uses the following processes and principles:

- a unit rate multiplied by volume; or
- discrete projects detailed in business cases; or
- the most recent actual information available (reflecting efficient expenditure); or
- the most recent tender/contract information available, reflecting the expected AA6 market costs.

We have incorporated labour cost escalation into our capex forecasts, which are identical to the labour cost escalators detailed in Chapter 9.

We have used our historical unit rates in our forecast. For more information, please refer to the *'Unit Rates Forecast', (see Attachment 10.023)*

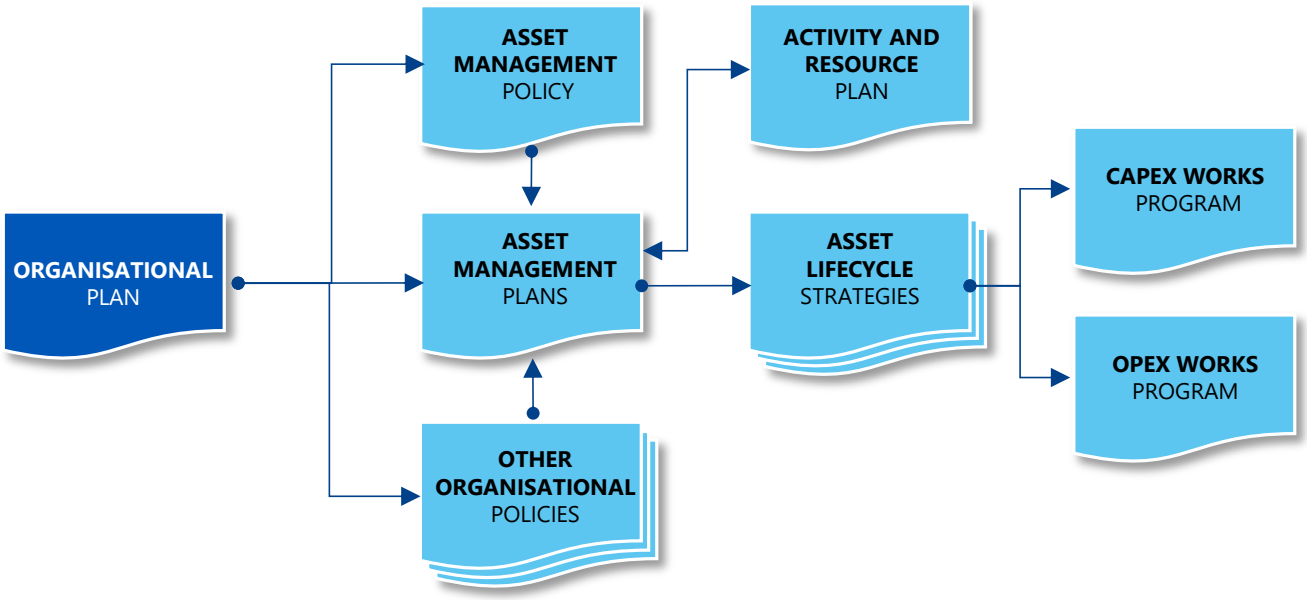
Our basis for cost estimation has demonstrated processes that have tested the most reasonable and efficient cost application and estimates. Detailed information on this process is discussed in our *'Cost Estimate Template Procedure', (see Attachment 10.003).*

These methods ensure that our forecast capex satisfies the NGR, to ensure expenditure is prudent, efficient, and consistent with good industry practice to achieve the lowest sustainable cost for our customers.

10.5.2 ASSET MANAGEMENT SYSTEMS

Our AA6 capex proposal has been developed in line with our asset management systems. These systems govern the scope, timing, and approach to undertaking investment and upgrades to our assets. These include critical business information systems, asset replacement, and augmentation programs that maintain network safety, meet our regulatory obligations, and maintain our service performance. Our Asset Management System hierarchy is shown in Figure 10.2.

Figure 10.2: Asset Management System hierarchy



10.5.3 RISK MANAGEMENT FRAMEWORK

ATCO integrates risk management into day-to-day decision making and has adopted the international standard for Risk Management ISO 31000:2009 as a benchmark to establish, implement, and maintain our risk management framework. A 'top-down' and 'bottom-up' view is taken towards implementing the risk management framework and involves assessing risks from different stakeholder perspectives and risk types.

As part of our Safety Case and Asset Management Plan, we have conducted a formal safety assessment for all asset classes to inform the development of Asset Lifecycle Strategies. Through this process, we aim to reduce network risk to ALARP and have identified the following actions:

- Continue the PVC mains replacement program to reduce the intermediate risk (non-ALARP) rated mains to ALARP.

- Upgrade high-pressure pipelines to facilitate inline inspection to ensure pipeline integrity.
- Continue ongoing projects to address network risk such as replacing mechanical fittings, installing step touch protection, and installing pressure monitoring devices (**PMD**).

10.5.4 INVESTMENT GOVERNANCE FRAMEWORK

Our investment governance practices include systems, structures, policies, processes, and resources employed to address ATCO's investment responsibilities and ensure alignment between ATCO's corporate strategy, objectives, and its investments. An investment is a cost incurred in pursuing corporate objectives, which results in a future economic benefit. Investment governance is about ensuring that our investments create value, are prudent and efficient, and are in the long-term interests of customers, shareholders and the community. Further information about our Investment Governance approaches and systems is detailed in the Portfolio and Investment Governance Practice.

10.5.4.1 INVESTMENT GOVERNANCE IN CONTEXT

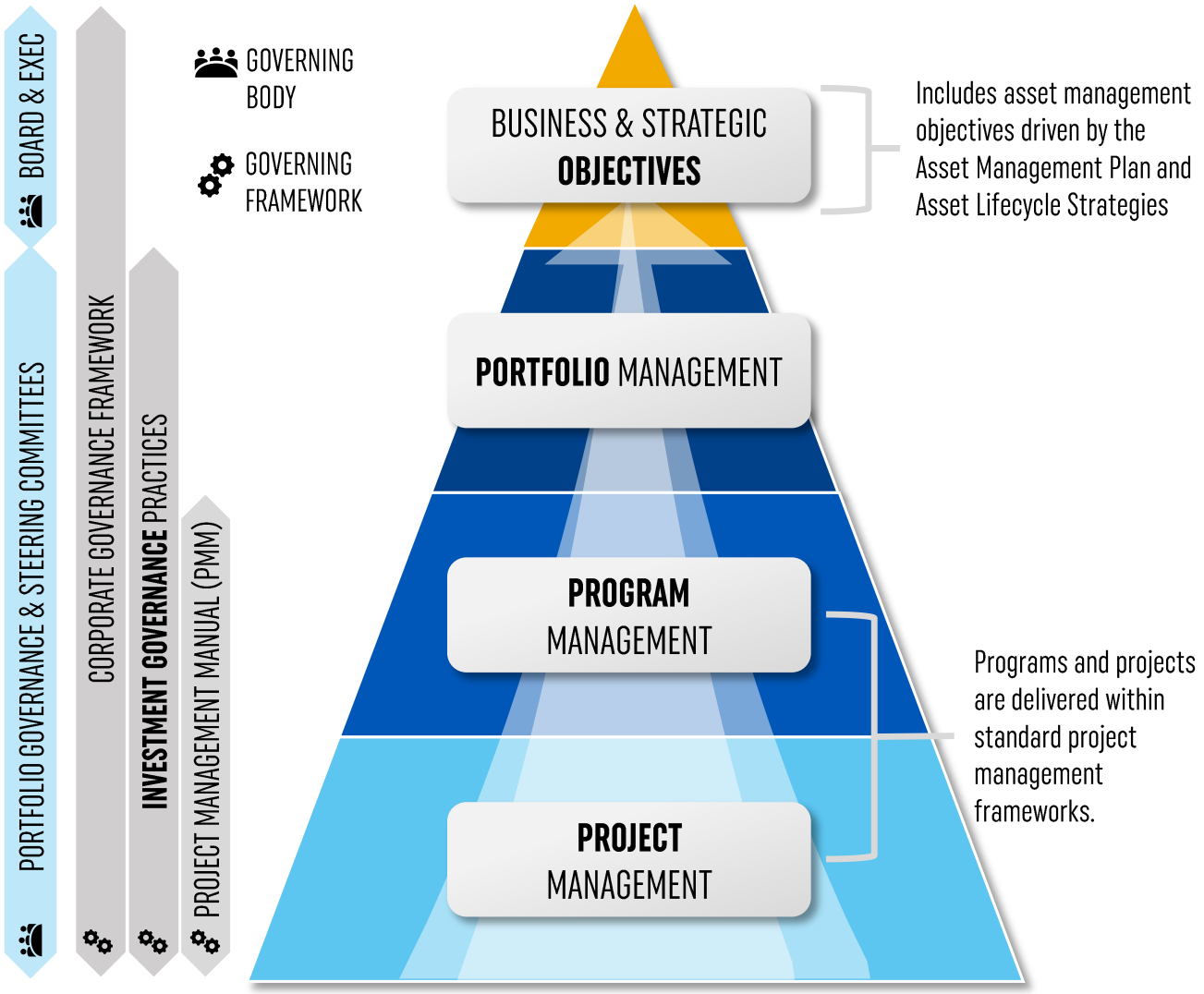
To ensure we meet the prudence requirements of regulators and shareholders, we manage investments at a portfolio, program, and project level. Our investment governance practices ensure programs and projects:

- Prioritise the safety of the network, employees and the community
- Make prudent and efficient investment and asset management decisions
- Are consistent with accepted good industry practice.

Our investment governance practices ensure that investment activities continue to reflect the strategic reasons for the original decisions to approve, fund and resource projects.

Figure 10.3 outlines the hierarchy between ATCO's strategic objectives, its respective governance frameworks and practices, and its project delivery. The investment governance practices ensure that project selection, approval, and implementation lead to prudent and efficient investments.

Figure 10.3: Investment governance hierarchy



10.5.4.2 INVESTMENT PLANNING

Our investment governance framework is aligned with our business's long-term planning, including the approval of the annual business plan. Business cases, financial evaluation spreadsheets, and capex appropriation requests are produced to detail the justification of our capex investments and submitted to the Portfolio Governance Committee (**PGC**) for review and approval.

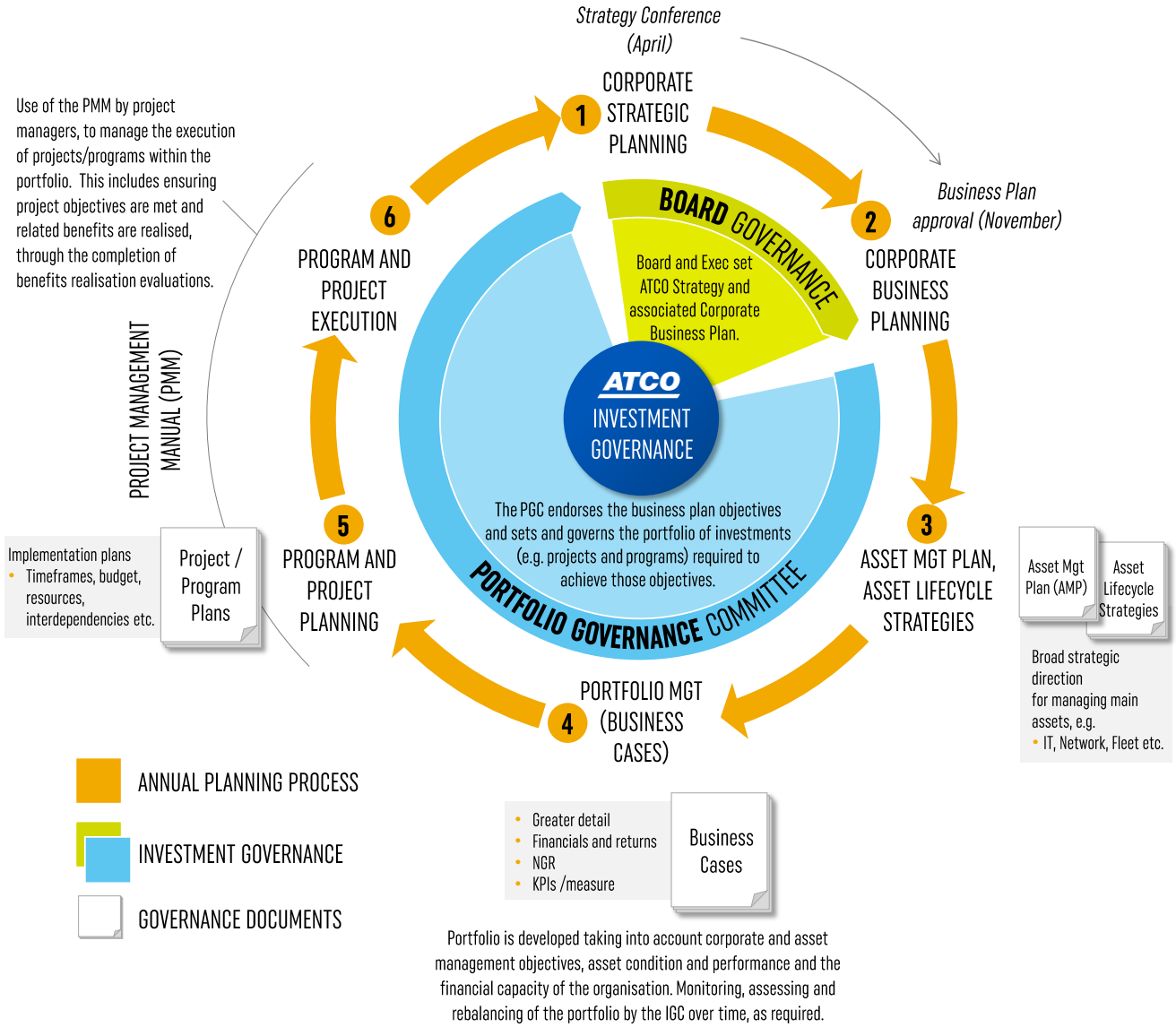
The PGC is a decision-making body that oversees the portfolio of current and future planned work by ATCO and the strategies underpinning this work. The PGC has been created as part of ATCO's good governance practice. For further information about the PGC's role and responsibilities, refer to the *'Portfolio Governance Committee Charter', (see Attachment 10.014)*.

With visibility of the portfolio, the PGC can ensure early identification of organisational and investment risk where there are interdependencies between projects. The PGC also ensures that capex is in the long-term interest of both the customer and ATCO, aligns with corporate strategies and objectives, and (as appropriate) is consistent with our regulatory framework.

Our annual planning process, shown in Figure 10.4 includes the following:

- Setting/updating the corporate strategy, business plan and objectives
- Updating the Asset Management Plan (**AMP**) and relevant strategies
- Construction of the investment portfolio (projects and programs) to achieve the business plan objectives within the context of the asset management plans and strategies
- Governance and steering of the portfolio and projects by the PGC and sponsors
- Monitoring, assessing and rebalancing of the portfolio by the PGC over time, as required
- Project execution by project teams.

Figure 10.4: Investment governance hierarchy



10.6 AA6 CAPEX FORECAST SUMMARY

Table 10.3 provides our AA6 forecast capex for each capex driver.

Table 10.3: AA6 forecast capex by capex driver ($million real as at 31 December 2023)

CATEGORY	($M)	(%)	INVESTMENT DESCRIPTION
NETWORK SUSTAINING	**271.6**	**58.3%**	
Asset Replacement	214.0	45.9%	The Mains and Meter Replacement Programs comprise over 80% of our asset replacement capex. For the Mains Replacement Program, we propose to replace 290km of our PVC network to reduce risk to ALARP. Our Meter Replacement Program is an ongoing compliance requirement to maintain reliable and accurate metering for end-user customers. During AA6, this program is forecast to replace over 110,000 meters.
Asset Performance and Safety	57.6	12.4%	Asset performance and safety programs support the ongoing safe and reliable gas supply to our customers. We are installing 50 PMDs in AA6 that will monitor the network flow for us to respond quickly in an emergency. This category also includes sustainability initiatives, enabling cleaner renewable fuels through our renewable gas programs. Our Network Reinforcement Programs maintain adequate capacity and network pressure to customers as gas usage and technology changes through installing new mains and pressure regulation facilities.
NETWORK GROWTH	**157.4**	**33.8%**	
Customer Initiated	157.4	33.8%	Network expansion projects will install new services, mains extensions, and meter installation for more than 68,000 new domestic and commercial customers.
Demand Related	0.0	0.0%	We are not forecasting Demand Related mains installations that relates to increasing existing network capacity. We have included capacity related projects under *Asset Performance and Safety* that ensures minimum pressures are maintained within distinct networks.
INFORMATION TECHNOLOGY	**13.0**	**2.8%**	IT capex is driven by operational priorities, our digital transformation strategy, vendor change announcements, and compliance requirements.
STRUCTURES AND EQUIPMENT	**23.9**	**5.1%**	In AA6, several minor facility improvement initiatives are planned for the seven facilities in the Perth metropolitan and regional areas. These initiatives are spread over AA6. Equipment is required to provide services to our customers and includes replacing tools and equipment used by our field staff.
TOTAL	**465.8**	**100.0%**	

10.7 FORECAST CAPEX: NETWORK SUSTAINING ($271.6M)

10.7.1 ASSET REPLACEMENT PROGRAMS ($214.0M)

Asset replacement programs replace network assets at the end of their useful operating life to ensure they remain safe and reliable to the network and customers. Table 10.4 provides the AA6 forecast capex for asset replacement programs.

Table 10.4: Asset Replacement Programs, AA6 Forecast Capex ($million real as at 31 December 2023)

PROGRAMS	2025	2026	2027	2028	2029	TOTAL
Mains Replacement Program	28.2	28.1	29.8	28.1	27.5	**141.7**
Meter Replacement Program	6.3	6.1	5.7	5.7	5.2	**29.1**
Other asset replacement programs	10.6	7.7	8.2	8.1	8.6	**43.2**
TOTAL	**45.1**	**41.9**	**43.7**	**42.0**	**41.3**	**214.0**

10.7.1.1 MAINS REPLACEMENT PROGRAM ($141.7M)

BACKGROUND

Keeping the gas flowing safely and affordably to our customers remains our priority. A critical part of this role is our Mains Replacement Program. Deteriorating mains pose a risk to customers and the public due to the potential for gas leaks to track into buildings, leading to a potential ignition event.

Our long-term mains replacement program involves decommissioning low pressure cast iron, low and medium pressure unprotected steel and PVC mains. We completed the replacement of all cast iron in AA4 and prioritised the replacement of unprotected metallic mains that pose an unacceptable risk in AA5. Each replacement program is essential to reduce the risk associated with these ageing assets to ALARP.

Our network consists of 9,360 km (approximately 67% of the network) of PVC mains, introduced to the network in the early 1960s. PE mains and services were introduced in 1993, and in 2003 became the material of choice, consistent with prudent operators nationally and internationally. Our PVC network has higher leakage rates than PE, predominantly occurring from fittings such as tapping bands, service tees and mechanical fittings. Leak rates increase as the material ages and deteriorates due to rubber seals and other components becoming brittle over time, leading to pipe failure.

In AA6, we will continue our PVC Mains Replacement Program to reduce the risks associated with these assets to ALARP.

INVESTMENT DRIVERS

The key driver (investment need) for this expenditure is the potential asset failure of poor-condition PVC mains with an unacceptable risk of an ignition event caused by a gas leak, impacting the safety of our customers and the public. Potential asset failures also cause increases in reactive maintenance and fugitive emissions (UAFG).

The Mains Replacement Program is driven by asset condition and associated risk rating, identified through our Mains Replacement Prioritisation tool. This software considers asset specification (such as age), historical leak data (including from fittings and exposure criteria to estimate pipe condition), remaining useful life, and risk from each pipeline to the public. The semi-quantitative risk outcomes from the Mains Replacement Prioritisation tool reflect the risk to public safety (the probability of individual fatality per km per year) from each pipeline segment and have been correlated to the *'ATCO Gas Australia Risk Matrix', (see Attachment 10.017)*, in accordance with our Safety Case.

Our mains replacement expenditure forecast includes service renewals, network rationalisation, and network reinstatement. We replace and upgrade identified assets as we deliver our Mains Replacement Program due to the safety and cost benefits, rather than as a stand-alone activity. This delivery approach is consistent with current accepted practice.

During AA5, we have conducted some PVC sampling and testing programs to gather additional asset condition data. This sampling program focused on condition assessment of the pipe material, and the findings are being considered in line with other drivers for this program (such as fittings condition and failure). The sample testing has yet to yield a definitive conclusion regarding the expected lifespan of the pipes, primarily due to the lack of significant correlation found between the pipe's mechanical properties and its service life. Nevertheless, the observed weak trends do suggest that material properties are deteriorating over time.

To obtain more conclusive results, we propose to conduct further testing with a broader scope. This expanded testing will include examining pipe fittings and targeting specific areas for pipe samples, such as those installed near busy roads. By doing so, we can gain a more comprehensive understanding of the pipes' condition and their expected longevity. Further testing is proposed for completion in AA6.

CONFORMING CAPEX JUSTIFICATION

The Mains Replacement Program conforms to NGR 79(1) and is justified on the following grounds in NGR 79:

- 79(2)(c)(i) – The investment improves safety by replacing 290 km out of 1690 km of Intermediate risk PVC mains in AA6, which is a quantity that reduces risk to ALARP. This proportion of the intermediate risk is prioritised based on the highest risk and poorest condition mains.
- 79(2)(c)(ii) – The investment maintains (or improves) network integrity by replacing PVC mains with PE mains to reduce the risk of asset failure due to age and deteriorating condition, thereby reducing reactive maintenance costs, improving the integrity of the network, and reducing the potential for impacts to customers.
- 79(2)(c)(iii) – The investment is necessary to comply with the regulatory requirements of Regulation 18(1) of the Gas Standard (Gas Supply and System Safety) Regulations 2000 (**GSSSR 2000**), which requires that a Gas Distribution Network must be designed, constructed, and operated and maintained to ensure so far as is reasonably practicable the safety of persons and to minimise damage to property. Regulation 37 of GSSSR 2000 prescribes that ATCO must comply with the accepted GDS Safety Case, which requires Intermediate risks to be assessed and reduced to an acceptable level (negligible, low) or intermediate and ALARP.

PLANNED ACTIVITY

The program has identified 290 km of mains to be replaced in AA6, with an average of 58 km of mains replaced per year. Table 10.5 outlines the total length of mains to be replaced annually in AA6.

Table 10.5: Mains length to be replaced in AA6 (km)

PROGRAMS	2025	2026	2027	2028	2029	TOTAL
Mains Replacement[43]	54	56	61	60	59	**290**

FORECAST EXPENDITURE

A total of $141.7 million of network sustaining capex has been estimated for the Mains Replacement Program for AA6, as summarised in Table 10.6.

The project cost is calculated using unit rates for each mains type and an assessment of the costs resulting from the geographical characteristics of the mains' location. Our forecast unit rates are based on the outcomes of our competitive tender processes. We also considered bundled efficiency, new delivery methods (such as the insertion method), mobilisation, disruption, and third-party combined works opportunities. Our unit rate forecasts ensure our forecast capex is a best estimate. Our mains replacement capex accounts for 30% of our total capex over AA6.

Table 10.6: Mains Replacement Program, AA6 Forecast Capex ($million real as at 31 December 2023)

PROGRAMS	2025	2026	2027	2028	2029	TOTAL
Mains Replacement Program	28.2	28.1	29.8	28.1	27.5	**141.7**

Our Mains Replacement Program is supported by a dedicated business case detailing: investment justification, options analysis, project details including resourcing, strategic alignment and compliance to the NGR; provided in confidential attachment *'End of Life Replacement - PVC Mains - Business Case', (see Attachment 10.045)*.

10.7.1.2 METER REPLACEMENT PROGRAM ($29.1M)

BACKGROUND

The Meter Replacement Program addresses our regulatory obligation under the GSSSR 2000[44] to manage the integrity of meters and ensure they operate within a prescribed tolerance band for metering accuracy. This obligation is carried out through our routine replacement of domestic and commercial meters that have reached their prescribed life or when the accuracy of their measurements falls outside the prescribed tolerance band.

While there are various types and sizes of meters on the network, each meter falls into one of two categories based on the type of meter being replaced: *domestic* meters and *commercial* meters.

[43] This is subject to change due to continuous refining of the Mains Replacement Prioritisation model.

[44] As per Gas Standards (Gas Supply and System Safety) Regulations (GSSR) 2000 (Part 3 – Metering: Section 16)

Commercial meters include those installed in the network for billing or network monitoring purposes (e.g., capacity modelling, UAFG calculations).

INVESTMENT DRIVERS

The Meter Replacement Program is driven by the meter's lifecycle stage. Both domestic and commercial meters have an end-of-life stipulated by regulatory requirements within the Gas Standards to ensure their accuracy:

- **Domestic meters** have a prescribed 'end of life' of 18 years as per GSSSR 2000. We carry out batch sampling and testing as part of our regular maintenance activities to ensure meters are measuring within their prescribed tolerance. Our sample batch in-service compliance testing (as per AS 4944) to justify the extension of a domestic meter's life was approved by our technical regulator, *Building and Energy*. Building and Energy approved an alternative requirement to the regulation, extending newer models of the domestic meter's in-service life to 25 years. Meters that reach end-of-life are removed and recycled as this is more economically viable than refurbishing meter components and placing these back in service. Meters that are removed from service are replaced with new meters.
- **Commercial meters** are more expensive than domestic meters as they are larger, operate at higher pressures, and must withstand higher volumes passing through them. These meters must remain compliant to the prescribed measurement tolerances in GSSSR 2000 and are removed from service, tested, refurbished, and readied to be put back in-service (the costs of which are treated as opex). However, commercial meters are subject to varying conditions and each meter removed from service is analysed based on its condition. If remediation work is not considered an effective long-term solution, for example, with severe grades of corrosion, then a complete replacement occurs, which is the scope of the Billing Commercial Meter Replacement program.

CONFORMING CAPEX JUSTIFICATION

The Meter Replacement Program conforms to NGR 79(1) and is justified on the following grounds in NGR 79:

- 79(2)(c)(iii) - the capex is necessary to comply with a regulatory obligation or requirement. The replacement project complies with GSSSR 2000 *(Part 3 – Metering: Section16),* which requires a network operator to ensure that all installed domestic meters are replaced at intervals not exceeding their prescribed end-of-life. This project will also ensure that the domestic gas meter accuracy is within tolerances identified in GSSSR 2000 by replacing the meters with new meters at the end of their in-service lives.

PLANNED ACTIVITY

The replacement year is calculated based on installation dates. In AA6, we forecast approximately 110,116 domestic meters and 64 commercial meter replacements. Table 10.7 shows the replacement volumes for each year of AA6.

Table 10.7: Meter Replacement Program, AA6 volume

PROGRAMS	2025	2026	2027	2028	2029	TOTAL
Meter Replacement - Domestic	24,865	23,120	22,013	21,824	18,294	**110,116**
Meter Replacement - Commercial	9	16	10	10	19	**64**
TOTAL	**24,874**	**23,136**	**22,023**	**21,834**	**18,313**	**110,180**

FORECAST EXPENDITURE

Applying the domestic and commercial meter replacement unit rates to the forecast set out above, we have estimated that the meter replacement program will cost $29.1 million over AA6, which represents around 6% of total capex. Table 10.8 shows the meter replacement forecast capex for each year of AA6.

Table 10.8: Meter Replacement Program, AA6 Forecast Capex ($million real as at 31 December 2023)

PROGRAMS	2025	2026	2027	2028	2029	TOTAL
Meter Replacement - Domestic	6.1	5.7	5.5	5.4	4.6	**27.3**
Meter Replacement - Commercial	0.3	0.4	0.3	0.3	0.6	**1.8**
TOTAL	**6.3**	**6.1**	**5.7**	**5.7**	**5.2**	**29.1**

Our Meter Replacement Programs are supported by a dedicated business case detailing investment justification, options analysis, and project details (including resourcing), strategic alignment, and compliance with the NGR. This is provided in the confidential attachments *'End of Life Replacement - Meter Facilities - Business Case', (see Attachment 10.032).*

10.7.1.3 OTHER ASSET REPLACEMENT PROGRAMS (END-OF-LIFE) ($43.2M)

The sections below provide information on our other end-of-life asset replacement programs, including background, investment driver, and conforming capex justification. Table 10.9 summarises the forecast capex for these programs in AA6.

RISERS AND SERVICES ($16.2M):

Ageing risers connected to PVC services are susceptible to leaks. Historically, we have identified approximately 1,500 leaks per year on risers and services via 'smell of gas' calls from the public or during routine maintenance. Due to the leak location being in close vicinity of a building, it is important to eliminate the leak rather than only repairing the fitting or joint causing it. Replacement of the affected PVC with PE improves integrity by eliminating the likelihood of leaks and extending the system's service life. Further detail about conditions assessments and failure mechanisms are provided in the Mains and Services ALS *(see Attachment 10.007)*.

The AA6 capex program is forecast to replace approximately 1,850 assets, with capex of $16.2 million. This forecast is based on actual AA5 volumes and unit rates for service and riser replacements.

These programs conform to NGR 79(1) and are justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) - the capex is necessary to maintain and improve the safety of services. This project eliminates the potential increase in leaks on services and risers by replacing with fully fused jointing solutions. The project also reduces the risk of leaks in proximity to customer properties.
- 79(2)(c)(ii) - the capex is necessary to maintain the integrity of services by eliminating the likelihood of leaks and extending the service life of the system.

Our Risers and Services program is supported by a dedicated business case detailing investment justification, options analysis, project details including resourcing, strategic alignment, and compliance to the NGR. This is provided in attachments '*End of Life Replacement - Service Replacement - Business Case'*, (*see confidential Attachment 10.043*). A component of this forecast investment is volumetric activities (variable volume), which is detailed in the Unit Rates Forecast (*see confidential Attachment 10.023*).

REGULATOR SETS AND METERING FACILITIES ($12.5M):

Regulator sets (including pits and lids) and commercial and industrial metering facilities (including pressure regulating, isolation equipment and meters) experience degradation in condition over time. We assess the condition of the assets during scheduled inspections. Where the condition of these assets is deemed poor, we undertake additional engineering design and condition assessment to ascertain the need for replacement or whether alternative refurbishment or repair options are available. However, they are replaced under the capex program when they no longer meet operational requirements.

The investment driver for this capex is to ensure the safety and integrity of facilities that have reached a condition where maintenance is no longer effective and risk is not ALARP.

The AA6 capex program forecasts the replacement of these assets based on replacement criteria set out in the Pressure Regulating Facilities ALS (*see Attachment 10.008*). Our forecast AA6 capex for these programs is $12.5 million.

These programs conform to NGR 79(1) and are justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) - replacing these assets improves the safety of these assets by reducing the likelihood of leaks or damage that lead to a risk of public safety.
- 79(2)(c)(ii) - improving the integrity of the assets by replacing poor condition pressure equipment or load bearing equipment to improve control and safety systems within the network.

Our Regulator Sets and Metering Facilities programs are supported by dedicated business cases detailing investment justification, options analysis, and project details including resourcing, strategic alignment and compliance with the NGR; (*see confidential Attachments 10,032, 10,035, and 10,036*), and AA5 Business Cases (*see confidential Attachments 05.006.18 and 05.006.04*).

TELEMETRY EQUIPMENT ($6.0M):

Telemetry equipment is used on the network to monitor pressures and proactively respond to developing circumstances before they result in outages. Network performance data is integral to the network's day-to-day operation and for network demand modelling. Telemetry is used to meet

regulatory obligations of providing hourly flow rate data for specific industrial customers. Telemetry replacement occurs when equipment reaches the manufacturer's prescribed end-of-life.

The investment driver for this capex is to maintain reliable data for decision-making in the network, ensure accurate and timely customer billing for industrial customers, and ensure continuous monitoring of network pressures, flows, and protection systems to optimise maintenance and operational response. Further detail about condition assessments and failure mechanisms are provided in our SCADA ALS (*see Attachment 10.009*).

The AA6 capex program forecasts the replacement of 3,403 items of equipment, such as data loggers, transducers, and flow computers based on replacement criteria set out in our SCADA ALS. Our forecast total capex cost of this AA6 programs is $6.0 million.

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(ii) and 79(2)(c)(iii) - maintaining integrity of the network by replacing telemetry on a condition-based program, this maintains the level of monitoring of network pressures, safety systems and commercial and industrial billing in compliance with Retail Market Procedures (WA)[45] and ensuring measurement accuracy limiting the need for manual verification.

Our Telemetry Equipment program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance to the NGR; provided in (*see confidential Attachment 10.029*).

MECHANICAL FITTINGS ($4.7M):

Mechanical compression fittings were historically used on the PVC network to connect sections. Since 2015, ATCO has been replacing disturbed mechanical fittings during operational activities to ensure safety risk to ALARP, preventing increases in reactive maintenance and UAFG.

A technical investigation in 2012 identified that mechanical compression fittings have a greater potential to leak after they have been exposed or disturbed during operational activities. Excavation works around the mechanical compression fitting can potentially disturb the ground under the fitting, which cannot be compacted prior to backfill. As a result, the mechanical compression fittings are more likely to deflect or move when back-filling excavations, potentially resulting in leaks.

The program to replace disturbed mechanical fitting was initiated in 2015. We assess the risk of a gas incident due to the leak of mechanical compression fittings in residential areas as not ALARP. The assessment result requires us to reduce risk to ALARP, and this can result replacement of these fittings when identified. Further detail about condition assessments and failure mechanisms are provided in our ALS for Mains and Services (*see Attachment 10.007*).

The investment driver for this capex is mitigating the risk associated with leaks from disturbed mechanical fittings, based on renewal and replacement criteria in our ALS for Mains and Services.

The program proposes to replace an average of 176 mechanical fittings annually, with 880 replacements in AA6. This will address the Intermediate (non-ALARP) risk associated with disturbed mechanical fittings during operational activities.

[45] https://aemo.com.au/en/energy-systems/gas/gas-retail-markets/procedures-policies-and-guides/western-australia

Our forecast AA6 capex for the program is $4.7 million.

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) – The investment improves safety by reducing leak frequency. Removing mechanical fittings when they are exposed and disturbed during operational activities reduces the number of return visits to asset locations. This will reduce the risk of leaking when the fitting experiences a greater than six-degree deflection caused by earthworks disturbance.

Our Mechanical Fittings program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; (*see confidential Attachment 10.034*).

METALLIC MAINS ($1.8M)

This program was introduced in AA4 to replace unprotected metallic mains under railway crossings that were identified to have deteriorated and reached end-of-life. Further details about conditions assessments and failure mechanisms are provided in the Mains and Services ALS (*see Attachment 10.007*).

The program was scheduled to be completed in AA5. However, the project was delayed mainly due to the COVID-19 pandemic, causing longer planning phases, receiving approvals from third parties (i.e., PTA, ARC, railways closure), access restrictions at site locations, and increased work around railways from government-driven projects. Program completion has now been extended to the end of 2025.

This program conforms to NGR 79(1) and is justified against the following sub-rule(s) aligned with the NGR 79(2):

- NGR 79(2)(c)(i), replacing these assets improves the safety of these assets by reducing the likelihood of leaks that lead to a risk of public safety; and
- NGR 79(2)(c)(ii), maintaining the integrity of the network by replacing poor-condition metallic mains that may be critical to maintaining appropriate supply pressures to customers.

Our Metallic Mains program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment and compliance to the NGR; (*see confidential Attachment 05.003.01*). Note: this Business Case was approved in AA5, with the activities to be completed in AA6.

ISOLATION VALVES ($1.6M):

High pressure isolation valves that cannot adequately isolate gas flows for emergencies or critical maintenance activities present an unacceptable risk to the public and ATCO personnel. Isolation valves installed on HP pipelines that have corroded, are leaking, or are inoperable are deemed end-of-life against the criteria in our ALS for High Pressure Pipelines (*see Attachment 10.011*).

The AA6 capex program is forecast to replace 6 isolation valves that meet end-of-life replacement criteria. Our forecast AA6 capex for this program is $1.6 million.

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) - The investment is necessary to maintain and improve safety by providing the ability to isolate the gas supply and provide sectional isolation during emergencies or maintenance and eliminate gas leaks from corroded ageing isolation valves.
- 79(2)(c)(ii) - The investment is necessary to maintain the integrity of services by reducing the duration of uncontrolled gas release and minimise the impact on customers' security of supply during emergencies.
- 79(2)(c)(iii) - The investment is necessary to comply with a regulatory obligation or requirement by meeting emergency isolation capability on HP networks in accordance with AS 2885.1[46], section 4.8 and AS/NZS 4645[47], section 4.11 as required to meet Safety Case obligations driven by compliance with Division 3, Part 27(2) of the GSSSR[48].

Our Isolation Valve program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; (*see confidential Attachment 10.027*).

WARNING SIGNS ($0.4M):

High Pressure Pipeline Warning Signs are installed on high pressure pipelines as a procedural control to mitigate the risk of third-party impacts on ATCO's assets. To date, approximately 7,000 warning signs are installed throughout the network along the pipeline routes comprising of approximately 800 km of pipelines. Warning signs provide information to third parties regarding the location of the pipelines and potential hazards associated with working within their vicinity. The replacement of warning signs that have reached their end-of-life is based on criteria provided in the ALS to increase safety awareness for third-party works within the vicinity of High Pressure Pipelines, reduce the risk of third-party impact, and ensure compliance to Australian Standards. Further details about conditions assessments and failure mechanisms are provided in the ALS for High Pressure Pipelines (*see Attachment 10.011*).

The investment driver for this capex is to maintain compliance with AS 2885.1[49] Section 4.4 Pipeline Markings, which requires warning signs to be located on the pipeline route that allows the pipeline route to be properly identified and to reduce the likelihood of a third-party impact on our high pressure assets. High pressure warning signs are visually inspected as part of a pipeline patrol (weekly or monthly) and are replaced at end-of-life due to physical damage (e.g., weather, vehicular impact, or vandalism), or structural degradation (e.g., corrosion).

We estimate approximately 130 signs annually (650 for AA6) require replacement based on historical data. The forecast AA6 capex for this program is $0.4 million.

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

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46 ATCO is obligated to comply with AS 2885.1 as a result of regulations 18, 20, 27 and 37 of the *Gas Standards (Gas Supply and System Safety) Regulations 2000.*

47 ATCO is obligated to comply with AS/NZS 4645 as a result of regulations 18, 20, 27 and 37 of the *Gas Standards (Gas Supply and System Safety) Regulations 2000.*

48 Gas Standards (Gas Supply and System Safety) Regulations 2000

49 ATCO is obligated to comply with AS 2885.1 as a result of regulations 18, 20, 27 and 37 of the *Gas Standards (Gas Supply and System Safety) Regulations 2000.*

- 79(2)(c)(i) - The investment is necessary to maintain and improve the safety of services by mitigating the risk of third-party impact on ATCO's HP assets to ALARP.
- 79(2)(c)(ii) - The investment is necessary to maintain the integrity of services by mitigating the damage to HP pipelines by third parties thereby ensuring supply continuity.
- 79(2)(c)(iii) - The investment is necessary to comply with a regulatory obligation or requirement by ensuring that pipelines can be identified and located along their route by third parties as mandated by AS 2885.3 and AS/NZS 4645[50] as required to meet Safety Case obligations driven by compliance with Division 3, Part 27(2) of the GSSSR[51].

Our Warning Sign program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance to the NGR; (*see confidential Attachment 10.026*).

FORECAST EXPENDITURE

Table 10.9 shows our AA6 forecast capex for our other replacement programs.

Table 10.9: Other Replacement Programs, AA6 Forecast Capex ($million real as at 31 December 2023)

PROGRAMS	2025	2026	2027	2028	2029	TOTAL
Risers and services	3.2	3.2	3.2	3.3	3.3	16.2
Regulator sets and metering facilities	3.2	2.3	2.2	2.2	2.6	12.5
Telemetry equipment	0.9	0.9	1.4	1.4	1.4	6.0
Mechanical compression fittings	0.9	0.9	0.9	0.9	1.0	4.7
Metallic mains	1.8	-	-	-	-	1.8
Isolation valves	0.5	0.3	0.3	0.3	0.3	1.6
Warning signs	0.1	0.1	0.1	0.1	0.1	0.4
TOTAL	**10.6**	**7.7**	**8.2**	**8.1**	**8.6**	**43.2**

10.7.2 ASSET PERFORMANCE & SAFETY ($57.6M)

This capex category ensures the efficient and safe operation of our network assets. It includes building infrastructure to meet the needs of stakeholders and our obligations as a gas distribution operator. Table 10.10 provides the AA6 forecast capex for Asset Performance and Safety programs.

[50] ATCO is obligated to comply with AS 2885.1 and AS/NZS 4645 as a result of regulations 18, 20, 27 and 37 of the *Gas Standards (Gas Supply and System Safety) Regulations 2000.*

[51] Gas Standards (Gas Supply and System Safety) Regulations 2000

Table 10.10: Asset Performance and Safety Programs, AA6 Forecast Capex ($million real as at 31 December 2023)

PROGRAMS	2025	2026	2027	2028	2029	TOTAL
Enabling renewable gases	4.5	2.7	2.7	2.8	2.8	15.5
Inline inspection	3.7	3.8	6.4	5.3	5.6	24.9
Network reinforcement	1.8	-	-	0.1	0.1	2.0
Other asset performance programs	3.1	4.7	2.5	2.5	2.3	15.1
TOTAL	**13.1**	**11.2**	**11.7**	**10.7**	**10.9**	**57.6**

10.7.2.1 ENABLING RENEWABLE GAS ($15.5M)

BACKGROUND

The enabling renewable gas program relates to the capex of ensuring the network can accept and distribute renewable gases.

Much of our network is compatible with renewable gases. PE mains and services were introduced in 1993, and in 2003, they became the material of choice, consistent with prudent operators nationally and internationally. PE is compatible with renewable hydrogen and biomethane. Our network now consists of over 4,300 km of PE (approximately 30%). Our PVC network is also compatible with biomethane, and renewable hydrogen blends up to 10%.

This means that at this time we do not need to make a large investment in the network to allow it to distribute renewable gases. Repurposing the existing network to distribute renewable gases means that consumers benefit from the investments already made in the network.

Our enabling renewable gas program involves a modest program of activities to support the injection of renewable gases into the network. This includes constructing gate stations to inject renewable gases into our network, installing control systems to ensure accurate measurement of energy content, and a replacing a small portion of meters with hydrogen compatible metering.

INVESTMENT DRIVERS

ATCO has set emissions reduction targets which align with Federal and State emissions reduction targets, as set out in our ATCO Gas Australia Sustainability Strategy. Our 2030 targets include:

- a 30% reduction in net emissions (Scope 1) by 2030 from 2020 levels
- a reduction in Scope 2 emissions to be no higher than 2020 levels by 2030
- a reduction in Scope 3 emissions by lowering the emissions intensity of the energy delivered through the ATCO network

The Renewable Gas Delivery Strategy *(see Attachment 03.004)* supports our Sustainability Strategy by articulating ATCO's proposed programs to meet these targets and enabling the introduction of renewable gases into the GDS to reduce both ATCO's and end-users' carbon footprints.

CONFORMING CAPEX JUSTIFICATION

The planned expenditure conforms to NGR 79(1) as the expenditure aligns to government climate objectives and is in line with good industry practice for reducing emissions. Other gas distribution networks across Australia are transitioning to renewable gases. Adelaide[52] and Sydney[53] have operating renewable gas facilities and two more projects (in Gladstone[54] and Wodonga[55]) will be operational by 2026. Replacing natural gas with renewable gas has greater long-term benefits for the environment and stakeholders, even with initial upfront infrastructure costs, as forecast operational costs (including the cost of renewable gas) over the long-term are less than offsetting emissions.

These programs are justified under the following grounds in NGR 79(2):

- 79(2)(a) - the investment delivers overall positive economic value by reducing UAFG costs in the long term[56], reducing environmental emissions, providing greater energy choice for customers, and enabling solutions for industry to reduce Scope 1 emissions. Further details regarding simplified economic modelling relating to Net Present Values are provided in the Renewable Gas Delivery Strategy.
- 79(2)(c)(iii) - the investment is required for Australia to meet its obligations under the Climate Change Act 2022 to reduce emissions by 43% below 2005 levels by 2030.

PLANNED ACTIVITY

ATCO's program to enable renewable gases to be accepted and delivered through the network will provide Western Australians with a choice of energy in the future. Our planned programs will ensure our transition is safe, maintains the network's reliability, and ensures the steps we take are prudent and timely for all stakeholders. The proposed capex programs include:

Enabling Renewable Gas Injection

This program aims to prepare the gas network to accept renewable gases, including renewable hydrogen and biomethane (*see Section 3.4*).

In AA6 we propose to build and maintain infrastructure to enable the safe and reliable injection of renewable gas. This program builds on ATCO's capability and experience from its blending project where we are blending renewable hydrogen into 2,700 homes in the Glen Iris, Treeby, and Calleya residential areas within Cockburn.

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52 Hydrogen Park South Australia blends renewable hydrogen to more than 700 homes in the Adelaide suburb of Mitchell Park. More information available here - https://www.agig.com.au/hydrogen-park-south-australia

53 Malabar Biomethane Injection Plant will have an initial capacity of 95 TJ of renewable gas per annum. This is about equivalent to the average annual gas usage of 6,300 NSW homes. More information available here - https://jemena.com.au/about/innovation/renewable-gas/key-projects/malabar-biomethane-project

54 Hydrogen Park Gladstone will blend up to 10% renewable hydrogen to 770 homes and businesses in Gladstone – More information available here - https://www.agig.com.au/hydrogen-park-gladstone

55 From 2025 Hydrogen Park Murray Valley will blend up to 10% hydrogen for supply into the existing gas distribution networks across Albury and Wodonga to more than 40,000 business and residential connections, More inflation available here - https://www.agig.com.au/hydrogen-park-murray-valley

56 Based on the assumption that emissions reduction will be legislated, and that replacing UAFG with renewable gas is cheaper than the comparative cost of replacing UAFG with natural gas and purchasing carbon offsets. This is discussed in the RGDS.

ATCO proposes building 6 gate stations to each inject around 100-200 TJ of renewable gas into the network (per site per year). We forecast to build 2 injection points in 2025 and then 1 per year over the remaining years of AA6 as shown in Table 10.11. As further detailed in our Renewable Gas Delivery Strategy, the six injection points are forecast during AA6 as follows:

- two injection points are forecast in 2025 to inject the amount of renewable gas needed for ATCO to replace a portion of its UAFG; and
- four injection points are forecast for the remaining four years of AA6 (1 per year) to inject the amount of renewable gas needed to address customer demand.

Table 10.11: Number of renewable gas injection points delivered per year

PROGRAMS	2025	2026	2027	2028	2029	TOTAL
Injection points	2	1	1	1	1	**6**

Preliminary proposed sites include Neerabup, Wangara, Forrestfield, and Busselton. The timing of these projects is projected over AA6 to ensure we can deliver and maintain the safety of the infrastructure and network.

Network Blending Control Systems

This project is for interconnection management controls to ensure a system for accurately measuring delivered energy in the network with dynamic renewable gas blends. This project is necessary to support the accurate billing of energy delivered from the network.

Meter Changes for Hydrogen Blending

This program is to replace a small proportion of metering assets in parts of the network where renewable gas blending will occur. Meter replacement is based on current data within our current blending project, whereby some legacy meters require replacement as they are not suitable to accept hydrogen.

For further information on our planned activities in AA6, refer to the Renewable Gas Delivery Strategy.

FORECAST EXPENDITURE

Table 10.12 shows the AA6 forecast capex for enabling the distribution of renewable gas of **$15.5 million.**

Table 10.12: Enabling Renewable Gas, AA6 Forecast Capex ($million real as at 31 December 2023)

PROJECTS	2025	2026	2027	2028	2029	TOTAL
Renewable gas injection	3.8	2.6	2.6	2.7	2.7	**14.3**
Network blending control systems	0.6	-	-	-	-	**0.6**
Meter changes for hydrogen blending	0.1	0.1	0.1	0.1	0.1	**0.6**
TOTAL	**4.5**	**2.7**	**2.7**	**2.8**	**2.8**	**15.5**

This program is supported by the Renewable Gas Delivery Strategy that details investment justification, investment options, strategic alignment, and legislative compliance.

10.7.2.2 INLINE INSPECTION ($24.9M)

BACKGROUND

In 2017, we commenced integrity assessments in accordance with AS 2885.3 for 15 pipelines. ATCO prioritised 10 pipelines, specifically those operating at pressures greater than 1,900kPa and falling under the CL600 and CL300 classifications. The project was delayed due to the impact of COVID-19 on execution and contractor resourcing, as well as longer planning phases for remote and complex pipelines.

The primary focus of the initial program was to implement inline inspections (ILI) to assess the integrity of these selected pipelines. The program's scope involves modifying pipeline configurations to accommodate the ILI process and subsequently conducting the inspections for the prioritised pipelines. This program aimed to ensure the safe and reliable operation of the pipelines while adhering to the regulatory requirements outlined in AS 2885.3[57]. Another outcome of the program was to determine if the pipe was fit for its intended purpose and to provide insights into the remaining life of the asset.

The initial program for the 10 pipelines is planned for completion in 2026. The 5 remaining pipelines are classified as being unable to be internally inspected through ILI, presenting significant challenges in proving their structural integrity. Conventional ILI methods, such as smart pipeline integrity gauges, may not be suitable due to pipeline constraints, bends, or inaccessible sections. This limitation restricts the ability to demonstrate compliance with AS 2885.3, making it essential to find a suitable solution and implement advanced ILI technologies specifically designed for these pipelines. These technologies may include magnetic flux leakage sensors, ultrasonic testing, or other innovative inspection tools capable of navigating bends and challenging configurations. The program will be tailored to ensure thorough inspection of the pipelines while meeting regulatory compliance requirements.

The ageing profile, inaccessible sections, and unknown internal corrosion further exacerbate the difficulty in demonstrating compliance with AS 2885.3. Relying solely on external coating inspections using direct current variance gradient techniques and manual inspection is not in line with industry-accepted practice, necessitating a more comprehensive approach. Due to the requirement to maintain the security of supply, these pipelines must be inspected without interrupting the operation of the pipelines. The detailed knowledge derived from the integrity signatures ensures the implementation of targeted and prudent measures, ensuring the security of supply to our customers.

INVESTMENT DRIVERS

The investment driver for this capex is to ensure the safe operation of the high pressure pipeline infrastructure and meeting regulatory requirements by conducting regular and thorough integrity inspections. By doing so, ATCO can validate the effectiveness of its maintenance practices, reducing

[57] ATCO is obligated to comply with AS 2885.3 a result of regulations 18, 20, 27 and 37 of the *Gas Standards (Gas Supply and System Safety) Regulations 2000*

risks and improving the overall safety and reliability of the pipeline system. The program aligns with ATCO's commitment to regulatory compliance and maintaining the integrity of its assets to provide secure and reliable services to its customers.

CONFORMING CAPEX JUSTIFICATION

These programs conform to NGR 79(1) and are justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) – The investment improves safety by enhancing the ability to detect potential pipeline leakage locations, particularly in areas that are currently inaccessible to external surveys. This capital expenditure is essential for maintaining and improving the safety of services provided by the pipeline infrastructure.
- 79(2)(c)(ii) – The investment maintains (or improves) network integrity by providing the capability to detect a comprehensive range of pipeline defects, ensuring security of supply utilising these assets.
- 79(2)(c)(iii) – The investment is necessary to comply with the inline inspection requirements of AS2885.3[58].

PLANNED ACTIVITY

We will modify the 5 pipelines and install facilities to enable ILI of these pipelines, which provides data for any mitigation activities. Implementation of ILI is a proactive and comprehensive method to demonstrate the structural integrity of 5 pipelines in accordance with AS 2885.3[59].

FORECAST EXPENDITURE

Table 10.13 shows the AA6 forecast capex for inline inspections of **$24.9 million.**

Table 10.13: Inline Inspection, AA6 Forecast Capex ($million real as at 31 December 2023)

PROJECTS	2025	2026	2027	2028	2029	TOTAL
Inline inspection program	3.7	3.8	6.4	5.3	5.6	**24.9**

Our Inline Inspection program is supported by dedicated business cases detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance to the NGR, (*see confidential Attachments 05.011.03 (approved in AA5) and 10.041.00)*.

10.7.2.3 NETWORK REINFORCEMENT ($2.0M)

BACKGROUND

The network must maintain adequate capacity to deliver gas safely to customers. As the demand for gas services grows due to new connections or increased usage, the existing network might face limitations in providing sufficient gas flow. Network reinforcement involves expanding the

[58] ATCO is obligated to comply with AS 2885.3 a result of regulations 18, 20, 27 and 37 of the *Gas Standards (Gas Supply and System Safety) Regulations 2000*

[59] ATCO is obligated to comply with AS 2885.3 a result of regulations 18, 20, 27 and 37 of the *Gas Standards (Gas Supply and System Safety) Regulations 2000*

infrastructure, such as installing additional gas mains or pipelines, to accommodate higher gas volumes. This increased capacity ensures that the network can meet peak demand without compromising pressure levels.

Network reinforcement can include installing new pressure regulation at key points in the network. These new gas regulating facilities maintain pressure above system minimum to ensure continuous gas supply to existing customers.

- We use an industry-standard software package known as '*SynerGi*'[60] to model network capacity and optimise network utilisation as it grows. This software identifies when projects are required to maintain security of supply and sufficient capacity. We have reviewed our network to ensure we have captured any areas that require reinforcement in AA6.

This project aligns with asset management objectives as identified in the ALS for Distribution Mains and Services *(see Attachment 10.007)*.

INVESTMENT DRIVERS

The investment driver for this capex is prioritising network safety, ensuring a continuous gas supply to existing gas customers, and maintaining the network pressure above its minimum system requirements. Based on forecast new connections and future available capacity, network hydraulic modelling has derived the following constraints:

- More than 8,300 domestic and commercial customers within Secret Harbour and the surrounding suburbs will have limited available capacity (and falling below minimum pressure requirements) by Winter of 2025.
- More than 3,200 domestic and commercial customers within Inglewood and the surrounding suburbs will have limited available capacity (and falling below minimum pressure requirements) by Winter of 2026.
- More than 3,500 domestic and commercial customers within Pearsall and the surrounding suburbs will have limited available capacity (and falling below minimum pressure requirements) by Winter of 2030.

CONFORMING CAPEX JUSTIFICATION

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) – The investment improves safety by ensuring network pressures do not fall below minimum safe operating pressures.
- 79(2)(c)(ii) – The investment maintains network integrity by maintaining the network minimum pressure to ensure continuous gas supply to existing customers.

PLANNED ACTIVITY

The major network reinforcement projects for AA6 include the installation of medium-pressure regulator sets and mains extensions. Each project is planned for the year prior to the network reaching

[60] Overview available at: https://www.dnv.com/services/synergi-software-for-simulation-and-optimization--14642

minimum system pressure to maintain continuous gas supply to customers. The reinforcement projects are:

- Network Reinforcement – Secret Harbour (begins in 2024, AA5)
- Network Reinforcement – Inglewood
- Network Reinforcement – Pearsall.

FORECAST EXPENDITURE

Table 10.14 shows the AA6 forecast Network Reinforcement capex of $2.0 million.

Table 10.14: Network Reinforcement, AA6 Forecast Capex ($million real as at 31 December 2023)

PROJECTS	2025	2026	2027	2028	2029	TOTAL
Network Reinforcement – Secret Harbour	1.3	-	-	-	-	1.3
Network Reinforcement – Inglewood	0.5	-	-	-	-	0.5
Network Reinforcement – Pearsall	-	-	-	0.1	0.1	0.2
TOTAL	**1.8**	**-**	**-**	**0.1**	**0.1**	**2.0**

Our Network Reinforcement program is supported by dedicated business cases detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance to the NGR; (*see confidential Attachments 10.030 and 10.031 for Inglewood and Pearsall. The Secret Harbour Business Case will be provided to the ERA during the AA6 review process*).

10.7.2.4 OTHER ASSET PERFORMANCE AND SAFETY PROGRAMS ($15.1M)

'STEP AND TOUCH' HAZARD MITIGATION ($7.5M)

This program aims to ensure the safety of field personnel and individuals near high pressure steel pipelines. The proximity of High Voltage (HV) electrical power networks and our metallic network infrastructure can result in electrical energy appearing on and near metallic assets, exposing personnel or the public to electrical safety risks. The mechanisms leading to energy transfer from the power system to the GDS are complex and can involve normal operating conditions or power system fault conditions. Electrical energy may also appear on the GDS due to the effects of lightning, independent of power system operation. Step and touch hazards occur when these conditions cause an earth potential rise (EPR)[61]. A person could risk injury (or fatality) by standing near the grounding point or touching a metallic asset.

The program entails a thorough evaluation of 40 pipelines with intermediate fatality risk, as classified by AS 4853, with respect to step and touch voltage hazards. The evaluation will identify the necessary remediation measures to reduce the risk to ALARP. Sites that require further mitigation will have additional assets installed such as 'deep earth electrodes' with associated earthing components.

[61] Earth potential rise is a measure of the difference in voltage level that can occur in the ground, at varying locations, following a discharge of current to ground when an electrical fault, or lightning strike, occurs (i.e. step or touch voltage).

Further details about site criteria and mitigation options are in our ALS for Regulating Facilities (*see Attachment 10.008*) supported by our ALS for High Pressure Pipelines (*see Attachment 10.011*).

The AA6 capex program forecast is based on the AA5 program. In AA6, we forecast to upgrade approximately 10 sites per year. Our AA6 forecast capex is $7.5 million based on historical costs and bottom-up estimates.

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) – The investment improves safety by preventing field personnel from induced voltages while working on HP pipelines, and others who might be in proximity of the assets.
- 79(2)(c)(iii) – The investment is necessary to comply with AS4853 and ATCO's Safety case. Building and Energy (Formerly Energy Safety) has previously issued a Corrective Action Request (CAR) to mitigate the risk of personnel being exposed to induced voltages whilst working on high pressure pipelines.

Our step and touch hazard mitigation program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance to the NGR; (*see confidential Attachment 10.037*).

VEHICLE PROTECTION ($1.9M)

Above-ground assets and assets adjacent to public transport infrastructure, which are threatened by vehicular impact, pose an unacceptable risk to public safety, personnel safety, and network integrity. Our personnel may be exposed to an intermediate risk of vehicle impact during maintenance or emergency response activities that is not ALARP. Assets installed above ground of our network can also be damaged by vehicular impact with the potential to result in gas supply and containment loss.

We are installing bollards and barriers within these areas to prevent risk of impact where the asset is not adequately protected. The sites are identified by field personnel during routine maintenance and assessed against risk-based criteria outlined in our ALS for Regulating Facilities (*see Attachment 10.008*).

This AA6 program is forecast to upgrade 46 locations (approximately 9 per year). The forecast is based on the historical cost of installing approved barriers with material procured through competitive procurement processes. Our AA6 forecast capex is $1.9 million.

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) – The investment improves safety by decreasing the probability of incidents that could endanger personnel working at a facility. By implementing suitable protective measures like bollards or crash barriers approved by Mains Road Western Australia, the risk level is significantly reduced. These vehicle protection measures ensure that maintenance personnel working on the asset are shielded from potential impacts, providing them with enhanced safety and a safe worksite.
- 79(2)(c)(ii) – The investment maintains (or improves) network integrity by reducing the likelihood of third-party impact to a facility, which therefore reduces the likelihood of asset failure and supply loss due to vehicle impact.

Our Vehicle Protection program is supported by a dedicated Business Case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; *(see confidential Attachment 10.028)*.

CORROSION PROTECTION ($1.4M)

Our HP steel pipelines are at risk of corrosion that could lead to pipeline failure and loss of containment events. Metallic pipelines are protected from corrosion primarily by an anti-corrosion coating such as yellow jacket or dual-layer fusion-bonded epoxy. A corrosion protection system inhibits the corrosion at locations with imperfections, or anti-corrosion coating damage caused by age or third-party damage.

The AA6 corrosion protection scope includes replacing depleted anodes, upgrading cathodic protection enclosures to minimise third-party damage, resistance probes to identify active corrosion, and insulation joints and surge diverters to prevent damage in the event of an electrical surge. Corrosion Protection (**CP**) Systems covered by this program are described within our ALS for Corrosion Protection Systems (*see Attachment 10.006*).

The investment driver for this capex is to ensure we operate our metallic infrastructure safely and in compliance with relevant industry practices and standards. To do so, ATCO must implement a corrosion mitigation strategy as mandated in AS 2885.3[62] section 6.4 and AS/NZS 4645.2 section 3.1.

The AA6 capex program forecasts to upgrade and replace approximately 63 sites per year based on historical volumes and actual costs in AA5. Our AA6 forecast capex is $1.4 million.

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) – The investment improves safety by reducing the risk of pipeline corrosion, which may lead to pipeline failure and uncontrolled gas release.
- 79(2)(c)(ii) – The investment maintains (or improves) network integrity by having an effective cathodic protection system in place to maintain steel pipeline integrity.
- 79(2)(c)(iii) – The investment is necessary to comply with the requirements of AS 2885.3 and AS/NZS 4645 by having a cathodic protection system in place.

Our Corrosion Protection program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; (*see confidential Attachment 10.039*).

CORROSION PROTECTION MONITORING ($0.7M)

This project includes installing monitoring devices on CP assets to provide remote data capture to ensure pipelines have adequate CP protection at all times and not waiting for manual maintenance visits to find our CP is not effective.

This program will begin in 2024 (AA5) and further installations will be completed in AA6 until all relevant systems are monitored. Our AA6 forecast capex is $0.7 million.

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62 ATCO is obligated to comply with AS 2885.3 a result of regulations 18, 20, 27 and 37 of the *Gas Standards (Gas Supply and System Safety) Regulations 2000*

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) – The investment improves safety by reducing the risk of pipeline corrosion, which may lead to pipeline failure and uncontrolled gas release.
- 79(2)(c)(ii) – The investment maintains (or improves) network integrity by having an effective CP system in place to maintain steel pipeline integrity.

Our Corrosion Protection Monitoring program will be supported by a dedicated AA5 Business Case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR, which will be provided to the ERA during the AA6 review process.

PRESSURE MONITORING DEVICES ($0.8M)

Installing 50 Pressure Monitoring Devices (PMD) within the network will significantly enhance the quality of network data and information, leading to improved operational response and more efficient planning. These PMDs are crucial for verifying modelling results under peak conditions against actual monitored data, supporting long-term planning for network reinforcement, and mitigating unexpected gas supply interruptions due to low pressure. Hydraulic modelling of the gas network is employed to identify locations where PMDs are required, such as areas with weak pressure during peak usage, with priority given to unmonitored sites and sites approaching minimum network pressure.

The investment driver for this capex is to enable fast identification and response to emergencies, trend analysis to identify critical pressure areas and manage network capacity, and verify the hydraulic models as required by our ALS for SCADA (*see Attachment 10.009*). This includes timely identification of Medium Pressure Regulator (MPR) performance issues, where MPRs are approaching end-of-life condition, and whereby unidentified faults could result in significant network impacts as detailed in the ALS for Pressure Regulating Facilities (*see Attachment 10.008*).

The AA6 program forecasts replacing 50 PMDs, approximately 10 per year, which is higher than the AA5 program replacement rate of *6 per year*. We are increasing our replacement rate in AA6 to mitigate the risk of failure of MPRs approaching their end-of-life. The AA6 program will install an additional 4 PMDs per annum on the outlets of MPRs (bringing the total to 50 PMDs within 5 years) to enable timely identification of faults and reduce the risk of MPR failure to ALARP. Our forecast AA6 capex is $0.8 million.

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(ii) - The capital expenditure is necessary as monitoring pressures in the GDS at network fringes or in areas where pressures are close to the network minimum is necessary to maintain the integrity of the existing services.

Our PMD program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment and compliance with the NGR; (*see confidential Attachment 10.033*).

GATE STATION METERING ($0.8M)

Measuring gas flow at the gate station outlet is essential for hydraulic modelling verification, UAFG calculation, and network analysis. In AA6, we propose installing 3 ultrasonic meters downstream of third-party owned gate stations (at GS008, GS010, and GS026).

The investment driver for this capex is the requirement for accurate gas flow measurement data into the ATCO network from third-party-owned gate stations. Accurate gas flow measurement provides a better analysis of the network availability and performance and provides data verification of inflows that can be assessed against UAFG calculations. Installing supplementary meters downstream of gate stations can detect metering inaccuracies and ensure the integrity of data via escalation of issues to the third-party gate station operators.

We forecast installing 3 ultrasonic meters in AA6, with a capex of $0.8 million using a bottom-up cost estimate.

These programs conform to NGR 79(1) and are justified against the following grounds in NGR 79(2):

- 79(2)(c)(ii) – The investment maintains (or improves) network integrity by providing detailed and precise information for network analysis and hydraulic modelling. It enables verification of network inflow data.

Our Gate Station Metering program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; (*see confidential Attachment 10.048*).

OTHER PERFORMANCE PROGRAMS ($2.0M)

- **Picarro Leak Survey device:** Our Picarro leak survey investment is detailed in the ALS for Mains and Services (*see Attachment 10.007*). The ASL details our investment justification and strategic alignment. Regular leak surveys of our gas network are important to maintain public safety, operational efficiency, and compliance. Our current methods include operators walking or biking to inspect distribution mains and conduct leak surveys with handheld detection devices at meter positions.

  In 2022, we conducted a successful trial of Picarro gas leak detection technology. The Picarro system equips a vehicle with specialised sensors and gas analysers, allowing the operator to drive over the distribution networks and remotely identify leaks. The technology can deliver analytical insights, scalability (which allows us to adjust the leak survey program), and data for the MRP tool, enhancing our understanding of network vulnerabilities.

  This investment aligns with NGR 79(1)(a); Implementing the Picarro system is in accordance with industry good practices, as gas operators in both Australia and around the world are adopting Picarro's technology. This technology will maintain the safety of services in line with NGR 79(2)(c)(ii) by extending the coverage of leak surveys to include services and meter positions.

- **Confined Space Program:** Our confined space program criteria and targeted locations are detailed in our ALS for Regulating Facilities (*see Attachment 10.008*).

ATCO has assets installed in confined spaces that require regular maintenance. Our design guideline does not allow for the creation of any new confined spaces, however, existing confined spaces are accessed to maintain network assets.

In March 2022, a change to Work Health and Safety Regulations in WA resulted in a review of our approach to confined spaces. A Change Request (CR-0462) was raised, and we are implementing a new approach to confined spaces. The change request aims to meet the compliance requirements of the updated regulations. Current outstanding actions from the change request include:

- Define and document what is a confined space under the new regulations.
- Define and document ATCO's strategy for confined spaces in compliance with the updated Work Health and Safety Regulations.
- Develop a strategy to remediate confined spaces in compliance with regulation changes.

ATCO has demonstrated compliance with 79(1)(a) as the current review has implemented alternative operational controls that meet compliance requirements instead of taking a blanket approach of remediating all confined spaces.

ATCO anticipates that the remediation of confined spaces will be align with NGR 79(2)(c)(iii) as the removal of confined spaces will align with ATCO's strategy to comply with changes identified from the change in *Work Health and Safety Regulations 2022*.

FORECAST EXPENDITURE

Table 10.15 shows the forecast AA6 capex for our other Asset Performance and Safety programs.

Table 10.15: Other Asset Performance & Safety, AA6 Forecast Capex ($million real as at 31 December 2023)

PROJECTS	2025	2026	2027	2028	2029	TOTAL
Step and touch Hazard Mitigation	1.5	1.5	1.5	1.5	1.5	**7.5**
Vehicle protection	0.4	0.4	0.4	0.4	0.4	**1.9**
Corrosion protection	0.3	0.3	0.3	0.3	0.2	**1.4**
Corrosion protection monitoring	0.2	0.2	0.2	0.2	-	**0.7**
Pressure monitoring devices	0.2	0.2	0.2	0.2	0.2	**0.8**
Gas station metering	0.4	0.3	-	-	-	**0.8**
Other performance programs	0.2	1.8	-	-	-	**2.0**
TOTAL	**3.1**	**4.7**	**2.5**	**2.5**	**2.3**	**15.1**

10.8 FORECAST CAPEX: NETWORK GROWTH ($157.4M)

10.8.1 CUSTOMER INITIATED: NEW CUSTOMER CONNECTIONS ($157.4M)

BACKGROUND

Customer initiated capex relates to the cost of facilitating new customer connections to our network. Most of our growth capex forecast is focused on the cost of connecting customers in new subdivisions bordering existing areas of our network. Chapter 7 and the CORE demand forecast (*see Attachment 07.001*) document the assumptions underlying the forecast new connections in AA6. In AA6, we expect to connect 68,000 new B2 and B3 customers to the network.

Growth in customer numbers spreads the benefits of gas and lowers prices to existing customers by extending the largely fixed costs of operating the network across a larger customer base. In addition, we work closely with developers, home builders, and other utilities to expand the use of common trenching to install new residential service lines, resulting in lower installation costs.

Growth development capex includes the cost to connect customers or subdivisions located away from the existing gas network and will require a network extension. In these circumstances, we assess these cases individually to ensure our investment is prudent.

Recent decisions in other Australian jurisdictions have created public debate around the advantages and disadvantages of continuing the growth of gas distribution networks. In WA, the gas distribution network continues to be supported by the government and by other stakeholders and customers in part due to the lower cost of gas compared to other states. We note that the recent analysis by the Grattan Institute demonstrates the price competitiveness of gas in WA. Their report states: "*Some West Australian homes may pay more in an all-electric home – since gas is so cheap in that state*."[63] In preparing our proposed AA6 program, we have also considered the findings of our Future of Gas study (see Chapter 3) that shows growth in the network in three of the four scenarios analysed.

INVESTMENT DRIVERS

Our growth capex is driven by the number of new customers we expect to connect to the network in AA6. A portion of our growth capex is driven by the obligation under our distribution licence to offer to connect residential customers within 20 metres of an existing gas main [64].

CONFORMING CAPEX JUSTIFICATION

AA6 growth capex meets NGR 79 for the following reasons:

[63] Grattan Institute, Getting off gas, June 2023, pg. 15, Available from: https://grattan.edu.au/wp-content/uploads/2023/06/Getting-off-gas-why-how-and-who-should-pay.pdf

[64] ATCO is obligated to offer to connect certain residential customers within its licence area as a result of clause 3, Schedule 1 of its Distribution Licence. The offer to connect applies only for connections requiring 20 meters of less of service pipe and where the gas main is so located that it is practicable in accordance with good industry practice to connect the relevant premises to the main.

- Growth capex is consistent with that which would be incurred by a prudent service provider acting efficiently in accordance with accepted good industry practice, to achieve the lowest sustainable cost. Expanding the network ensures that operating costs are spread over an increasing number of customers, helping to lower the average cost per customer.
- Growth domestic capex meets NGR 79 based on its location by either:
  - Growth domestic capex into new subdivisions (greenfield) satisfies NGR 79(2)(b), in that the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the expenditure.
  - Growth domestic capex in existing parts of the network (brownfield) satisfies NGR 79(2)(c)(iii), as we have an obligation under our distribution licence to offer to connect certain residential customers.
- For growth commercial capex, it meets NGR 79 based on its location by either:
  - Growth commercial capex into new subdivisions (greenfield) satisfies NGR 79(2)(b), in that the present value of the expected incremental revenue to be generated as a result of the expenditure exceeds the present value of the expenditure.
  - Growth commercial capex in existing parts of the network (brownfield) satisfies NGR 79(2)(b), in that the present value of the expected incremental revenue generated as a result of the expenditure plus the historical level of capital contributions received from customers exceeds the present value of the expenditure.
- Growth development capex satisfies NGR 79(2)(b), in that the present value of the expected incremental revenue generated as a result of the expenditure plus the historical level of capital contributions received from customers exceeds the present value of the expenditure.

PLANNED ACTIVITY

Based on the demand forecast, we forecast to connect:

- **274 new commercial (B1) customer connections.**
- **1,239 new commercial (B2) customer connections**.
- **66,265 new domestic (B3) customer connections** with the associated new services, mains extension and new domestic meters.

The number of installations used within the forecast is based on CORE's demand forecast. For A1 and A2 customers, we forecast no new connections in AA6.

GROWTH CAPEX NET PRESENT VALUE ASSESSMENT (A1, A2, AND B1 ONLY)

While we have forecast no new A1 and A2 customers for AA6, if any arise during AA6, these will be assessed on an individual basis to ensure that there is an economic justification for the capex.

For B1 customer connections, we have derived a forecast of costs and a level of capital contribution based on historical averages. During AA6 each of these will be assessed on an individual basis to ensure that there is an economic justification for the capex, *(see 'Commercial New Connections - Business Case', Attachment 10.042.00*).

GROWTH CAPEX NET PRESENT VALUE ASSESSMENT (B2 & B3 ONLY)

ATCO demonstrates that growth capex satisfies NGR 79(2)(b) through a net present value assessment. We have adopted the following assumptions in our modelling for growth domestic and commercial capex (see Table 10.16) to assess the expected incremental revenue to be generated as a result of the expenditure against the present value of the expenditure. Each assumption is discussed in the following sections.

Table 10.16: Greenfield and brownfield NPV assumption summary

ASSUMPTION	DESCRIPTION
Growth domestic and commercial capex	ATCO has adopted different unit rate forecasts for B2 and B3 customers across greenfield and brownfield connections. These unit rate forecasts are shown in Table 10.17.
Analysis period	25 years reflecting one lifecycle of 'Meter and service pipes'.
Tariff	ATCO has adopted the 2023 tariffs.
Discount rate	ATCO has adopted values from the 2023 tariff variation mechanism process.
Labour cost escalator	ATCO has adopted the labour cost escalator of 1.06%
Gas consumption	Based on the average gas demand for new customers as per the Core Energy forecast, with a 0.54% p.a. reduction in average consumption. No disconnections for B2 and a disconnection rate of 0.54% for B3 is assumed after 10 years.
Incremental opex	B2: $141.29 per customer ($ real 2023) B3: $35.07 per customer ($ real 2023)

Basis of forecast capex

The expenditure is forecast by multiplying the expected volume with the unit rate. The unit rate is based on a three-year average, including contractor and material costs from 2020 to 2022. The costs incurred over this period can be considered efficient and reasonable to forecast AA6 costs because they reflect competitively tendered main-laying rates and material costs. Historical rates have been used in this case because the volume and type of work expected in AA6 is similar to what has recently been delivered. The historical rates, therefore, provide an appropriate basis for estimating the AA6 forecast.

The unit rates differ based on the nature of the work, e.g., between laying new services in new sub-divisions (greenfield) and laying services to existing properties (brownfield). A higher proportion of work is carried out in greenfield developments. The nature of the work to connect a new residential greenfield development is quite generic and unit rates are relatively stable. Infill growth in brownfield areas typically requires higher traffic management and reinstatement costs.

Greenfield and commercial brownfield growth capex

ATCO has modelled the NPV of incremental revenue and costs associated with greenfield (B2 and B3) and commercial brownfield (B2) connections in line with NGR 79(2)(b). Capex is based on 63,285

residential (B3) new connections in greenfield developments and 1,239 small commercial (B2) connections in greenfield and brownfield areas expected to connect in AA6.

The capex required to connect 2,980 residential customers (B3) in brownfield developments has not been included in the NPV analysis required for 79(2)(b), as we have an obligation to connect customers within 20 metres of an existing gas main as per ATCO's Gas Distribution License 8 (GDL8) Schedule 1 clause 3.

Table 10.17: AA6 connection costs ($real as at 31 Dec 2022)

	B2 ($2022) GREENFIELD	B2 ($2022) BROWNFIELD	B3 ($2022) GREENFIELD	B3 ($2022) BROWNFIELD
Mains capex	493,589		38,997,198	
Meter and Service capex	3,409,933	2,158,753	75,712,164	6,934,889
Feeders capex	-		9,976,822	469,794
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Analysis period

ATCO has chosen an analysis period of 25 years to align with the economic life of 'Meter and Services Pipes' after consideration of the following:

- The tariff revenue for new connections is generally set to recover the investment over its economic life. The majority of growth capex relates to meters and services with an economic life of 25 years.
- Given that most of the B3 connections relate to suburban residential developments, it is likely these connections will be maintained in the long run, however, a disconnection rate of 0.37% is assumed after 10 years to account for the fact that not all gas users will remain connected.
- A positive NPV over the 25-year period means that existing customers would be better off even if the NPV was modelled out over the previous 50-year assessment period.
- Uncertainty associated with the energy transition supports a more conservative approach by adopting a 25-year period compared to the previous 50-year assessment period.

Tariff

ATCO has adopted the 2023 prevailing tariffs per the tariff variation adopted on 1 January 2023. This is consistent with the requirement to adopt the prevailing reference tariffs under NGR 79(4)(a).

Discount rate

ATCO has adopted the WACC parameters used in the 2023 tariff variation process. This is consistent with the requirement to adopt a discount rate equal to the rate of return implicit in the reference tariff under NGR 79(4)(c).

Labour cost escalation

ATCO has adopted the AA6 labour escalation for opex to reflect a rate of 1.06% above CPI inflation in the NPV modelling as per Section 9.5.6.

Gas consumption

ATCO has adopted the forecast average annual consumption per customer in line with our AA6 demand forecast (refer Chapter 7) as follows:

- B2 connections – 92.75 GJ for connections over AA6
- B3 connections – ATCO has assumed a ramp-up from 2.63 GJ in the first year of connection increasing to 10.50 GJ after 2 years.

We have adopted a 0.5% annual reduction to reflect that average gas demand is unlikely to remain constant for 25 years. We have assumed no disconnections for B2 and a disconnection rate of 0.54% for B3, after 10 years of connection, based on the average disconnections rate over the last 5 years.

Incremental opex

ATCO has used the output growth escalation value for AA6 of $10.4 million to derive an annual incremental opex cost per tariff class. We have allocated the output growth portion of the opex forecast across tariff classes by referencing the allocation calculated for 2022. By applying the weighted annual real output growth rate to Network and IT costs, we have calculated an average incremental opex for each tariff class, as shown in Table 10.18.

Table 10.18: Incremental opex per tariff class ($million real as at 31 Dec 2023)

TARIFF CLASS	$ PER NEW CUSTOMER
A1	35,675.
A2	16,066
B1	970
B2	141
B3	35

NGR 79 testing: Results

The NGR 79 test results are summarised in Table 10.19. This demonstrates that the NPV for growth capex is positive and remains positive under a range of scenarios. Therefore, growth capex satisfies NGR 79(2)(b) because the expected incremental revenue to be generated as a result of the expenditure is greater than the present value of the expenditure.

Table 10.19: NGR 79 tests – summary of results ($real as at 31 Dec 2024)

NGR 79(2)(B) TEST	CAPEX ($M)	NPV ($M)	PAYBACK PERIOD	NPV SENSITIVITIES		
				CAPEX +10%	OPEX +10%	DEMAND -10%
B2 & B3 greenfield capex	133.0	23.3	20	11.8	18.5	5.2
Commercial (B2) brownfield capex	2.2	3.1	10	2.9	3.0	2.5
TOTAL	**135.2**					

The NPV assessment does not include residential brownfield capex because these are covered by the obligation under ATCO's distribution licence to offer to connect certain residential customers within the licence area[65], and therefore meets NGR 79 irrespective of the NPV. The above analysis demonstrates that the requirements of the NGR and NGO have been met for other categories of growth capex.

FORECAST EXPENDITURE

We have based our forecast capex on a unit cost approach, using the customer growth forecast multiplied by the relevant unit rates outlined in the Unit Rates Forecast and Strategy. The costs associated with a new connection include the following:

- **Mains extension:** the average cost of extending our network to connect the new customer.
- **New service and meter installation:** the average cost of installing a service and new meter equipment.

Our forecast for AA6 growth development capex is offset by capital contributions and only the net capex will be added to the capital base. The forecast is based on historical expenditure and capital contributions.

Our Growth Development program is supported by dedicated business cases detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; (*see confidential Attachments 10.046.00 and 10.047.00*).

Table 10.20 shows the AA6 forecast new customer connections growth capex.

Table 10.20: New Customer Connections, AA6 Forecast Capex ($million real as at 31 December 2023)

PROGRAMS	2025	2026	2027	2028	2029	TOTAL
Growth Domestic Forecast	23.7	26.8	28.7	29.9	30.4	139.6
Growth Commercial Forecast	4.9	3.6	3.7	3.9	4.1	20.2
Growth Development	1.1	0.8	0.8	0.8	0.8	4.3
SUB-TOTAL	**29.7**	**31.2**	**33.2**	**34.6**	**35.3**	**164.1**
Less Capital Contribution	- 2.4[66]	- 1.1	- 1.1	- 1.1	- 1.1	- 6.7
TOTAL	**27.3**	**30.2**	**32.2**	**33.5**	**34.2**	**157.4**

[65] Clause 3, Schedule 1 of ATCO's Distribution Licence requires ATCO to offer to connect certain residential customers within ATCO's licence area. The obligation applies only for connections requiring 20 meters of less of service pipe and where the gas main is so located that it is practicable in accordance with good industry practice to connect the relevant premises to the main.

[66] Capital contribution higher in 2025 due to an A1 customer connection.

10.9 INFORMATION TECHNOLOGY (IT) ($13.0M)

10.9.1 IT FORECAST EXPENDITURE

Table 10.21 shows the AA6 forecast IT capex of $13.0M. The opex portion related to each investment is discussed in Section 9.8.3.

Table 10.21: Information Technology, AA6 Forecast Capex ($million real as at 31 December 2023)

CATEGORY AND PROGRAMS	2025	2026	2027	2028	2029	TOTAL
IT CAPEX						
ERP Replacement	0.4	1.9	1.9	-	-	**4.2**
IT Sustainability Programs	1.8	0.2	0.2	0.2	0.2	**2.5**
IT Upgrades						
HR and Payroll Upgrade	0.2	-	-	-	-	**0.2**
Geographic Information System Upgrade	1.0	1.0	-	-	-	**2.0**
webMethods Upgrade	-	-	-	1.1	-	**1.1**
IT Business Capability Improvements						
Continuous Improvement Program	0.1	0.1	0.1	0.1	0.1	**0.6**
Digital Improvement Program	0.3	0.3	0.3	0.3	0.3	**1.5**
Data and Analytics Program	0.2	0.2	0.2	0.1	0.1	**0.8**
TOTAL	**4.0**	**3.7**	**2.7**	**1.9**	**0.7**	**13.0**

10.9.2 BACKGROUND

IT systems underpin and support almost all of ATCO's operations. These systems and platforms range from employee communications, such as email, digital channels for our customers, data management and record keeping, to larger systems that monitor network reliability.

Our IT Systems are critical to enabling ATCO to maintain safe, reliable, and affordable gas network services and ensure we are building sustainable operations for the future. In summary, our IT systems support this through:

- **Safety**
  - Facilitating real-time alerts in the event of gas leaks or emergencies, enabling prompt responses to ensure public safety.
  - Sharing critical information between gas distribution companies and emergency responders, enhancing coordination during crises.
  - Predictive Maintenance: IT analytics assist in identifying potential equipment and asset failures before they occur, allowing proactive maintenance and reducing service disruptions.

- **Reliability**
  - Enabling efficient monitoring and management of gas distribution networks, optimising resource allocation, and minimising downtime.
  - Analysing network data to optimise gas flow, pressure, and distribution, enhancing overall system performance.
  - Adhering to regulatory requirements by maintaining accurate records and data reporting.
  - Data and Analytics and dedicated programs assist in analysing usage patterns, aiding in infrastructure planning and expansion to meet future demands.
  - Data insights help allocate resources effectively to support optimal infrastructure investment.
- **Affordability**
  - IT-based metering systems ensure precise measurement of gas consumption, leading to accurate billing and reduced disputes.
  - Online platforms to enable consumers to report issues, track service requests, and receive timely updates on maintenance activities.
- **Sustainability**
  - Analytics provide valuable insights, facilitating evidence-based policy-making and enhancing the regulation of environmental practices.
  - Assist in monitoring gas emissions and leakages, supporting efforts to reduce greenhouse gas emissions and environmental impact.
  - IT-based training programs enhance the skills of gas distribution professionals, ensuring they are well-equipped to operate and maintain complex systems.
  - Online tools enable employees and stakeholders to interact with our business anytime, including remote assistance to field technicians, improving issue resolution, and reducing downtime.

10.9.3 INFORMATION TECHNOLOGY PROGRAMS

IT capex will enable ATCO to efficiently manage gas network assets through their lifecycles, enhance information access opportunities for customers, and enable the workforce to retrieve the information they need when they need it. In AA6, we plan to deliver programs that will support and enhance our business operations. Note that each program has a corresponding opex component (*see Section 9.8.3*).

10.9.3.1 ENTERPRISE RESOURCE PLANNING (ERP) REPLACEMENT ($4.2M)

BACKGROUND

Enterprise Resource Planning (ERP) software integrates various business processes and functions within our organisation into a single, unified system, allowing for the seamless flow of information and data across departments, facilitating better communication, collaboration, and decision-making. ERP systems typically consist of various modules, each catering to a specific business function or department. These modules work together to create an integrated and comprehensive solution for managing our operations.

SAP ECC6 (SAP) is ATCO's current ERP system and is the central business application used to enable business processes across several process areas including Finance, HR, Payroll, Asset Management, Project Management, and Supply Chain. The ERP system facilitates the flow of information that supports decision making. It is considered a critical enabler of business process and a key piece of IT infrastructure.

The SAP modules currently installed include:

- Plant Maintenance
- Materials Management
- Finance and Controlling
- Human Resources and Payroll
- Project System
- Project Portfolio Management
- Business Intelligence/Business Warehouse
- Extended Enterprise Content Management

SAP was initially implemented in 2008, with the last major upgrade implemented in 2017. The system will reach end of life in 2027 so, as a minimum, a suitable solution needs to be identified early in AA6. This aligns with our principle to operate on vendor-supported and up-to-date software, minimising the risk of prolonged outages and breach of regulatory or compliance obligations. Further details related to the criteria we apply to our software systems to determine their status are provided in ATCO's 2025-2029 IT Strategic Plan (*see Attachment 09.004*).

INVESTMENT DRIVERS

The key driver for this expenditure is that the current ERP system used by ATCO, (SAP ECC6), will reach "end of support" in 2027. The system no longer provides all the capabilities ATCO requires to support an evolving business, particularly to support digital transformation and sustainability activities as well as new business operations such as enabling the introduction of renewable gases. SAP is the source of the organisation's financial management system and is therefore a critical source of data that enables analytical insights as well as financial and sustainability reporting. In its present form the system cannot be modified or modernised without incurring material cost with only limited benefit.

SAP will not be viable as our ERP system after 2027 as it will not be supported by the vendor, the product is difficult and expensive to change to meet business needs, and it is more vulnerable to cyber security attacks, that are difficult to defend against, due to the advanced age of the software that makes up the ECC6 platform.

CONFORMING CAPEX JUSTIFICATION

This program conforms to NGR 79(1) and NGR 91(1):

- NGR 79(1)(a) – the investment is in accordance with good industry practice and provides the most efficient solution given the risks addressed and the benefits achieved. The solution provides the lowest sustainable cost that meets all business requirements (investment need). This is achieved by selecting 'best-of-breed' solutions to fulfil the system requirements.

- NGR 91 –As the new ERP solution is likely to be a mix of cloud and on-premises components, the project(s) to implement the solution will be funded by capex and opex. Until the Planning, Scoping, and Selection phase is complete, it is unreasonable to expect to be able to determine the lowest cost option at this time. A revised business case will confirm the option and ensure that the chosen solution achieves the lowest sustainable cost of providing services while meeting business requirements.

These are justified on the following grounds in NGR 79(2):

- 79(2)(c)(ii)- The capital expenditure is necessary to maintain the integrity of services. SAP is a critical application supporting key business processes across the organisation. A replacement ERP system will enable ATCO to maintain the required service levels by minimising the risk of prolonged outages to SAP, which will reach end-of-life in 2027. Service levels can be affected by ERP failures that the software vendor can't resolve due to the age of the technology (end of life). This also opens further risks including cyber security vulnerabilities, and system failure due to changes made by ATCO. Prolonged outages would require ATCO to revert to manual processes that would directly impact our ability to maintain the network assets and deliver services in a timely manner.
- 79(2)(c)(iii)- The capital expenditure is necessary to comply with the Gas Retail Market Procedures (WA) as governed by AEMO[67] for daily gas market operations. A replacement ERP system will ensure the critical application operates on vendor-supported and up-to-date software, minimising the risk of prolonged outages and a breach of gas market operations and other financial and regulatory obligations.

PLANNED ACTIVITY

We have chosen to replace our current ERP system with a "best-of-breed"[68] solution that would be implemented as a composable[69] ERP solution. This solution meets our needs and is in line with good industry practice. Completion of the Planning, Scoping, and Selection phase in 2025 will provide further detail on software specifics, project schedule, and costs. This option is the only one that meets all business requirements and stakeholder expectations.

According to Gartner, "*Composable ERP is an adaptive technology strategy that enables foundational, administrative and operational digital capabilities through which an enterprise can keep pace with fast business change.*" It generally means assembling a selection of best-of-breed applications to meet the business ERP requirements. It involves creating a network of applications, data, and solution providers that work seamlessly to fit any business need. The best system in its referenced niche or category is called best-of-breed. Companies often purchase software from different vendors to obtain the best-of-breed offering for each application area. For example, companies may purchase an HR product from one vendor and a Supply Chain Management product from another. Although ERP vendors offer

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67 Australian Energy Market Operator (2022) "Market Procedures Western Australia". Available at: https://aemo.com.au/en/energy-systems/gas/gas-retail-markets/procedures-policies-and-guides/western-australia

68 Enterprises can purchase software from different vendors to obtain the "best-of-breed" offering for each application area. For example, enterprises may purchase a human-resource package from one vendor and an accounting package from another.

69 Gartner "Predicts 2023: In a Period of Global Upheaval, Will ERP Come to the Rescue?", Denis Torii, Tim Faith, Neha Ralhan, 5 April 2023.

numerous enterprise applications and claim that their integrated system is a superior solution, all modules in an ERP system are rarely best of breed[69].

FORECAST EXPENDITURE

Our AA6 capex forecast for ERP replacement is shown in Table 10.22. The total cost (capex and opex) is $28.3 million, however as per Section 9.5.3.3 and Table 9.20, $24.0 million of the total cost is considered opex under the SaaS accounting standards, resulting in a capex forecast of $4.2 million.

Table 10.22: ERP Replacement, AA6 Forecast Capex ($million real as at 31 December 2023)

PROJECTS	2025	2026	2027	2028	2029	TOTAL
ERP Replacement (Total Capex and Opex)	2.9	12.7	12.7	-	-	**28.3**
less SaaS adjustment (Opex)	- 2.5	- 10.8	- 10.8	-	-	**- 24.0**
TOTAL (Capex)	**0.4**	**1.9**	**1.9**	**-**	**-**	**4.2**

Our ERP Replacement program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; (*see confidential Attachment 10.052.00*).

10.9.3.2 IT SUSTAINABILITY PROGRAMS ($2.5M)

BACKGROUND

The imperatives of corporate social responsibility and sustainable practices are reshaping the energy industry. Stakeholders place great importance on ATCO's performance against environmental and social factors through the lens of good governance. A sustainability reporting system serves to align reporting with business processes and assist in developing our practices to support continuous sustainability improvement.

Our investment drivers for reporting and developing sustainability systems include:

- **Regulatory Compliance**: Many jurisdictions are implementing mandatory reporting requirements. Implementing a sustainability reporting system ensures ATCO stays compliant with evolving regulations.
- **Stakeholder Expectations**: Customers, employees, and investors expect transparency regarding a company's sustainability efforts. A reporting system demonstrates ATCO's commitment to addressing environmental and social concerns.
- **Risk Mitigation**: Identifying and addressing sustainability risks can prevent costly disruptions to operations and enhance long-term stability.

INVESTMENT DRIVERS

Our Sustainability Strategy has several actions that require system and data support, and we are looking to invest in several systems to ensure we maintain compliance with our multiple legislative requirements and ensure system and data integrity, including:

- **Sustainability reporting system:** To address governmental and NGER framework reporting requirements. This project will deliver a solution to collate required environmental inputs and reports in the format required by various agencies with ongoing operational support.
- **Energy regulator reporting amendments:** Introducing renewable gas, associated higher heating value (**HHV**) changes, and gate injection point locations will require measurement system changes. Our customer billing systems and reporting to AEMO must be adjusted via the Network Management Information System (**NMIS**). This project will review, scope, and implement changes to the existing NMIS to address these changes.
- **System modelling amendments:** The proposed addition of gas injection points will alter the flow of gases through the system, and the change to HHV will require new billing zones to be defined. To validate the billing zones or the consequence areas of these changes, new modelling tools will need to be implemented. This project will review, scope, and implement changes to the existing Synergi modelling system to address these changes.

CONFORMING CAPEX JUSTIFICATION

These programs conform to NGR 79(1) and are justified on the following grounds in NGR 79(2):

- 79(2)(c)(ii) and 79(2)(c)(iii) – The investment maintains (or improves) network integrity by ensuring our measurement systems and integration with third-party systems including AEMO Gas Retail Market systems are relevant, provide data integrity and are secure, and ensure ATCO can comply with its legislative reporting obligations under the NGER framework.

PLANNED ACTIVITY

To manage our current and future reporting obligations, 3 projects are planned for AA6 to support our sustainability objectives and obligations.

FORECAST EXPENDITURE

Our AA6 forecast capex for IT Sustainability Programs is detailed in Table 10.23. The total cost (capex and opex) is $3.6 million, however as per Section 9.5.3.3 and Table 9.20, the SaaS adjustment is $1.2 million, returning a capex forecast of $2.5 million.

Table 10.23: IT Sustainability Programs, AA6 Forecast Capex ($million real as at 31 December 2023)

PROJECTS	2025	2026	2027	2028	2029	TOTAL
IT SUSTAINABILITY PROGRAMS						
Energy regulator reporting amendments - *NMIS*	0.9	0.1	0.1	0.1	0.1	1.4
Network modelling amendments - *Synergi*	1.6	0.1	0.1	0.1	0.1	1.8
Sustainability Reporting System	0.1	0.1	0.1	0.1	0.1	0.5
TOTAL (capex and opex)	**2.5**	**0.3**	**0.3**	**0.3**	**0.3**	**3.6**
less SaaS adjustment (opex)	- 0.8	- 0.1	- 0.1	- 0.1	- 0.1	- 1.2
TOTAL (capex)	**1.8**	**0.2**	**0.2**	**0.2**	**0.2**	**2.5**

Our IT Sustainability Program is supported by the Renewable Gas Delivery Strategy, which details our investment justification, investment options, strategic alignment, and legislative compliance.

10.9.3.3 INFORMATION TECHNOLOGY UPGRADE PROJECTS ($3.4M)

This section provides a summary of our IT upgrade programs that include background, investment driver and conforming capex justification. Table 10.24 provides a summary of the AA6 forecast capex. for these programs.

HUMAN RESOURCE AND PAYROLL UPGRADE ($0.2M CAPEX))

As part of the Application Renewal program established in AA5 (refer to the AA5 IT Asset Strategy), ATCO identified the need to implement Human Capital Management (HCM) software solutions. This solution would enable the standardisation of processes and improve efficiency for performance management, talent management, succession planning, recruitment and onboarding, learning management and compensation management. While individual projects have tried to address some of these gaps, a holistic review and transformation of the HCM/Payroll software landscape was completed in 2022 to determine the best solution.

Our payroll and employee management functions are currently managed within the SAP system (refer to Section 10.9.3.1 for ERP Replacement). Due to shortfalls in the capabilities of this system, we have implemented additional systems and processes to meet changing business needs and legislative reporting requirements. This has included:

- The addition of a third-party system to allow the monitoring, entry and approval of leave in paperless form to reduce risks of unentered paid leave and unnecessary business costs.
- The addition of a third-party system to comply with time writing and cost allocation requirements to ensure accurate cost tracking and employee payment, reducing the risk of administrative wage payment errors and compliance with the *Fair Work Act 2009 (Cth)* and proposed wage theft legislation.
- The addition of a third-party system to manage employee performance and development.
- Manual configuration of SAP to meet with Single Touch Payroll (STP) reporting requirements.

The considerable number of systems with limited integration between them provides a disjointed end-to-end solution requiring large amounts of manual processing by the HR function.

We have already commenced the process to implement a new HCM System that will realise benefits for the HR and Payroll Functions and business users. It is anticipated that the benefits of the HCM will include:

- Reduced manual processing.
- Improved ability to meet current and future STP reporting requirements to government.
- Avoidance of future costs as current systems become unsupported, and system modifications become more complex and costly.
- An enhanced user experience, leading to greater employee engagement.
- Opportunity to use HCM system functionality to support the HR and Business strategies (Talent management, advanced analytics, etc.).

ATCO commenced the Planning and Scoping Stage phase of HCM in September 2022, and the project is currently in the tender process with vendors. We forecast that pre-work will commence in September 2023, and implementation will commence in September 2024. As this timing coincides with the transition between AA5 and AA6, we have forecast our AA6 costs as $0.9 million, less SaaS of $0.7 million, returning a capex forecast of $0.2 million.

Our HR and Payroll program is supported by a Project Brief (*see Attachment 10.057.00*) and will be further supported by a dedicated AA5 business case following the completion of the Planning and Scoping Stage. This Business Case will be provided to the ERA during the AA6 review process with the activities to begin in 2024 and be completed in AA6.

GEOGRAPHIC INFORMATION SYSTEM (GIS) UPGRADE ($2.0M CAPEX)

The GIS is one of our core systems that locates and creates spatial pictures of data in maps, globes, reports, and charts. This data is needed when locating assets for maintenance and emergency response. Post 2025, the current GIS will receive limited support from the vendor due to the age of the current version.

Several business processes utilise the GIS. Most of the business interfaces with the GIS from several web applications to display the information in a format that the business can easily consume. The main business processes utilising the GIS are:

- Asset replacement programs
- Spatial information management
- New connections process
- Customer billing activities
- Network operation and monitoring
- Work management
- Lands management.

In 2022, a significant investment was made to upgrade the software platform to the Esri Utility Network and migrate to the Geocentric Datum of Australia 2020. The two upgrades proposed for AA6 are required to maintain vendor support for the software and to make available any new features in the product that will help support the business. The vendor, Esri, releases new versions of software every 12-18 months and provides mainstream support for each version for two years. For the subsequent two years, Esri will provide Extended Support for an additional fee, allowing its customers to use the product for up to four years with full technical support.

Our current GIS system software will be supported until November 2023, with a purchase of extended support through to November 2025. In 2025, ATCO will undertake the first of two planned upgrades during AA6. The second upgrade will take place in 2029, based on Esri's current product lifecycle support policy.

Maintaining vendor support is critical for supporting ATCO's gas distribution activities. The system is the basis of many key risk controls for gas distribution activities and preventing damage from the construction and general industries. Having this continual support minimises the risk of prolonged outages and security threats presented by operating on non-supported software.

The key driver for this expenditure is to maintain a dedicated GIS system with critical linkages to sustain business functionality, enhance the accuracy of data and data management systems, maintain integration with other core systems, and address future risks such as security concerns, and handling larger datasets.

The AA6 capex program will upgrade our GIS. Our AA6 forecast capex for the GIS Upgrade is $2.0 million, and the forecast is based on historical upgrade actuals, supported by bottom-up estimates and third-party advice.

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) - The capital expenditure is necessary to maintain and improve the safety of services. Maintenance of the gas network is reliant on an accurate GIS system.
- 79(2)(c)(ii) - The expenditure is necessary to maintain the integrity of services. Each upgrade ensures the GIS software is kept in line with vendor support requirements, provides enhanced stability after implementing the latest applications and minimises reliance on ageing applications and infrastructure.

Our GIS Upgrade project is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; (*see confidential Attachment 10.053.00*).

WEBMETHODS UPGRADE ($1.1M CAPEX)

ATCO currently uses Software AG's webMethods 10.5 platform as its integration platform, a centralised integration transport layer to exchange data between systems. The webMethods upgrade will maintain vendor support and make available any new features as they become available to maintain the availability of ATCO's core business systems and assist with mitigating cyber security risks.

webMethods is an integration platform providing a comprehensive suite of tools and technologies for ATCO to connect various applications, systems, and data sources. It facilitates the seamless exchange of information and processes across different technologies and platforms, enabling seamless data exchange between ATCO and third parties, and providing ATCO with further enhancements, agility, and innovative linkages between services.

The investment drivers for this capex include:

- remaining on vendor-supported software to minimise the risk of prolonged outages and security threats
- the integration of ATCO's applications both internally and externally is critical for ATCO to maintain a safe and reliable gas network and to continue to meet market rules and regulations.

The AA6 capex program will upgrade our webMethods integration platform. Our AA6 forecast capex is $1.1 million, and the forecast is based on historical upgrade actuals, supported by bottom-up estimates and third-party advice.

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) - The investment improves safety by providing the data exchange required for the maintenance of the gas network. Maintenance of the gas network is reliant on webMethods to exchange data between systems. webMethods also impacts the safety levels of Before You Dig Australia users, customers, staff, and the general public.
- 79(2)(c)(ii) - The investment maintains (or improves) network integrity by maintaining the software version to continue to obtain vendor support and avoid the risk of system failure, which can reduce our capability to maintain network integrity. Upgrading webMethods ensures the software is kept in line with vendor support requirements.
- 79(2)(c)(iii) - The investment is necessary to comply with ATCO's obligations under the Gas Retail Market Rules, which includes delivery of critical market information. Ensuring the critical Integration Platform is operating on vendor-supported and up-to-date software, minimises the risk of prolonged outages and breaches of rules.

Our webMethods Upgrade project is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; (*see confidential Attachment 10.054.00*).

FORECAST EXPENDITURE

Our AA6 forecast capex for IT Upgrade programs is shown in Table 10.24. The total capex is $4.1 million, with the only SaaS adjustment ($0.7 million) for HR and Payroll Upgrade, returning a capex forecast of $3.5 million.

Table 10.24: IT Upgrade Projects, AA6 Forecast Capex ($million real as at 31 December 2023)

PROGRAMS	2025	2026	2027	2028	2029	TOTAL
IT UPGRADES						
HR and Payroll Upgrade	0.9	-	-	-	-	0.9
Geographic Information System Upgrade	1.0	1.0	-	-	-	2.0
webMethods Upgrade	-	-	-	1.1	-	1.1
TOTAL (Capex and Opex)	**1.9**	**1.0**	**-**	**1.1**	**-**	**4.1**
less SaaS - HR and Payroll Upgrade (opex)	- 0.7	-	-	-	-	- 0.7
TOTAL (Capex)	**1.2**	**1.0**	**-**	**1.1**	**-**	**3.4**

10.9.3.4 IT BUSINESS CAPABILITY IMPROVEMENT PROGRAMS ($2.9M)

This section provides a summary of our IT business capability improvement programs and includes background, additional governance processes, investment driver and conforming capex justification. Table 10.25 provides a summary of the forecast capex for these programs over the AA6 period.

CAPITAL EXPENDITURE REQUESTS (CER) PROCESS

To streamline the approval of small IT Business Capability Improvement projects (ranging from $1,000 to less than $50,000), ATCO has a dedicated governance process – the Capital Expenditure Request (CER) online process. A CER is prepared and approved to draw down on the approved allocated expenditure for IT business capability improvement projects (e.g., IT continuous improvement). As part of our governance processes, we will approve an annual Capital Expenditure Appropriation Request (CEAR) based on the governing Business Case for the project through our PGC governance processes (see Section 10.5.4.2).

Members of our IT team (also applies to other non-network teams) prepare an online CER in line with the project scope and alignment to the approved Business Case (linked to Business Plan) and CEAR. The CER is sent to the Line Manager for initial approval of the project. Once approved, the CER is forwarded to relevant approvers for final approval. This process is a fast, controlled, and effective way to complete projects using an Agile project delivery methodology.

PROGRAM SUMMARY

Table 10.25 summarises the IT Business Capability Programs, including the high level investment driver and the key differences between each of the programs.

Table 10.25: Summary of IT business capability program drivers and differences

PROGRAM	KEY DIFFERENCES BETWEEN PROJECTS
IT Continuous Improvements Program	Ensure ATCO can respond to demands from its customers, regulators and other key stakeholders for improvements and enhancements of critical systems that support critical services.
Digital Improvement Program	Identify digitalisation opportunities based on value to ATCO and its customers including workflow optimisation, process improvement, and customer-facing applications
Data and Analytics Program	Identify value-adding data and analytics products to improve decision-making, services to customers, and accuracy of financial forecasting and reporting.

IT - CONTINUOUS IMPROVEMENT PROGRAM ($0.6M CAPEX)

This program commenced in AA5 and will continue in AA6, ensuring that we can deliver new digital and business improvement opportunities for our workforce, retailers, and end users to meet contemporary expectations of our systems. These projects may be delivered using an Agile project delivery framework to ensure they are implemented in a timely and least cost way.

Continuous IT improvements provide a flexible approach to enabling small-scale systems changes and implementing changes as demand arises. These improvements are often for regulatory changes and business operational changes that are needed without delay.

Key improvements that ATCO may seek include:

- Enhancing or extending technology to operate more efficiently

- Optimising system performance to improve business responsiveness to customer needs
- Implementing changes mandated via legislation or regulation
- Improving the usability of systems to increase employee productivity
- Increasing the security of ATCO's systems and information assets.

Since specific investments under this program are not currently known, the relevant provisions of the NGR will be assessed on an individual basis as part of the CER process.

The AA6 capex of $0.6 million will implement the Continuous Improvement Program, forecast using historical actuals.

Our strong governance ensures the program conforms to NGR 79(1), where the solution provides the lowest sustainable cost that meets all business requirements through following procurement processes and efficient delivery. Although each component of the program has differing levels of investment and provides different solutions, we expect that the investments pursued as part of the program will comply with NGR 79(2):

- 79(2)(a) – Improving efficiency into our systems provides a positive overall economic value.
- 79(2)(c)(i) & 79(2)(c)(ii) – Improving systems that identify opportunities for safety improvement and maintain system integrity by providing succinct and simplified information.
- 79(2)(c)(iii) – Improving systems to maintain compliance with a regulatory obligation or requirement in our core and support services, improving audit outcomes and seamless integration with third party systems. For example, improvements may be required for:
    - Billing and metering systems (relating to Gas Retail market Procedures)
    - Safety and monitoring systems (relating to Safety Case (GSSSR) obligations)
    - Financial and Human Resource systems (relating to relevant Financial, Australian Taxation Office, or Work Health Safety obligations)

Our Continuous Improvement Program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; (*see confidential Attachment 10.049.00*).

IT – DIGITAL IMPROVEMENT PROGRAM ($1.5M CAPEX)

The Digital Improvement Program is an IT initiative to enhance business workflows, customer satisfaction, and dynamic inter-team decision-making. This program is designed to enable ATCO to adapt to changing market dynamics and customer expectations while focusing on simplifying processes and continuous improvement.

This program commenced in AA5 and will continue in AA6, ensuring that ATCO can deliver new digital and business improvement opportunities to its customers and implement them with the least cost and time. Typically, these projects are delivered using an Agile project delivery framework.

The primary driver behind the Digital Improvement Program is the need to remain competitive and responsive in a dynamic business environment. We recognise the importance of agility in addressing evolving customer demands, market trends, and technological advancements. By embracing agility,

we aim to achieve quicker decision-making, faster delivery of products and services, and a culture of innovation that fosters growth.

The AA6 capex program is forecast to implement the Digital Improvement Program based on forecast using historical upgrade actuals, supported by bottom-up estimates. Our AA6 forecast capex for the Digital Improvement Program is $1.5 million.

Our strong governance, including the CER process, ensures the program conforms to NGR 79(1), where the solution provides the lowest sustainable cost that meets all business requirements through following procurement processes and efficient delivery. Although each component of the program has differing levels of investment and provides different solutions, we expect that the investments pursued as part of the program will comply with NGR 79 including:

- 79(2)(i) - The overall economic value of the expenditure is positive. Upgraded digital programs facilitate improved business and customer processes, providing a positive overall economic value.

Our Digital Improvement Program is supported by a dedicated Business Case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; (*see confidential Attachment 10.051.00*).

IT - DATA AND ANALYTICS PROGRAM ($0.6M CAPEX)

This program commenced in AA5 and will continue in AA6 to ensure that ATCO can continually identify new analytical models, reporting, and dashboard opportunities. The benefits of investing in this program have resulted in increased data accuracy, increased data security, and access to a richer data history.

Opportunities afforded by investment in data and analytics capability include:

- Expanding general reporting capability to increase employee productivity
- Improving accuracy and robust forecasting of expenditure and revenue
- Improving understanding of asset performance and proactive asset maintenance through access to more reliable data
- Predicting gas leakage through a combination of internal systems and external satellite data
- Expanding the use of data and analytics to enable the workforce to conduct their activities more efficiently
- Streamlining and automating the approach to annual reporting.

Since specific investments under this program are not currently known, the relevant provisions of the NGR will be assessed on an individual basis as part of the CER process (see above).

Our AA6 forecast capex for the Data and Analytics Program is $0.6 million, and the forecast is based on historical upgrade actuals, supported by bottom-up estimates.

Our strong governance, including the CER process, ensures the program conforms to NGR 79(1), where the solution provides the lowest sustainable cost that meets all business requirements through following procurement processes and efficient delivery. Although each component of the program has differing levels of investment and provides different solutions, we expect that the investments pursued as part of the program will comply with NGR 79 including:

- 79(2)(a) – Building efficiency and capability into our systems provides a positive economic value.
- 79(2)(c)(i) & 79(2)(c)(ii) – Identifying new systems that identify opportunities for safety improvement and maintain system integrity by providing succinct and simplified information and using data for enhanced outcomes.
- 79(2)(c)(iii) – Adding systems to achieve compliance with a regulatory obligation or requirement to support our core services, providing seamless integration with internal and external systems. For example, new reporting or dashboards may be required for:
  - Billing and metering systems (relating to Gas Retail market Procedures)
  - Safety and monitoring systems (relating to Safety Case (GSSSR) obligations)
  - Financial and Human Resource systems (relating to relevant Financial, Australian Taxation Office, or Work Health Safety obligations)

Our Data and Analytics program is supported by a dedicated business case detailing investment justification, options analysis, and project details including resourcing, strategic alignment, and compliance with the NGR; (*see confidential Attachment 10.050.00*).

FORECAST EXPENDITURE

Our capex forecast for IT Business Capability Programs is shown in Table 10.26. The total cost (capex and opex) is $4.9 million, however as per Section 9.5.3.3 and Table 9.20, the SaaS adjustment is $2.0 million returning a capex forecast of $2.9 million.

Table 10.26: IT Business Capability Programs, AA6 Forecast Capex ($million real as at 31 December 2023)

PROJECTS	2025	2026	2027	2028	2029	TOTAL
IT BUSINESS CAPABILITY PROGRAMS						
IT Continuous Improvement Program (total)	0.4	0.4	0.4	0.4	0.4	2.0
Digital Improvement Program (total)	0.4	0.4	0.4	0.4	0.4	1.9
Data and Analytics Program (total)	0.2	0.2	0.2	0.2	0.2	1.0
TOTAL (Capex and Opex)	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**	**4.9**
Less SaaS - IT Continuous Improvement (opex)	- 0.3	- 0.3	- 0.3	- 0.3	- 0.3	- 1.4
Less SaaS - Digital Improvement (opex)	- 0.1	- 0.1	- 0.1	- 0.1	- 0.1	- 0.4
Less SaaS - Data and Analytics	- 0.0	- 0.0	- 0.0	- 0.0	- 0.0	- 0.2
TOTAL	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**2.9**

10.10 STRUCTURES AND EQUIPMENT ($23.9M)

10.10.1 FLEET ($12.6M)

BACKGROUND

ATCO's fleet assets play a vital role in enabling the work crews to undertake network maintenance activities, respond to network incidents promptly, connect new customers to the network, extend gas mains to support network growth and provide a broad range of services. Our current fleet assets include:

- **motorcycles**
- **passenger vehicles**
- **light commercial vehicles** (e.g., utility vehicles and vans)
- **heavy vehicles**
- **larger plant and equipment** (e.g., trailers, mobile message boards, excavators, and compressors).

We have a mobile workforce and locate our personnel and fleet close to operational demand centres to serve our customers more efficiently.

INVESTMENT DRIVERS

Our fleet size and composition are driven by the workforce plan, which sets out the resources required to deliver the program of work as set out in the AMP. Where the workforce plan identifies a need for additional vehicles, we assess the existing fleet to determine whether the requirement can be met through the redistribution of current assets or if additional vehicles are required. Our forecast is developed for a 5-year horizon and includes the type and number of fleet assets.

Our fleet capex forecast is categorised into:

- **Fleet replacement**: Replacement of existing fleet assets due to asset condition and suitability. We are forecasting replacements in AA6.
- **Fleet demand**: New fleet assets are required due to changes in business requirements. We are forecasting no new fleet assets in AA6 due to no additional demand for field roles.

Additionally, we are monitoring and assessing the use of electric and hydrogen vehicles and will look to incorporate these into the fleet when appropriate.

CONFORMING CAPEX JUSTIFICATION

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) and 79(2)(c)(ii) - the capex is necessary to maintain and improve safety of services and maintain the integrity of services. These are achieved by ensuring our fleet remains fit for purpose, fully operational, and in a good condition. Fleet assets are essential to respond to network incidents promptly and undertake network projects and maintenance activities effectively.

PLANNED ACTIVITY

We forecast the long-term replacement of fleet assets using age-based requirements, and then each year, we refine the annual replacement schedule based on:

- utilisation data (e.g., kilometres travelled or engine hours metered);
- the vehicle's condition (e.g., through visual inspection and the vehicle's maintenance history); and
- the vehicle's ongoing operational suitability.

We have developed our fleet replacement criteria in line with industry practice. The criteria are based on the recommended replacement timing for trucks (as published by the Institute of Public Works Engineering Australia in its Plant and Vehicle Management Manual) and the replacement criteria from other network operators.

Our criteria for replacement and further detail regarding the Fleet assets are provided in our ALS for Fleet (*see Attachment 10.004*)

FORECAST EXPENDITURE:

Table 10.27 shows the AA6 forecast Fleet capex of **$12.6M.**

Table 10.27: Fleet, AA6 Forecast Capex ($million real as at 31 December 2023)

CATEGORY	2025	2026	2027	2028	2029	TOTAL
FLEET TOTAL	**3.8**	**2.3**	**1.4**	**2.4**	**2.8**	**12.6**

10.10.2 PROPERTY, PLANT, AND EQUIPMENT ($11.3M)

BACKGROUND

This asset class comprises property, plant, and equipment (**PP&E**), which are non-network assets used to support our daily operations, including our operational customer service and network maintenance teams. Below are the categories of assets within PP&E:

- **Property and Plant:** These include real estate properties owned or leased by ATCO as depots and offices, workshops, warehouses, and associated assets such as air conditioning units, furniture, and fittings. We have 9 operational facilities, with the head operations centre at Jandakot, 3 depots in the Perth metro region, and another 5 regional depots. The 3 metro depots are in Mandurah, Malaga, and Joondalup. Our regional depots are in Geraldton, Bunbury, and Busselton, and there are 3 depots in Kalgoorlie and Albany to support the unregulated gas network (not included in the AA6 submission).
- **Equipment:** These are tangible assets used by the business for network construction, operation, and maintenance, such as flow-stopping equipment, equipment that requires servicing, and calibration and hand tools.

INVESTMENT DRIVERS

Demand for new facilities is driven by forecast network activities, staff and accommodation requirements, and future network expansions. Facilities like depots are refurbished based on their

condition and operational suitability. Most of our equipment that are non-critical assets is run to failure.

CONFORMING CAPEX JUSTIFICATION

This program conforms to NGR 79(1) and is justified on the following grounds in NGR 79(2):

- 79(2)(c)(i) and 79(2)(c)(ii) - the capex is necessary to maintain the safety and integrity of services. These are achieved by ensuring our PP&E remains fit for purpose, fully functional, and in a good condition. PP&E assets are essential to ensure personnel are using safe equipment, undertake network projects with the appropriate tooling, and carry out maintenance activities effectively.

PLANNED ACTIVITY

How assets are operated and maintained is a key factor in how they perform and how long they remain serviceable. Our AA6 PP&E capex program includes Property (Facilities and Plant) improvement initiatives for the facilities in the Perth metropolitan area and the acquisition of equipment aligned with the *'Strategic Delivery and Resource Plan', (see Attachment 10.025)*.

Our criteria for replacement and further detail regarding the PP&E assets are provided in our ALS for Property, Plant and Equipment (*see Attachment 10.005*).

FORECAST EXPENDITURE:

Table 10.28 outlines our AA6 forecast PP&E capex of **$11.3M.**

Table 10.28: Property, Plant, and Equipment, AA6 Forecast Capex ($million real as at 31 December 2023)

CATEGORY	2025	2026	2027	2028	2029	TOTAL
Property (Facilities and Plant)	1.6	3.7	0.5	0.4	0.5	6.7
Equipment	0.9	0.9	0.9	0.9	0.9	4.6
TOTAL	**2.6**	**4.6**	**1.4**	**1.4**	**1.4**	**11.3**

10.11 OVERHEAD COSTS

10.11.1 OVERVIEW

We define overheads as all the necessary indirect costs of delivering the capex program, except for the labour and materials costs that can be directly allocated. Overhead costs are not directly attributable to capex projects and activities via a source document such as a work order, invoice or a timesheet, but are incurred as a result of delivering the capex program. Further information on our overhead allocation process is provided in '*Cutler Merz - Indirect Cost Allocation Review*', (*see Attachment 10.024).*

We incur overheads by supporting both the capex program and operations and maintenance activities. Overheads relating to opex are included as part of the total opex forecast in Chapter 9 and have not been separately analysed and reported. Only those overhead costs incurred as a result of supporting the capex program are reviewed and analysed in this section of our 2025-29 Plan.

ATCO sought expert advice from CutlerMerz on its indirect cost methodology to estimate costs attributable to capex and the implication of this methodology on the AA6 forecast (See Attachment 10.024). It was found that ATCO demonstrates a robust framework and accounting process to estimate overheads and benchmarking analysis reveals ATCO's capitalised overheads are set at comparable rates to its industry peers. The benchmark analysis shows that ATCO is towards the lower end of the allocation spectrum. Furthermore, CutlerMerz concluded:

> *We consider the forecast of capitalised overheads for AA6 is reasonable and allocated at a rate that the ERA has previously considered efficient.*[70]

We are forecasting to capitalise overhead costs of $64.4 million in AA6. These overhead costs are justifiable under NGR 79(2) on the same basis as the underlying capex. Table 10.29 provides a breakdown of overhead expenditure per asset class, noting from the table that overheads do not apply to non-network assets, including IT, Fleet or PP&E. Figure 10.5 shows the annual breakdown of overheads between regulatory asset categories.

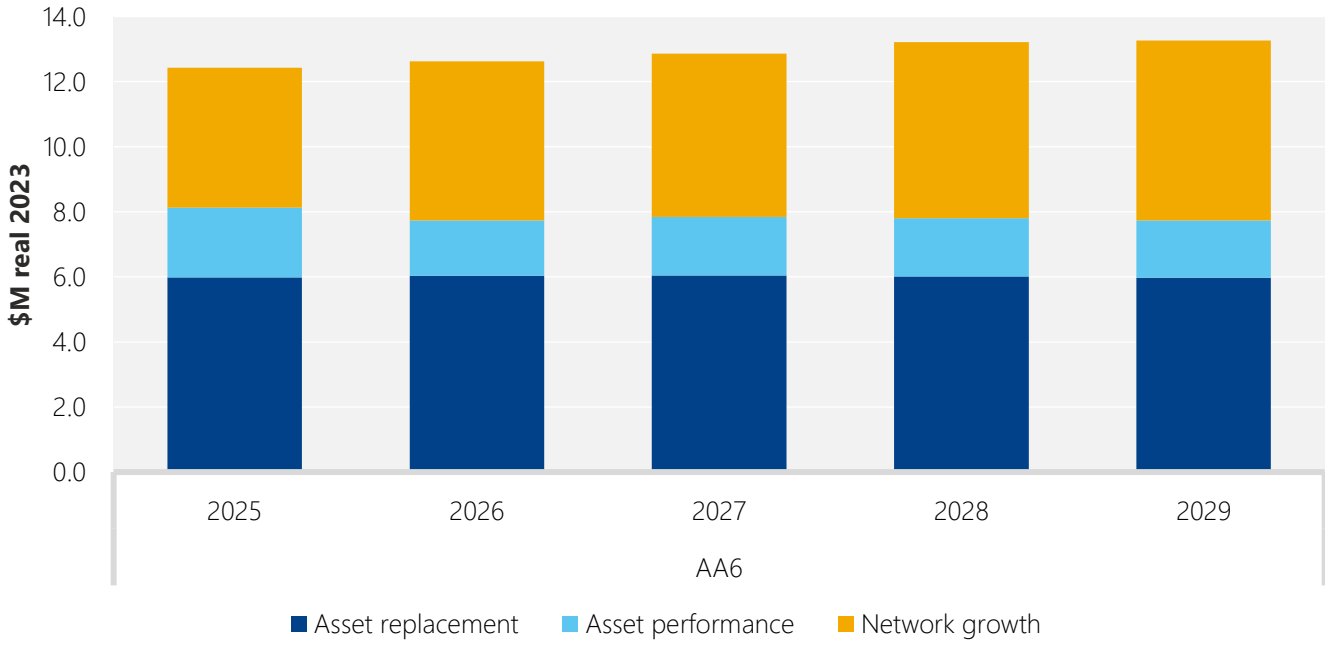
Table 10.29: Forecast AA6 Overheads by Asset Class ($M real as at 31 December 2023)

ASSET CLASS	2025	2026	2027	2028	2029	TOTAL AA6
High pressure mains - steel	1.0	1.0	1.2	1.1	1.1	**5.4**
Medium and low pressure mains	5.4	5.7	5.8	5.8	5.8	**28.4**
Regulators	0.7	0.3	0.3	0.3	0.4	**2.1**
Secondary gate stations	0.7	0.5	0.5	0.5	0.6	**2.9**
Buildings	-	-	-	-	-	**-**
Meter and services pipes	4.5	4.9	4.9	5.2	5.3	**24.7**

[70] CutlerMerz, Indirect Cost Allocation Review, August 2023, pg 17

ASSET CLASS	2025	2026	2027	2028	2029	TOTAL AA6
Equipment and Vehicles	-	-	-	-	-	-
Vehicles (Fleet)	-	-	-	-	-	-
Information technology	-	-	-	-	-	-
Telemetry and monitoring	0.2	0.2	0.2	0.2	0.2	**1.0**
TOTAL CAPEX	**12.4**	**12.6**	**12.9**	**13.2**	**13.3**	**64.4**

Figure 10.5: Forecast AA6 Overheads by Asset ($M real as at 31 December 2023)



10.11.2 OVERHEAD CATEGORISATION

Overheads relating to the forecast capex include the indirect costs associated with:

- **Network construction**: Includes indirect costs associated with establishing and maintaining pipeline assets including the internal labour cost (and associated fleet, IT and telecommunications costs) of management and administration support. It also includes the costs of training staff, planning teams and inspection teams whose hours cannot be directly attributed to projects and activities but are indirectly driven by network construction.
- **Customer and corporate services:** Relate to the portion of services provided by corporate departments such as Finance, Human Resources, Regulatory, Legal and Risk that relate to the capex program but cannot be directly allocated to projects or activities via timesheets or invoices. Most of these costs are internal labour and the associated employee costs of fleet, IT, and telecommunications.
- **Asset management:** Includes the indirect costs of technical support services, compliance and risk departments, and asset services. Most of these costs are internal labour and associated costs of

staff whose hours cannot be allocated directly to projects and activities but arise because of incurring directly attributable costs.

10.11.3 APPROACH

We have adopted the base-step-trend (BST) method to calculate overheads to be capitalised. A detailed breakdown of this calculation is provided in '*Base Step Trend - Overhead Forecast Model', (see Attachment 10.056)*. The BST method is suitable because the nature of overhead costs is largely fixed. For consistency, we have used the step changes and trends assumed for forecast opex (see Chapter 9) for the forecast overhead calculation.

Using the BST approach means using overhead costs in the efficient base year to forecast AA6 overheads. By using 2022 costs to predict future overheads, ATCO ensures that a prudent approach is applied to the overhead estimate for AA6 and achieves the lowest sustainable overhead cost to support the capex program.

10.11.4 ESTABLISH THE EFFICIENT BASE YEAR FOR OVERHEADS

We have used our actual overheads from the most recent complete calendar year (2022) as representative overhead costs for AA6. We have assumed that any efficiency savings made in 2022 are recurrent and will continue to apply in the future. We adjusted the base overhead costs to remove any 2022 non-recurrent expenditure. The use of a base level of overhead, based on our actual overhead, reflects that overheads are recurrent. The AA6 base overhead forecast is $57.2 million

10.11.5 ADJUSTING OVERHEADS FOR STEP CHANGES IN RECURRENT EXPENDITURE

The activities during AA6 that are not reflected in our base year are known as 'step changes'. Step changes include the additional costs of associated safety, compliance, and regulatory activities typically driven by a change in obligation. The step changes we have identified for AA6, and the justification for each of these step changes, is outlined in Section 9.5.2.

We have analysed the cost of each step change and identified the direct and indirect components (overheads). We first identify the department that will drive these step changes and estimate their respective portion of the step change. Each of these departments has a typical overhead percentage based on established business rules; these percentages are used to calculate the total overhead associated with the step changes.

For example, the step change relating to 'enabling renewable gases' includes labour costs to deliver the project. Although a portion of labour costs are time-written and capitalised to the project directly, the portion relating to administration, support, and management costs associated with this project have been determined as indirect capex. The overhead component of each step change is outlined in Table 10.30.

Table 10.30: Adjustments for the overhead component of recurrent step changes ($million real as at 31 December 2023)

RECURRENT STEP CHANGES	AA6 TOTAL
Enabling Renewable Gases	1.3
Cyber Security	0.6
Gas Inspection – Safety changes (DMIRS B&E)	0.1
Economic regulatory changes	0.2
TOTAL	**2.2**

10.11.6 ADJUSTING OVERHEADS FOR NON-RECURRENT EXPENDITURE

Several non-recurrent costs will occur during AA6 that are not reflected in our base year. The non-recurrent step changes we have identified for AA6 are detailed in Table 9.15. The justification for each of the non-recurrent costs is outlined in Section 9.5.3.

As with the recurrent step changes, the overhead component has been calculated based on the proportion of costs that will not be directly attributable to the step change activity (i.e., the proportion of the costs that cannot be traced to the activity via invoice, timesheet or other source document but arises because of these activities). The overheads that relate to capex are outlined in Table 10.31.

Table 10.31: Adjustments for the overhead component of non-recurrent step changes ($million real as at 31 December 2023)

NON-RECURRENT STEP CHANGES	YEAR	AA6 TOTAL
Access Arrangement 7 Regulatory Preparation	2026 to 2029	**0.6**

10.11.7 TREND TO ACCOUNT FOR FORECAST GROWTH

We incur additional expenditure as the number of customers connected to the network increases and as the size of the network increases; most of this additional expenditure is *directly allocated* to capex. *Indirect costs* (overheads) also increase with additional customer connections and network growth. These increases in overheads include, for example, more support services.

It is therefore appropriate that we escalate our base year overhead by the forecast growth in customer numbers and the increased size of our distribution network (measured in km of mains). The AA6 overhead associated with forecast growth is $2.3 million and is calculated by applying a cumulative growth factor to the overhead value in the 'efficient base year'.

10.11.8 TREND TO ACCOUNT FOR FORECAST PRICE GROWTH

Forecast price growth typically accounts for price increases in labour and non-labour (e.g., materials). Our forecast price growth results in an additional $2.0 million of overhead in AA6.

Our approach to escalating input costs is based on the following:

- A resource mix of 62% labour and 38% non-labour costs based on benchmark weights. These weights are consistent with AA5 and similar to the AER's recent decisions for AGN's (SA) 2021-26 Access Arrangement, Evoenergy's 2021-26 Access Arrangement, and AusNet's 2022-26 Final Decision.
- The resource mix adopted is conservative compared to the actual overhead resource mix but has been applied to maintain consistency with the opex BST assumptions.
- Labour cost escalation over AA6 is based on the forecast annual growth rate in the wage price index determined by an independent expert.
- We have forecast that non-labour costs do not incur any additional price rises over and above inflation.

10.11.9 PRODUCTIVITY GROWTH

As with base opex, we have not applied a productivity adjustment on the basis that our benchmark performance is already considered efficient compared to our peers (see Section 9.5.7).

10.11.10 OVERHEAD FORECAST

We forecast $64.4 million of overhead costs to be capitalised in AA6, as shown in Table 10.32.

Table 10.32: Capitalised portion of overhead expenditure ($M real as at 31 December 2023)

	2025	2026	2027	2028	2029	TOTAL
Base Year	11.4	11.4	11.4	11.4	11.4	**57.2**
Recurrent step changes	0.5	0.5	0.5	0.4	0.4	**2.2**
Non-recurrent step changes	-	0.0	0.1	0.3	0.2	**0.6**
Forecast growth	0.3	0.4	0.5	0.6	0.7	**2.3**
Forecast price growth	0.2	0.3	0.4	0.5	0.6	**2.0**
TOTAL	**12.4**	**12.6**	**12.9**	**13.2**	**13.3**	**64.4**

These overhead costs are included in our AA6 capex forecast.

10.12 AA6 CAPEX FORECAST BY ASSET CLASS

Table 10.33 summarises the forecast AA6 capex over asset class:

Table 10.33: Forecast AA6 Capex by Asset Class ($M real as at 31 December 2023)

ASSET CLASS	2025	2026	2027	2028	2029	TOTAL AA6
High pressure mains - steel	6.0	5.7	8.3	7.2	7.5	**34.6**
Medium and low pressure mains	38.5	39.3	39.8	38.5	38.1	**194.2**
Regulators	4.9	2.2	2.2	2.2	2.2	**13.8**
Secondary gate stations	3.8	2.6	2.6	2.7	2.7	**14.3**
Buildings	1.6	3.7	0.5	0.4	0.5	**6.7**
Meter and services pipes	30.3	31.6	32.6	33.8	34.0	**162.3**
Equipment and Vehicles	0.9	0.9	0.9	0.9	0.9	**4.6**
Vehicles	3.8	2.3	1.4	2.4	2.8	**12.6**
Information technology	4.0	3.7	2.7	1.9	0.7	**13.0**
Telemetry and monitoring	1.9	1.8	2.0	2.0	1.9	**9.6**
TOTAL ACTUAL CAPEX	**95.8**	**93.8**	**93.0**	**91.9**	**91.3**	**465.8**

11. CAPITAL BASE

CHAPTER HIGHLIGHTS

1. The capital base has been rolled forward using forecast depreciation and actual capex.
2. Our opening capital base has increased from $1,518.8 million at 31 December 2019 to $1,605.4 million as at 1 January 2025.
3. Our projected capital base at the end of AA6 is $1,642.5 million.
4. ATCO has investigated options to change the depreciation profiles of its gas distribution assets to reflect uncertainty in the energy transition. The result is to bring forward $80 million of depreciation into AA6.

11.1 INTRODUCTION

The forecast value of our capital base at 1 January 2025 is $1,605.4 million. The value of our capital base is a primary input into our total revenue calculation; it forms the basis of our return on assets and depreciation building blocks.

As part of the access arrangement process, we are required to adjust our capital base in relation to capex, depreciation, and inflation using actual information from AA5 and forecast information for AA6. This Chapter discusses how we have made those adjustments for AA5 and AA6 and focuses on the method used to calculate the capital base, including the treatment of inflation, disposals, capital contributions, and depreciation.

11.2 STAKEHOLDER FEEDBACK

Table 11:1 summarises the feedback received from our stakeholders and our respective responses

Table 11:1: Consideration of stakeholder feedback on the Capital base

STAKEHOLDER FEEDBACK	OUR RESPONSE
Concern that, if electrification proceeds rapidly, consumers, particularly vulnerable consumers, left connected to the gas network will face rapidly increasing prices to recover the fixed costs of the network, especially under accelerated depreciation profiles.	The rationale for accelerated depreciation in an uncertain future is to bring forward costs now in an equitable way to avoid rapidly increasing prices if the customer base declines. Refer to Section 11.5.2.
Given the need to phase out fossil fuels and the uncertainties about the viability of renewable gas supply through the gas distribution network, ATCO Gas should take on the full asset risk of any expenditure spent on expanding the gas	The cost of expanding the network continues to return a positive financial benefit to all customers, resulting in lower tariffs than would otherwise be the case – the NPV of new connections remains positive. If no network expansion took place the impact would result in higher

STAKEHOLDER FEEDBACK	OUR RESPONSE
distribution system. Concessions, like accelerated depreciation, of this future expanded asset's value should not be allowed if it becomes stranded or suffers from decreasing customer numbers and consumption. Consumers should not have to bear the risk of paying for stranded gas network assets that are installed from now on.	tariffs across AA6. Further detail about the financial benefit of expanding the network is presented alongside our growth capex forecast, see Section 10.8. Accelerated depreciation is not a concession. Using accelerated depreciation to ameliorate asset stranding risk spreads the costs of the network across consumers across multiple access arrangement periods in an equitable way as explained in Section 11.5.2. Additionally, ATCO is investing in the network to make it ready for a low/zero emissions future thus allowing costs to be spread across more customers over a longer period.

11.3 OPENING CAPITAL BASE

The opening capital base is calculated using the roll forward method, as set out in Rule 77 of the NGR. The asset base is rolled forward using forecast depreciation in the ERA's AA5 Final Decision.

Figure 11.1: Opening capital base calculation

The opening capital base for AA6 (1 January 2025) incorporates an adjustment for any difference between estimated and actual capex included in the 2020 opening capital base. This adjustment must also remove any benefit or penalty associated with any difference between the estimated and actual capex. Capex for 2019 includes $0.8 million of equity raising costs approved in the AA5 Final Decision and is included in accordance with regulatory precedent.

The opening capital base for AA5 (1 January 2020) was $1,518.8 million, as shown in Table 11.2.

Table 11.2: Opening capital base ($ millions real as at 31 December 2023)

	2019	2020	2021	2022	2023	2024
Opening capital base 2019 before adjustment	1,499.2					
Benefit from the difference between the estimated and actual 2019 capex	-1.4					
Opening capital base	1,497.8	1,518.8	1,535.8	1,554.2	1,571.9	1,588.3
Capex (net)	84.6	71.9	84.0	85.0	84.7	88.0
Depreciation	-62.6	-54.3	-65.1	-66.8	-68.3	-71.0
Asset disposals	-1.0	-0.7	-0.6	-0.4	0.0	0.0
CLOSING CAPITAL BASE	**1,518.8**	**1,535.8**	**1,554.2**	**1,571.9**	**1,588.3**	**1,605.4**

11.4 PROJECTED CAPITAL BASE

The projected capital base is calculated using the roll forward method, as set out in NGR 78.

Figure 11.2: Projected capital base calculation

The forecast capital base over AA6 is provided in Table 11.3 considering forecast depreciation, and capex. This shows a projected capital base of $1,642.5 million as at 31 December 2029, as shown in Table 11.3.

Table 11.3: Projected capital base ($ millions real as at 31 December 2023)

	2025	2026	2027	2028	2029
Opening Capital Base	1,605.4	1,623.5	1,629.8	1,634.7	1,638.5
Capex (net)	95.8	93.8	93.0	91.9	91.3
Depreciation - straight line	-61.7	-71.5	-72.0	-72.1	-71.3
Depreciation – accelerated	-16.0	-16.0	-16.0	-16.0	-16.0
Asset Disposals	0.0	0.0	0.0	0.0	0.0
CLOSING CAPITAL BASE	**1,623.5**	**1,629.8**	**1,634.7**	**1,638.5**	**1,642.5**

11.5 SUPPORTING INFORMATION AND ASSUMPTIONS

11.5.1 CAPITAL CONTRIBUTIONS (RULE 82)

Capital contributions received have been netted off against conforming capex so that only the net amount is included in the capital base and the tax asset base.

We recover the tax costs that we incur when we receive a capital contribution from the customer paying the capital contribution. The amount of the capital contribution netted against conforming capex does not include this additional tax cost recovery. We determine the tax cost as the net present value effect of the timing difference between the capital contribution being assessed as taxable income and the related depreciation being assessed as a tax expense.

11.5.2 DEPRECIATION (RULES 88, 89 AND 90)

11.5.2.1 OPENING CAPITAL BASE

Rule 90(2) requires that an access arrangement contain provisions stating whether depreciation used in calculating the opening capital base for the next access arrangement is based on actual or forecast depreciation. As set out in AA5, the opening capital base in AA6 has been calculated using the

forecast depreciation in the ERA's AA5 Final Decision tariff model. Assets are depreciated using the straight-line method consistent with the ERA's AA5 Final Decision tariff model.

11.5.2.2 PROJECTED CAPITAL BASE

We have used the findings from the Future of Gas work (see Chapter 3) to inform our depreciation approach for the projected AA6 capital base. Our approach to the calculation of depreciation for AA6 includes two components:

- Adopting the appropriate economic asset lives per category
- Adopting the appropriate depreciation schedule.

Economic lives of asset categories

Firstly, in calculating depreciation for the projected AA6 capital base, we have adopted the following economic lives:

- The asset lives for the initial capital base at 1 January 2000 remain unchanged and are as stated in the ERA's AA5 Final Decision tariff model.
- The economic lives by asset categories are shown in Table 11.4 and remain unchanged from AA5 for the AA6 period.
- The asset life of 'equity raising costs' for AA6 has been amended to align with the average life of assets at 31 December 2024, rather than 31 December 2019.

Table 11.4: Economic lives of asset categories (years)

ASSET CATEGORIES	ECONOMIC LIVES	
	AA5	AA6
CURRENT AND NEW ASSET CATEGORIES		
HP Mains - Steel	80	80
HP Mains - PE	60	60
Medium and Low Pressure Mains	60	60
Regulators	40	40
Secondary Gate Stations	40	40
Buildings	40	40
Meter and Services Pipes	25	25
Equipment and Vehicles	10	10
IT	5	5
Telemetry	10	10
Equity Raising Cost	65.8	53.7
HISTORICAL ASSET CATEGORIES – NO LONGER USED FOR NEW CAPEX		
Medium Pressure Mains	60	60
Low Pressure Mains	60	60

Determining our depreciation schedule

Secondly, in response to the uncertainty of the energy transition, we propose to bring forward, or *accelerate*, depreciation.

> ATCO proposes to use accelerated depreciation in response to the uncertainty of the energy transition.

Rule 89(1)(c) allows the "depreciation schedule" or profile to be adjusted to reflect changes in the expected economic lives of assets. Gas distribution networks are now operating in a period of change, which will likely affect the economic lives of gas distribution assets. The Western Australian Government has recently announced its target of net zero emissions by 2050, while the Federal Government has set a legislated target of 43% below 2005 emission levels by 2030.

The AER, in its November 2021 Information paper[71], recognised the uncertainty in the economic lives of gas distribution assets, with its preferred response being to use accelerated depreciation to manage the uncertainty. As the AER stated in its information paper:

> *"Accelerated depreciation allows us to respond to the forecast change in demand in a pragmatic manner and adjust the tariffs over time to facilitate an equitable and efficient allocation of costs between current and future gas customers. Importantly, adjusting depreciation offers us the greatest flexibility in responding to new information in the future if the natural gas substitution pathways or actual demand turn out to be different than expected.*
>
> *Unlike other options under consideration, accelerating depreciation does not lock in a price change permanently. This avoids providing a material windfall gain or loss to either the regulated businesses or consumers if actual gas demand differs markedly from our assumption made under uncertainty. Depreciation can be adjusted in later access arrangement periods when the future of gas networks utilisation becomes clearer."*[72]

Noting the advantages of an accelerated depreciation approach, ATCO investigated options to change the depreciation profiles of its gas distribution assets to reflect likely changing economic lives.

This is not a new concept for regulated gas networks. In April 2021, the ERA adjusted the depreciation schedules of the Dampier to Bunbury Pipeline to reflect economic lives capped at 2063.

The concept of accelerated depreciation is further supported in section 24(2) of the NGL: Revenue and Pricing Principles (**RPP**)[73].

> *"A service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in - (a) providing reference services"*

[71] AER, Regulating gas pipelines under uncertainty, Information paper, November 2021

[72] AER, Regulating gas pipelines under uncertainty, Information paper, November 2021, page ix.

[73] National Gas Access (WA) Act 2009, 10 October 2020, section 24(2)

Section 24(2) provides a clear principle that the service provider, ATCO, should be provided with a reasonable opportunity to recover efficient costs that include the costs sunk into the network investment. Where there is a risk that this "reasonable opportunity" may be lost due to changes in the energy market, it makes sense to bring forward the recovery of those costs to reduce the risk that the RPP will not be satisfied.

Incenta in their report to ATCO explain other RPP provisions that support accelerated depreciation where there is a future prospect of asset stranding[74].

> *a. A price or charge for the provision of services should allow "**for a return commensurate with the regulatory and commercial risk involved**".[75] If the regulatory approach does not permit that capital invested is returned to investors, it is clearly not possible for a service provider to earn a return commensurate with the regulatory and commercial risks involved. This would also be true where the business is required to retain stranded asset risk but without explicit compensation being provided.*
>
> *b. "**Regard should be had to the economic costs and risks of the potential for under and over investment" by the regulated service provider**[76]". Returning capital to a service provider earlier than otherwise does not mean that it earns a higher return. The reason for this is that altering depreciation is NPV neutral. Therefore, there is limited reason to be concerned that returning capital earlier than first expected would lead to over-investment by a service provider. Conversely, as identified above, if recovery is sufficiently delayed that asset stranding is expected this is likely to harm the incentive for investment and so increase the prospects of under-investment."*

Taken together, these provisions clearly allow and support the concept of adjusting depreciation to allow a reasonable opportunity to recover the costs of network investment considering changing economic circumstances. Further detailed support for this reasoning is provided in Incenta's report quoted above.

An accelerated depreciation approach is supported by the report from *Incenta Economic Consulting, 'Incenta - Regulatory Depreciation for AA6', (see Attachment 11.001*). In summary, Incenta's findings conclude:

> *12. In our view, when interpreting the advice from the scenarios for AA6 depreciation, the priority should be to minimise the risk of asset stranding, which is a particular issue under the Electricity Dominates scenario. We say this because reducing stranded asset risk relies upon early action because (that is, if action to address stranded asset is excessively delayed, then the scope to recover cost may already have passed) and because providing a reasonable opportunity to recover efficient cost has been a central element in how utilities have been regulated in Australia. In contrast to*

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74 Incenta Economic Consulting, Regulatory depreciation for AA6, ATCO Gas Australia, August 2023, page 10

75 National gas access (WA) Act 2009, 10 October 2020, section 24(5).

76 National gas access (WA) Act 2009, 10 October 2020, section 24(6).

> *our views in relation to the Hydrogen Future scenario, there is much less scope to defer action if substantial stranded asset risk is to be avoided under the Electricity Dominates scenario.*
>
> *13. We note, however, that there are a range of other factors that will result in prices for AA6 increasing materially compared to previous regulatory periods, most notably the increase in the WACC as government interest rates revert to levels more consistent with historical averages, which is not likely to be present at the next review.9 Given this backdrop, it would be prudent to moderate some of the advancement of depreciation, at least where this did not add substantially to the risk of asset stranding.*
>
> *14. Whilst this is a matter where judgement is required, we observe that advancing depreciation by approximately half of the amount that is suggested by the Electricity Dominates scenario would most likely keep stranded asset risk at a modest level, and also improve the efficiency in the use of the asset under this scenario. Moreover, this degree of advancement would also be approximately consistent with maximising the efficiency of the utilisation of the asset if the "Energy Hybrid" scenario came to pass, and not unduly affect the efficiency of use of the asset if the Gas Retained scenario came to pass.*

The result of this investigation is to bring forward $80 million of depreciation to AA6, determined by:

- Investigating four plausible future scenarios (*see Section 3.4*) and the resulting effect on inputs to the tariff calculation
- Modelling tariffs to 2074
- Determining the amount of depreciation for each period required to smooth tariffs in real dollar terms from 2025 to 2074.

Furthermore, Incenta's findings support ATCO's approach to levelising prices as they noted the dual benefit of this approach:

- **Reasonable opportunity to recover costs** - levelising prices for the Electricity Dominates scenario is likely to provide ATCO with a reasonable opportunity to recover its costs (and, absent of a change to regulatory depreciation, ATCO will face substantial stranded asset risk), and
- **Efficient utilisation** - under all scenarios including the Electricity Dominates scenario, levelising prices is likely to promote the efficient utilisation of the gas networks over time.

We recognise that the results of the analysis are estimates and subject to future uncertainty, however, as the AER pointed out in its recent decision for Victorian gas distribution service providers, it is important to act now to avoid the need for more action later. As the AER Chair, Ms Clare Savage, stated in announcing the decisions:

> *"It is important that we start taking small steps now to manage the equitable recovery of those costs from what may be a declining, and sometimes vulnerable, customer base over time. The final decisions allow for a small start to accelerated depreciation of the networks. This balances recovery of asset costs between current customers, while*

> *the customer base is still relatively high, and a potentially smaller number of customers in the future."* [77]

The AER approved accelerated depreciation of $53 million for Multinet and $175 million for Australian Gas Networks (Victoria).

The amount of accelerated depreciation proposed to be brought forward by ATCO to AA6 is within the range of amounts brought forward by the various Victorian gas distributors.

While acknowledging potential changes to asset economic lives, ATCO is also actively investigating ways to prolong the lives of those assets, such as by preparing the network for the use of renewable gas. Extending the lives of assets benefits customers by spreading the cost of those assets over a longer period. Incenta also addresses this matter and concludes:

> *17. Continued investment to connect new customers can reduce the risk of asset stranding by reducing the average cost per customer, and therefore improves the competitiveness of gas relative to other fuels (at least in the absence of direct regulation about the choice of fuel sources). This occurs where the incremental revenue expected from customers exceeds the incremental cost incurred in connecting those customers.*
>
> *18. In addition, a substantial risk of asset stranding would only appear to exist under the Electricity Dominates scenario, and continuing to connect customers will also be beneficial if the other scenarios come to pass (i.e., Energy Hybrid, Gas Retained or Hydrogen Future). In particular, continuing to connect customers may have a material effect on whether conversion to hydrogen or use of renewable gas is commercially viable in the long term, as well as the price in the future under this scenario and the other two scenarios that envisage an enduring role for gas networks.*

11.5.2.3 OPENING CAPITAL BASE FOR AA7

Rule 90 requires that an access arrangement contain provisions governing the calculation of depreciation used in establishing the opening capital base for the next access arrangement.

ATCO proposes to continue adopting the use of forecast depreciation to calculate the opening capital base in AA7. To avoid doubt, this forecast depreciation amount includes the $80 million of depreciation brought forward into AA6.

Forecast depreciation by asset class over AA6 is shown in Table 11.5.

[77] Available at: https://www.aer.gov.au/news-release/aer-decision-supports-victorian-gas-consumers-in-energy-transition#:~:text=The%20AER's%20final%20decisions%20on,than%20in%20their%20revised%20proposal

Table 11.5: AA6 forecast depreciation ($ millions real as at 31 December 2023)

ASSET CATEGORIES	2025	2026	2027	2028	2029
HP Mains - Steel	4.4	4.5	4.5	4.6	4.7
HP Mains - PE	-0.1	0.1	0.1	0.1	0.1
Medium and Low Pressure Mains	7.0	7.0	7.0	7.0	7.0
Medium and Low Pressure Mains	14.7	15.3	16.0	16.7	17.3
Regulators	1.7	1.7	1.7	1.7	1.7
Secondary Gate Stations	1.6	1.8	1.1	1.1	1.2
Buildings	-1.2	0.3	0.4	0.4	0.5
Meter and Services Pipes	1.1	1.1	1.2	1.2	1.2
Equipment and Vehicles	28.8	29.2	29.7	29.7	29.8
IT	1.0	1.0	1.1	1.0	0.9
Telemetry	1.6	2.0	1.9	1.9	1.9
Equity Raising Cost	0.0	0.0	0.0	0.0	0.0
SUB-TOTAL: Straight line Depreciation	**61.7**	**71.5**	**72.0**	**72.1**	**71.3**
Plus Accelerated depreciation	16.0	16.0	16.0	16.0	16.0
TOTAL DEPRECIATION	**77.7**	**87.5**	**88.0**	**88.1**	**87.3**

11.5.3 RULES 84, 85, 86

No events have occurred in AA5 or are forecast to occur during AA6 that would require adjustment under Rules 84, 85, or 86.

11.5.4 INFLATION

ATCO has applied an inflation adjustment to the opening capital base, consistent with the current cost accounting method. The inflation percentages applied in each period are recorded at Section 1.2, Table 1.1.

11.5.5 CAPEX

ATCO's application of the roll forward method adopts an end-of-year timing assumption for capex, consistent with inflation and net present value cash flow assumptions. Capex is included in the asset base on an 'as incurred' basis rather than a commissioned basis because the expenditure must be funded as it is incurred. Regarding the revenue building blocks, capex starts to depreciate from 1 January in the year following the year of acquisition.

11.5.6 DISPOSALS

ATCO has deducted actual asset disposals, with the value based on sale proceeds, from the capital base. While no disposals have been forecast for AA6, if there are asset disposals during AA6, these will be deducted from the opening capital base at the start of AA7.

11.5.7 UNREGULATED AND NON-REFERENCE ASSETS

Assets used to provide unregulated services, i.e., those not related to the covered pipeline, have been excluded from the asset base. In addition, the cost of assets allocated to the provision of non-reference services has also been excluded from the asset base, so the costs related to those assets are excluded from the costs of providing reference services.

12. RATE OF RETURN

CHAPTER HIGHLIGHTS

1. The ERA's 2022 Rate of Return Instrument will be adopted throughout the AA6 submission and approval process.
2. Our estimate of the rate of return is 7.33% (vanilla nominal after-tax).
3. We have used June 2023 market data and the 2023 debt risk premium to estimate the rate of return that will be applied for AA6.

12.1 INTRODUCTION

The NGR provide a framework for calculating the rate of return. The ERA's 2022 Rate of Return Instrument (RORI) details the approach we must follow for calculating the rate of return under the NGR.

Our distribution charges are sensitive to the debt and equity risk-free rates, determined in accordance with the ERA's 2022 Rate of Return Instrument. Future rates of return are always uncertain and therefore we have calculated the rate of return using the June 2023 risk-free rate, which is the most recent practically available data. The resulting rate of return has a material impact on our cost of service and distribution charges for AA6 and will likely vary following future movements in the risk-free rate. For example, if the May 2023 risk-free rate data was used rather than the June data, we estimate the 2025 bill at average consumption would be $7 lower compared to our AA6 forecast.

The rate of return adopted in AA6 will be determined when the ERA makes its Final Decision in the fourth quarter of 2024. The ERA's Final Decision will incorporate updated market parameters.

12.2 STAKEHOLDER FEEDBACK

Table 12:1 summarises the feedback received from our stakeholders and our respective responses.

Table 12:1: Consideration of stakeholder feedback on the Rate of Return

STAKEHOLDER FEEDBACK	OUR RESPONSE
Support rationale for ROR, but suggest analysis of sensitivity of revenue forecast and tariffs to different levels of the WACC	The rate of return rationale is explained in Section 12.3 and is a predetermined process set out in the ERA's 2022 Rate of Return Instrument available on the ERA's website at https://www.erawa.com.au/gas/gas-access/guidelines/gas-rate-of-return-instrument/2022-gas-rate-of-return-instrument-review. Under the regulatory framework, ATCO has no discretion in setting the rate of return other than

STAKEHOLDER FEEDBACK	OUR RESPONSE
	setting the observation period during which market parameters are observed.

12.3 RATE OF RETURN

ATCO has estimated the rate of return in accordance with the 2022 RORI. The RORI fixes some parameters for the WACC calculation, and others are observed in the financial market in accordance with procedures set out in the RORI.

12.3.1 RORI PARAMETERS

The RORI sets some parameters for the WACC calculation that apply to all ERA gas pipeline determinations made after 18 December 2022 (until replaced by the next RORI).

Those parameters are:

- **Equity:** Market risk premium and the Beta used in the Capital Asset Pricing Model (**CAPM**) used by the RORI to calculate the allowed return on equity.
- **Debt:**
  - **Debt raising cost and hedging cost:** Costs additional to the interest rate of maintaining the debt portfolio.
  - **Gearing:** The proportion of funding from either debt or equity.
  - **Credit rating:** A credit rating (BBB+) is set against which the debt risk premium is determined
  - **Term:** A term of 10 years is set against which the interest rate is determined**.**
- **Gamma:** Accounts for the reduction in the effective corporate tax generated by the distribution of franking credits to investors.

12.3.2 MARKET OBSERVED PARAMETERS

Observed market data will be used to calculate the market-based parameters in accordance with procedures set out in the RORI. Market-based parameters are the following:

- Debt risk-free rate - 5-year interest rate swap (effective yield).
- Debt Risk Premium (**DRP**) for 2024 and assumed to apply for AA6 in the final decision but updated annually during AA6 as part of the tariff variation process.
- Equity risk-free rate.
- Forecast inflation.

For this submission, the risk-free rate, both debt and equity, and inflation data were observed over the 20 trading days to 30 June 2023. The inflation forecast uses the Fisher Equation to estimate the implied inflation rate from the 5-year Australian Commonwealth Government Securities and their 5-year indexed yields set out in the RORI.

Prior year and forecast DRPs used to calculate the 2025 10-year trailing average DRP values are shown in Table 12.2.

Table 12.2: DRP values included in the 2025 trailing average DRP estimate

CALENDAR YEAR	DRP	METHOD
2016	2.467%	Adopted AA5 Final Decision value
2017	2.326%	
2018	1.689%	
2019	1.663%	
2020	1.770%	Adopted the value determined for the **2020** Tariff Variation Mechanism
2021	2.075%	Adopted the value determined for the **2021** Tariff Variation Mechanism
2022	1.562%	Adopted the value determined for the **2022** Tariff Variation Mechanism
2023	2.215%	Adopted the value determined for the **2023** Tariff Variation Mechanism
2024	2.215%	Forecast – to be calculated using the automatic formula DRP estimate under the 2024 Tariff Variation Mechanism
2025	2.215%	Forecast – to be calculated using the automatic formula DRP estimate under the 2025 Tariff Variation Mechanism
10Y trailing average	**2.02%**	

Table 12.3 summarises the rate of return adopted for this 2025-29 Plan. The market parameters will be finalised after the ERA's Draft Decision in 2024 and incorporated by the ERA into its Final Decision.

Table 12.3: Rate of return estimate

PARAMETER	VALUE
Inflation rate	2.66%
Cost of debt	
Debt risk-free rate - 5-year interest rate swap (effective yield)	4.27%
Debt issuing cost (0.165%) + hedging (0.123%)	0.29%
Debt Risk Premium (**DRP**) (10-year average)	2.02%
Cost of debt	**6.58%**
Cost of equity	
Risk-free rate	3.97%
Market Risk Premium	6.10%
Beta	0.7
Nominal after tax cost of equity	**8.24%**
Debt proportion	55%
Equity proportion	45%
Nominal after tax rate of return	**7.33%**
Real after tax rate of return	**4.54%**

13. GAMMA AND COST OF TAX

1. We estimate that our cost of tax over AA6 is $31.6 million ($real 2023).
2. We have adopted the value of imputation credits (gamma) from the 2022 Rate of Return Instrument.

13.1 INTRODUCTION

ATCO calculates the estimated cost of corporate income tax to determine its building block revenue requirement for AA6. We have estimated our corporate income tax expense by considering forecast revenue, opex, interest on debt, and tax asset base depreciation.

Table 13.1 presents the statutory income tax rate and the value of imputation credits that have informed our application of Rule 87A to calculate the cost of tax.

Table 13.1: Taxation parameters

PARAMETER	PROPOSED VALUE
Corporate Tax Rate	30%
Imputation Credit (gamma)	0.5

This Chapter explains our approach to estimating the cost of tax.

13.2 GAMMA

We have adopted the value of gamma of 0.5, detailed in the 2022 RORI. The 2022 RORI is binding on the ERA and ATCO, and so the value of gamma will be 0.5 in the AA6 Final Decision.

13.3 TAX ASSET LIVES

We have used the guidance provided by the Australian Taxation Office to apply tax asset lives to our tax asset base. The AA6 tax asset lives and asset categories in Table 13.2 are unchanged from AA5.

Table 13.2: Tax asset lives (years)

ASSET CATEGORIES	ASSET LIVES (YEARS)
CURRENT AND NEW ASSET CATEGORIES	
HP Mains - Steel	20
HP Mains - PE	20
Medium and Low Pressure Mains	20
Regulators	20
Secondary Gate Stations	20
Buildings	40
Meter and Services Pipes	15
Equipment and Vehicles	10
Information Technology	5
Equity Raising Cost	5
Telemetry	10
HISTORICAL ASSET CATEGORIES (NO LONGER USED FOR NEW EXPENDITURE)	
Medium Pressure Mains	20
Low Pressure Mains	20

13.4 ESTABLISHING THE OPENING AA6 TAX ASSET BASE

The tax asset base (**TAB**) is a primary input in calculating the cost of tax. We have calculated the opening value of the AA6 TAB using the roll forward method, using the value of the TAB from the start of AA5. Similar to rolling forward the Regulatory Asset Base (RAB), the forecast AA6 TAB calculation considers the following:

- The opening value at 1 January 2019 so that the difference between the forecast and actual 2019 capex net of capital contributions is accounted for in the TAB roll forward.
- Actual capex (net of capital contributions) incurred over AA5 and the forecast capex (net of capital contributions) over AA6 will be rolled into the TAB.
- Depreciation based on the 2019 and AA5 actual capex and the AA6 forecast capex will be deducted from the TAB.

We note that the Federal Government introduced taxation system measures to allow full write-offs for new investments in response to the COVID-19 pandemic. ATCO did not take advantage of any of

these measures, so no adjustments were made to our method to forecast our taxation costs for AA5. Table 13:3 details the roll-forward of the TAB over AA5.

Table 13:3: Roll forward of tax asset base over AA5 ($million nominal)

	2020	2021	2022	2023(F)	2024(F)
Opening value per AA5 Final Decision	614.5				
Difference between forecast and actual 2019 capex	-7.8				
Opening value	606.7	609.4	623.6	644.0	655.8
Plus, capex (net)	61.6	74.6	81.3	84.7	90.9
Less, tax depreciation	-58.4	-59.8	-60.5	-62.9	-66.5
Less, asset disposals	-0.6	-0.5	-0.4	0.0	0.0
Closing value	609.4	623.6	644.0	655.8	690.2

13.5 AA6 TAX ASSET BASE

Table 13:4 details the rolling forward of the TAB over AA6 and the resultant tax depreciation values adopted in the calculation of our corporate income tax estimate. We have continued applying tax asset lives consistent with the Australian Taxation Office guidance and the AA5 Final Decision. The tax asset base is not affected by accelerated depreciation.

Table 13:4: Roll forward of tax asset base over AA6 ($million nominal)

	2025	2026	2027	2028	2029
Opening value	690.2	721.9	750.0	777.2	804.0
Plus, capex (net)	101.6	102.1	103.9	105.4	107.5
Less, tax depreciation	-69.8	-74.0	-76.6	-78.7	-79.7
Less, asset disposals	0	0	0	0	0
Closing value	**721.9**	**750.0**	**777.2**	**804.0**	**831.8**

13.6 ESTIMATE OF CORPORATE INCOME TAX

We have calculated our estimate of corporate income tax using the method applied in the ERA's AA5 Final Decision as follows:

Unsmoothed building block revenue

minus Approved forecast opex.

minus Straight-line depreciation of the tax asset base.[78]

minus Debt servicing costs, calculated by multiplying the opening regulatory asset base by the proportion of the RAB funded by debt (assumed at 55%) and the nominal cost of debt.

equals **Estimated taxable income.**

We then apply the statutory company tax rate and the value of imputation credits to the estimated taxable income to determine our estimate of corporate income tax, as shown in Table 13.5.

Table 13.5: Estimate of corporate income tax ($million)

	2025	2026	2027	2028	2029
Estimated taxable income	36.1	47.6	49.2	50.6	52.2
Tax payable	10.8	14.3	14.7	15.2	15.7
Less value of imputation credits	-5.4	-7.1	-7.4	-7.6	-7.8
Estimate of corporate income tax ($million nominal)	5.4	7.1	7.4	7.6	7.8
Deflator to $real 2023	0.943	0.919	0.895	0.872	0.849
Estimate of corporate income tax ($million real 2023)	**5.1**	**6.6**	**6.6**	**6.6**	**6.7**

[78] No adjustment to the tax asset bae or depreciation of the tax asset base has been made for accelerated depreciation.

14. WORKING CAPITAL

CHAPTER HIGHLIGHTS

1. Working capital has been calculated in accordance with the method in the ERA's AA5 Final Decision tariff model.
2. Parameters used in the calculation have been updated from the ERA's AA5 Final Decision tariff model to reflect current working capital requirements.

14.1 INTRODUCTION

Working capital refers to a stock of funds that ATCO must maintain to pay costs as they fall due, and inventory held to meet service requirements within mandated or reasonable service delivery times. The cost of this working capital (the required return on the capital investment) is incurred during everyday business operations, including providing reference services.

The requirement to maintain a stock of funds arises from the timing misalignment (on average) between incurring the costs of providing services and recovering the revenues associated with those services. In addition, a stock of materials is held to allow the efficient and timely provision of services. Therefore, the cost of working capital represents the efficient costs of a business that receives revenue at a different time than when it incurs costs.

14.2 FORECAST WORKING CAPITAL

ATCO has estimated the cost of capital using the '*working capital cycle model*' as previously accepted by the ERA. This cost is calculated as the difference between the implicit cost incurred by providing credit to users of the service and the implicit benefit of receiving credit from suppliers. The working capital cycle comprises three core components: inventory, creditors, and receivables.

Although the method used is the same as AA5, the parameters applied to each component of working capital have been reviewed and amended where necessary.

Inventory: Based on data available for 2022, inventory as a percentage of capex was 2.26% (see Table 14.1). Inventory requirements have increased relative to AA5 due to the need to ensure security of supply of materials necessary to operate, maintain and expand the network. This is particularly critical for long lead time items sourced overseas due to the ongoing effects of COVID-19 on supply chains. There have also been significant price rises in inventory items, e.g., meters have increased by 73%.

Table 14.1: Inventory calculation

	2017[79]	2018	2019	2020	2021	2022
Year-end inventory value ($million nominal)	0.9	1.1	1.4	1.5	1.8	1.8
Actual reference service capex[80] ($million nominal)	89.1	93.8	72.0	61.6	74.6	81.3
INVENTORY AS A % OF CAPEX	**1.02%**	**1.18%**	**1.97%**	**2.47%**	**2.44%**	**2.26%**

Creditors: There has been no overall change to creditor days from AA5 to AA6. Creditor days have been reviewed, considering the payment terms relating to labour costs, general creditors, and UAFG payments. The weighted average creditor days is 19; the calculation is shown in Table 14.2.

Table 14.2: Calculation of creditor days

CREDITOR ELEMENT	WEIGHTING	DAYS
Labour	34%	1
Non-labour	63%	27
UAFG	3%	44
	AVERAGE CREDITOR DAYS	**19**

Receivables: Receivables days consider the days of unbilled haulage. Unbilled haulage reflects the incurred costs to provide reference services for which revenue has not yet been received. Delays in the receipt of revenue are due to several reasons, the primary reason being the 3-monthly billing of B3 services. Receivable days are summarised in Table 14.3, and are unchanged from AA5.

Table 14.3 Calculation of receivables days

RECEIVABLES ELEMENT	DAYS
Average unbilled revenue days	40
Average days from meter read to invoice (based on billing twice a month)	7
Days to issue invoice	1
Days from invoice to payment (payment terms are 10 business days)	14
TOTAL RECEIVABLES DAYS	**62**

[79] 2017 data was used in the AA5 Final Decision

[80] Before ERA adjustment

14.2.1 WORKING CAPITAL CONTRIBUTIONS

Table 14.4 summarises the working capital parameters.

Table 14.4: Working capital parameters

PARAMETER	AA5	AA6	BASIS OF CALCULATION
Inventory as a % of capex	0.89%	2.26%	Determined from the average inventory level as a percentage of the forecast capex program. This measure does not include work in progress or completed assets not yet added to the RAB.
Creditors	19 days	19 days	Determined from the standard terms of payment to suppliers, labour, and suppliers of unaccounted for gas. The amount relates to total expenditure, including capex.
Receivables	62 days	62 days	Determined from the payment terms of our contracts with retailers.

The opening 2025 working capital value is the closing working capital value in the ERA's AA5 Final Decision tariff model as varied in annual tariff variations.

A return on opening working capital is included in total revenue for each year of the access arrangement period (based on the parameters above) and is shown in Table 14.5.

Table 14.5: Return on working capital

RETURN ON WORKING CAPITAL	2025	2026	2027	2028	2029
Opening working capital ($million nominal)	23.0	35.9	40.7	42.2	42.4
WACC (% nominal)	7.33%	7.33%	7.33%	7.33%	7.33%
Return on working capital ($million nominal)	1.7	2.6	3.0	3.1	3.1
Deflator to $real 2023	0.943	0.919	0.895	0.872	0.849
Return on working capital ($million real 2023)	**1.6**	**2.4**	**2.7**	**2.7**	**2.6**

15. TOTAL REVENUE

CHAPTER HIGHLIGHTS

1. We applied the building block method on a post-tax basis to determine AA6 total revenue.
2. The building block revenue requirement for AA6 is calculated to be $1,452 million (nominal), which compares to $840 million (nominal) for AA5. This increase is largely due to rising inflation, the increased regulated rate of return, and accelerated depreciation.

15.1 INTRODUCTION

ATCO has applied the building block method on a post-tax basis to determine AA6 total revenue for the provision of reference services. The building block method is commonly used in regulatory determinations and is required by Rule 76.

'Total revenue' consists of 'building blocks' that are summed to determine the total revenue in each year of AA6. These building blocks include the return on capital, depreciation, opex, and other components such as taxes and incentive mechanisms. This total revenue is recovered through the tariff revenue received for providing reference services on a net present value equivalent basis.

Table 15.1 provides cross-references to the sections of this document that discuss and justify our proposal for each building block.

Table 15.1: Cross-references to building block information in this document

REVENUE BUILDING BLOCK	SECTION OF THIS DOCUMENT
Return on the projected capital base	Sections 11.4 and 12.3
Return of the projected capital base	Section 11.5.2
Return on working capital	Chapter 14
Estimated cost of corporate income tax	Chapter 13
Forecast opex	Section 9.5

This Chapter sets out the total revenue for AA6.

15.2 FORECAST BUILDING BLOCK TOTAL REVENUE

The forecast building block total revenue for the provision of reference services over AA6 is $1,452 million (nominal), comprising the building blocks shown annually in Table 15.2. The increase compared to AA5 ($840 million nominal) is largely due to rising inflation, the increased regulated rate of return, and accelerated depreciation.

Table 15.2: Total AA6 revenue ($million nominal)

BUILDING BLOCK	2025	2026	2027	2028	2029	TOTAL
Forecast opex	89.9	104.0	108.3	102.4	105.1	**509.8**
Return of the projected capital base	65.4	77.8	80.5	82.7	84.0	**390.4**
Less inflationary gain in return on assets	-44.2	-45.8	-47.2	-48.6	-50.1	**-235.9**
Accelerated depreciation	17.0	17.4	17.9	18.4	18.8	**89.4**
Return on the projected capital base	121.5	126.1	130.0	133.8	137.7	**649.1**
Return on working capital	1.7	2.6	3.0	3.1	3.1	**13.5**
Tax payable	10.8	14.3	14.7	15.2	15.7	**70.7**
Less value of imputation credits	-5.4	-7.1	-7.4	-7.6	-7.8	**-35.4**
TOTAL REVENUE (unsmoothed)	**256.7**	**289.3**	**299.7**	**299.4**	**306.6**	**1,451.7**

The total revenue requirement is collected on a net present value equivalent basis through the reference tariffs, per the requirements of Rule 92. Our approach to revenue equalisation through the reference tariffs is described in Chapters 16 and 17.

PART C | Derivation of Reference Tariffs

ATCO

16. REFERENCE TARIFFS

CHAPTER HIGHLIGHTS

1. Our existing tariff classes will be retained for AA6, and the existing tariff structures (consisting of a fixed charge and a usage charge component) will be retained for the A1, A2, B1 and B2 reference tariffs.
2. We propose to amend the B3 tariff structure by removing the first tariff band for the B3 tariff class that currently provides for the first 1.825 GJ to be provided at no charge.
3. For the 2025-29 Plan, we propose an initial tariff increase on 1 January 2025, followed by a flat price path in real terms over AA6.
4. The forecast distribution charges in AA6 are higher than AA5, mainly because of factors beyond ATCO's control, such as increased funding costs (determined in accordance with the ERA's 2022 Rate of Return Instrument) and higher inflation.

16.1 INTRODUCTION

The purpose of this chapter is to provide information on how we have allocated the total revenue requirement to the reference tariffs for AA6. This chapter provides information on:

- The regulatory framework for tariff setting
- The objectives ATCO uses and the reasons for those objectives when setting tariff structures
- The process ATCO uses when setting tariff classes, tariff structures, and tariffs
- The final tariff structure and tariffs proposed by ATCO.

16.2 STAKEHOLDER FEEDBACK

We published our 2025-29 Draft Plan in April 2023 and invited feedback from stakeholders. Several retailers and other parties provided feedback. Table 16.1 summarises the feedback received from our stakeholders on the Draft Plan and our respective responses.

Table 16.1: Consideration of stakeholder feedback on AA6 Reference Tariffs

STAKEHOLDER FEEDBACK	OUR RESPONSE
Would like to see sensitivity analysis of varying demand profiles on forecast expenditure and tariffs.	ATCO has an obligation to continue offering a safe and reliable gas supply, and the expenditure in our AA6 submission reflects this obligation. Although the demand profile affects *growth-driven* elements of our costs, not all our costs fall with demand. The expenditure in our AA6 submission is based on what is required to maintain a safe and reliable distribution

STAKEHOLDER FEEDBACK	OUR RESPONSE
	network. We are submitting one demand profile that reflects our expectations for the AA6 period. This profile includes an assumption on continued customer growth through new connections, which reduces tariff increases to all customers across the AA6 period.
Almost half of WA households say having affordable energy prices is their number one issue and three quarters are concerned electricity and gas will become unaffordable for some Australians in the next three years.	ATCO understands that affordability is a concern for customers. However, as outlined in Chapter 4, our research shows that more customers consider their gas bill affordable than their electricity bills. This is supported by recent research conducted by Energy Consumers Australia, which indicates concerns about the gas bill are less significant than other utility bills (see Figure 4.3). ATCO also notes that more than 50% of the anticipated cost increase from AA5 to AA6 is beyond its control, being increases in the regulated rate of return and inflation.
A better understanding of consumer preferences about tariff structures is needed, particularly removal of free charge for B3.	Tariff structures relevant to consumers are set by retailers. ATCO's tariff structures are used to charge retailers for use of the gas distribution network, not end use customers. The free B3 tariff band was originally introduced in AA4 to mitigate the impact of raising the standing charge to align more with the fixed costs of providing a B3 service. While retail tariffs were not adjusted in response to the free B3 tariff band, the market has now had time to adjust. Further details on our reasons for removing the free B3 tariff band are set out in Section 16.4.2.1. ATCO's tariff structure setting method is summarised in section 16.4 and fully explained in *'Tariff setting method', (see Attachment 16.002).*
Should test consumer preferences of adopting a flat rather than declining block tariff structure.	ATCO proposes a declining block tariff structure to promote efficient use of and investment in the network, consistent with the National Gas Objective. ATCO is maintaining its tariff structures that have been in place for a significant period and are well understood by retailers and the market. Maintaining the existing tariff structures avoids unnecessary system changes. By using a declining block tariff structure, it is possible that consumers benefit from a lower charge during peak winter usage months if that is passed through by retailers.

STAKEHOLDER FEEDBACK	OUR RESPONSE
Want a better understanding of whether the costs of households disconnecting from the gas distribution network permanently are included in the regulatory cost base, and whether all the different types of charges that ATCO Gas imposes to disconnect are reference tariffs.	The costs of households permanently disconnecting from the gas distribution network are included within the ancillary services element of our opex forecast because 'Permanent Disconnection' is an ancillary reference service in AA6. The AA6 reference tariff for the 'Permanent Disconnection' service seeks to recover the costs of this service on a user pays basis. As a result, there is no cross-subsidy for this service from the regulatory cost base.
Price path needs to be balanced with the upfront impact to reduce bill shock for consumers.	In setting this price path, we have balanced the longer-term interests of consumers with the short-term price changes. ATCO has adjusted its tariffs to allow recovery of the cost of providing services while being conscious of consumer affordability concerns. We note that gas is a relatively cheap energy source relative to electricity (on a per unit basis) and consumers are less concerned about their gas bill than other utilities due to its lower cost. Consumers and retailers over the AA5 period have benefited from lower charges brought about by the unsustainable low rates of return that reduced those charges. In evaluating the price increase from AA5 to AA6 it is instructive to look at prior periods such as AA4 where in real terms, the prices are similar to those proposed before the addition of accelerated depreciation. Adjusting tariff revenue to the approximate cost of service ensures that efficient price signals are sent to customers and efficient use of and investment in the gas network is made.
The proposed price paths makes it more efficient to establish multi-year contracts.	ATCO acknowledges the advantages of the proposed price path for price stability during the access arrangement period.
While there are Ancillary charges for completed services in the draft plan, the charges for non-completed services are not shown, although the tariff sheets indicate that non-completed services are charged at the same rate. While it is understood the need to pay for a 'wasted truck visit' it is interesting to note that ATCO is charging the same amount for a completed or not-completed service, indicating that the actual service component/labour of the	During the AA5 process, ATCO responded to retailer requests to remove cancellation charges for special meter reads cancelled more than three days prior to the scheduled service. ATCO similarly removed cancelled service charges relating to applying and removing meter locks that are cancelled with reasonable notice (more than three business days prior to the scheduled service date). Where other services incur cancellation charges due to the short turnaround time from receipt of a service order to the processing of the service, it is likely costs will have been incurred and need to be recovered.

STAKEHOLDER FEEDBACK	OUR RESPONSE
cost is negligible compared to the travel and administration. AGL would prefer to see either a formula or amount specified for not-completed visits	The Permanent Disconnection service incorporates a reduced cancellation charge for services cancelled less than one business day before the scheduled service. In addition, the Permanent Disconnection service includes a call-out charge for the 'wasted truck visit' in the event that we are unable to undertake the service at the agreed time or need to make multiple visits. This charge is published in Annexure C to the Access Arrangement.

16.3 TARIFF OBJECTIVES

When setting tariff structures and tariffs, our primary objectives are to ensure that market price signals are as economically efficient as possible, to maintain legislative compliance with our regulatory framework, and to reflect feedback received from customers and stakeholders.

16.4 TARIFF CLASSES & STRUCTURES

16.4.1 TARIFF CLASSES

The reference tariff classes proposed in AA6 will be the same as in AA5, as there are no material changes in the types of:

- haulage services required by customers in each tariff class; or
- customers requiring reference services.

Our existing tariff classes are defined by the type of delivery facilities provided to certain customer groups. By grouping customers according to the delivery facilities, required tariffs can be constructed to reflect the costs of serving that tariff class and provide suitable price signals. We are maintaining the same tariff classes because they are well understood, and it reduces the need for system changes for retailers, AEMO and ATCO.

16.4.2 TARIFF STRUCTURE: HAULAGE REFERENCE SERVICES

ATCO will maintain the reference tariff structures for AA6 with some amendments to the B3 tariff structure. Maintaining the existing tariff structures avoids potential costly changes to systems (including retailer systems) and processes that may be required should tariff structures change.

> In AA6, we are proposing to remove the first tariff band for the B3 usage charge component that provides for the first 1.825 GJ to be provided at no charge.

16.4.2.1 PROPOSED AMENDMENTS IN AA6

In AA6, we are proposing to remove the first tariff band for the B3 usage charge component, pursuant to which the first 1.825 GJ is provided at no charge.

The free B3 tariff band was originally introduced in AA4 to mitigate the impact of raising the standing charge to align more with the fixed costs of providing a B3 service. By the end of 2024, this band has been in place nearly 10 years, and we note that retail tariffs were not adjusted in response to the free B3 tariff band. The market has now had time to adjust to the level of the standing charge.

In addition, the benefits of this proposed change include:

- Adopting two, rather than three, bands will make the B3 tariff structure more consistent with retail gas tariff structures.
- Simplifying the tariff structure will reduce the likelihood of forecasting error.
- Removing this tariff band reduces the level of other B3 tariff usage bands because our approach has been to ensure that the revenue recovered from B3 tariff charges does not change as a result of adopting two usage bands.
- At the average AA6 consumption level of 11.5 gigajoules, there is approximately a $5 reduction in the consumer's bill by removing the no charge for the first 1.825 gigajoules.

After conducting a reasonableness check of the fixed costs of providing the B3 service, the B3 standing charge was reduced by $19 ($real 2023) compared to what it would have been had a flat percentage increase similar to other tariff increases been applied. This reduction offsets the additional charges for the first 1.825 GJ.

16.4.2.2 AA6 TARIFF STRUCTURE

The reference tariff structures include a fixed charge and a usage charge component. This tariff structure design provides efficient price signals to customers regarding their network usage.

- Usage charges in the second usage band reflect costs placed on the network by additional usage. The lower charges in the second usage band help reduce charges in the peak winter period when daily gas consumption increases. We propose to continue a two-band usage tariff structure that is understood by customers and supported by regulatory precedent in gas distribution networks.
- Fixed charges are set to recover the cost of service not recovered via the usage charges. Using fixed charges recovers this 'residual revenue' and minimises the distortion to price signals.

The A1 tariff structure (typically industrial customers) also includes demand charges. These demand charges reflect the direct effects that these customers can have on network requirements. The A1 tariffs are based on the 'maximum usage of that customer at any point in time', measured as gigajoules per hour (GJ/h) (capacity-based prices). Demand-based prices encourage a smoother usage profile rather than a 'peaky' profile. Smoother profiles lead to lower network costs and higher network utilisation, as network capacity does not have to meet short-term usage peaks.

Table 16.2 shows the proposed tariff structures for each tariff class (noting that we have adopted a single tariff class for each reference service).

Table 16.2: Haulage Services Tariff Structure

TARIFF CLASS	SERVICE ELEMENT	CHARGING PARAMETER
A1	Fixed charge for using the distribution system	Standing Charge ($/year)
	Fixed charge for the capacity of network utilised (reflecting maximum hourly quantity (**MHQ**))	Demand Charge ($/MHQ GJ/km)
	Variable charge based on throughput	Usage Charge ($/GJ/km)
	Charge to reflect the specific costs associated with the customer for service pipe, regulators, metering, and telemetry	User-specific Charge ($)
A2	Fixed charge for using the distribution system	Standing Charge ($/year)
	Variable charge based on throughput	Usage Charge ($/GJ)
	Charge to reflect the specific costs associated with the customer for service pipe, regulators, metering, and telemetry	User-specific Charge ($)
B1	Fixed charge for using the distribution system	Standing Charge ($/year)
	Variable charge based on throughput	Usage Charge ($/GJ) with two blocks
	Charge to reflect the specific costs associated with the customer for service pipe, regulators, metering, and telemetry	User-specific Charge ($)
B2	Fixed charge for using the distribution system	Standing Charge ($/year)
	Variable charge based on throughput	Usage Charge ($/GJ) with two blocks
B3	Fixed charge for using the distribution system	Standing Charge ($/year)
	Variable charge based on throughput	Usage Charge ($/GJ) with two blocks

16.4.3 TARIFF STRUCTURE: ANCILLARY SERVICES

In addition to haulage services, ancillary services are charged at the same rate to all customers within the relevant tariff classes. Rates charged reflect the costs of providing the service. It is anticipated that the contract with a third-party service provider for special meter read, apply meter lock, and remove meter lock will be re-negotiated before the ERA's Draft Decision. We will use the outcomes of this market process to update our forecast costs and prices for ancillary services in response to the ERA's Draft Decision.

Table 16.3 shows the proposed tariff structures for ancillary services.

Table 16.3: Ancillary Services Tariff Structure

ANCILLARY SERVICE	CHARGING PARAMETER
Applying a meter lock	Published tariff per activity
Removing a meter lock	Published tariff per activity
Deregistering a delivery point	Published tariff per activity
Disconnecting a delivery point	Published tariff per activity
Reconnecting a delivery point	Published tariff per activity
Special meter reading	Published tariff per activity
Permanent Disconnection	Published tariff per activity

16.4.4 SETTING REFERENCE TARIFFS

Reference tariffs have been set considering the objectives set out in *Section 16.3*. The tariff-setting process can be summarised as follows:

- Allocate costs to reference services so that tariffs can be set to recover those costs.
- Estimate the long-run marginal cost of providing the reference services so that tariffs can be set to promote efficient network utilisation.
- Set tariff components so the usage charge accounts for the long-run marginal cost and the costs of providing the reference service are recovered (as required by Rule 94(4)).
- Confirm that for each tariff class, the revenue expected to be recovered by the tariff charges lies between an upper bound of the stand-alone cost of providing the reference service and a lower bound of the avoidable cost of not providing the reference service (as required by Rule 94(3)).

16.5 PRICE PATH

We have adopted a price path that increases tariffs on 1 January 2025 with no further real tariff increase in AA6. This price path provides stability for our customers and aligns our cost with our revenue to provide efficient incentives regarding the use of and investment in the gas distribution network.

As a result, we have given primary weight to smoothing tariffs within AA6 while keeping the final year divergence of smoothed revenue and unsmoothed revenues as low as possible.

In setting this price path, we have balanced the longer-term interests of consumers with the short-term price changes. This has been achieved through the following principles:

- Unsmoothed and smoothed revenue should be equalised in net present value terms.
- Proposed tariffs should reflect their underlying efficient costs.
- Proposed tariffs should minimise tariff variability between each year of AA6.
- Proposed tariffs should minimise the likelihood of tariff variability at the start of AA7.

Adjusting tariff revenue to the approximate cost of service ensures that efficient price signals are sent to customers and efficient use of and investment in the gas network is made.

16.6 AA6 TARIFF CHARGING PARAMETERS

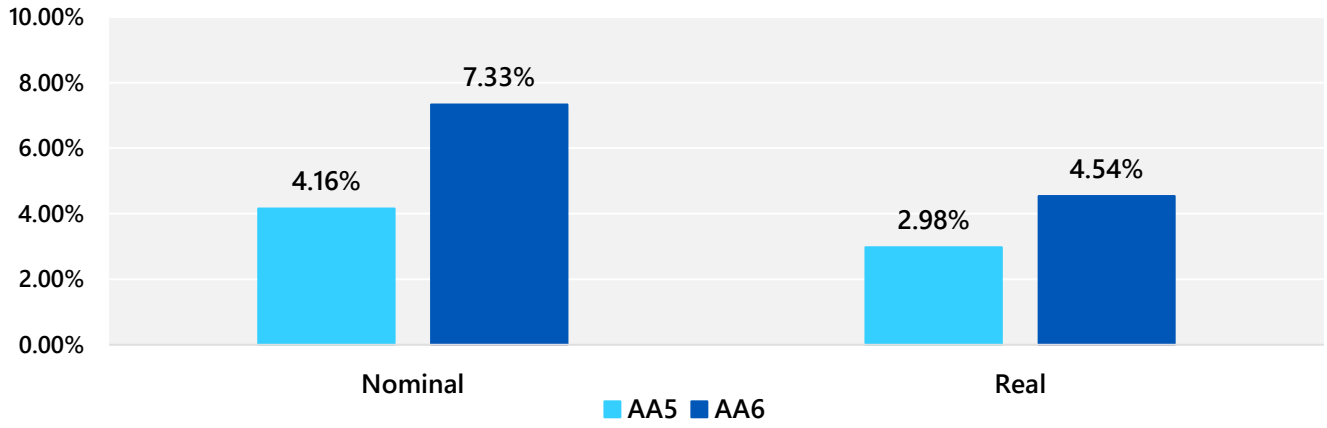
This section details our process and considerations to establish the AA6 tariff charging parameters. Further details are provided in *'Tariff Setting Method', (see Attachment 16.002)*.

16.6.1 BACKGROUND AND CONTEXT

The AA5 period commenced on 1 January 2020 at a time of low rates of return. The final rate of return for AA5 was determined in September 2019 at a time of relatively low interest rates compared to the current interest rate environment. These higher interest rates have contributed to a significantly higher rate of return, shown in Figure 16.1, determined in accordance with the ERA's 2022 RORI. The increase in rate of return accounts for approximately 40% of the estimated price increase from 2024 to 2025 for a B3 tariff distribution charge at forecast AA6 average consumption.

Additionally, most global economies, including Australia, have experienced and continue to experience a period of high inflation. Inflation has a direct impact on prices and affects the value of the asset base that is funded. These uncontrollable effects account for over 50% of the price increase from 2024 to 2025.

Figure 16.1: Rates of return



The balance of the 2024 to 2025 price increase comprises a combination of factors necessary for the continued safe operation of the network, including step changes in opex (See Chapter 9) and the need for accelerated depreciation due to uncertainty. The need for accelerated depreciation has been incorporated with the aim to preserve equitable pricing into future access arrangement periods and to reduce the risk of the asset base not being recovered (See section 11.5.2).

The values of tariff parameters have been set considering the overall cost of service for AA6, which incorporates these cost increases.

16.6.2 AA6 REFERENCE TARIFF CHARGING PARAMETERS OUTCOMES

The process to set the tariffs over AA6 results in a step-change in prices on 1 January 2025, followed by stable prices in real terms over AA6. Overall, all tariff charging parameters increase 38.6% on 1 January 2025 (based on real $2023 prices) before further adjustment to B2 and B3 charges to:

- Adjust standing charges to be more reflective of fixed costs.
- Maintain relativities of usage charges and preserve the consistency of revenue for each tariff class with the cost of service allocated to the tariff class.

For the B3 usage component, we have removed the free first 1.825GJ per annum as explained earlier in Section 16.4.2.1. As the first 1.825GJ now incurs a charge, the charge for the next 8.03GJ is lower than it would otherwise have been, as the recovery of cost of service is now spread over a wider consumption band.

In setting the AA6 reference tariff charging parameters we have considered the following matters:

- **Usage charges**: Usage charges reflect costs placed on the network by *additional usage*. That is, the marginal usage charge has been set considering the long-run marginal cost of providing additional capacity. The first band of usage charges is set for an initial level of consumption to assist with recovery of costs not recovered by the marginal usage charge. AA6 usage charges have increased to align the cost of service and expected tariff revenue.

  Using a 2-band tariff structure helps reduce the barrier of a higher fixed charge to customers connecting and thus promotes the sharing of fixed costs across a larger number of customers to the benefit of all customers. Using a 2-band tariff structure is also generally consistent with the band structure of retailers, creating the potential for better distribution charge price signals to end users. There is regulatory precedent for multiple usage bands in gas distribution recognising the positive incentive effects on network utilisation.

- **Fixed charges**: The fixed charge is set to recover the cost of service *not recovered via the usage charges*. Using fixed charges to recover this 'residual revenue' minimises the distortion to price signals and is supported by regulatory precedent.
- **Efficient cost recovery**: Amendments to our reference tariffs allow our expected tariff revenue by tariff class to approximate the estimated costs of service by tariff class.
- **Comparison with historical tariffs**: Comparisons were made against historical tariffs and distribution charges at average levels of consumption. The effect of cost pressures on prices has forced tariff increases from AA5 to AA6. Tariffs were experienced at similar levels, once adjusted for inflation (i.e., in real terms) at the beginning of the AA4 period. After a delay in implementing revised tariffs, prices were reduced in the latter part of AA4 to ensure the net present value of revenue equalled the net present value of the cost of service over the AA4 period. During AA5, prices were held at lower levels due to the low rate of return compared to historical levels. Rates of return and inflation have now risen and are reflected in the increased AA6 tariffs.

- **Customer and retailer pricing preferences:** The initial 2025 proposed tariff increase has been determined to recover the cost of service. Deferring the recovery of the cost of service to later years in the AA6 period increases the amount paid by consumers over the AA6 period. For example, adopting equal price increases in each year of AA6 would add $22 to the gas distribution charge for a B3 customer at average usage over the AA6 period. The proposed price path also keeps the difference in cost of service and expected tariff revenue within 3% of the cost of service at the end of the AA6 period. Keeping the differential in 2029 within 3% reduces the potential for price shock in the transition from AA6 to AA7.

The following sections provide further detail on the movements in the tariffs over AA6 and outline the associated rationale.

16.6.3 LONG-RUN MARGINAL COST ESTIMATES

We have estimated the long-run marginal costs for each reference service to set the variable charging parameters. The estimates by tariff class are shown in Table 16.4.

Table 16.4: Long-run marginal cost estimates ($ real as at 31 December 2023)

	A1	A2	B1	B2	B3
Average perturbation method	1.44	2.06	1.68	1.88	2.15
Average forecast/actual projects	0.23	0.24	0.30	0.63	0.97
Forecast 2020 marginal usage tariff	0.14[81]	1.52	4.89	6.68	6.85

Further detail on our long-run marginal costs estimates can be found in Attachment 16.002, "Tariff Setting Method".

16.7 AA6 TARIFFS

We understand that affordability is a priority for our customers, so we strive to keep our distribution charges as low as reasonably possible in line with the National Gas Objective. This issue was raised throughout our customer engagement. In the current high inflation and interest rate environment, we understand that affordability is more important than ever. We are constantly looking for ways to reduce costs and improve efficiencies in our operations, and we are proud of our performance as one of the most efficient gas distribution businesses in Australia.

> … inflation and the regulatory rate of return represent over 50% of the forecast increase. For an average residential (B3) customer, the average distribution charge will increase by $78 from 2024 to 2025. If this increase is fully passed on by retailers, this represents an increase of 12% on an annual retail gas bill at the gazetted retail price.

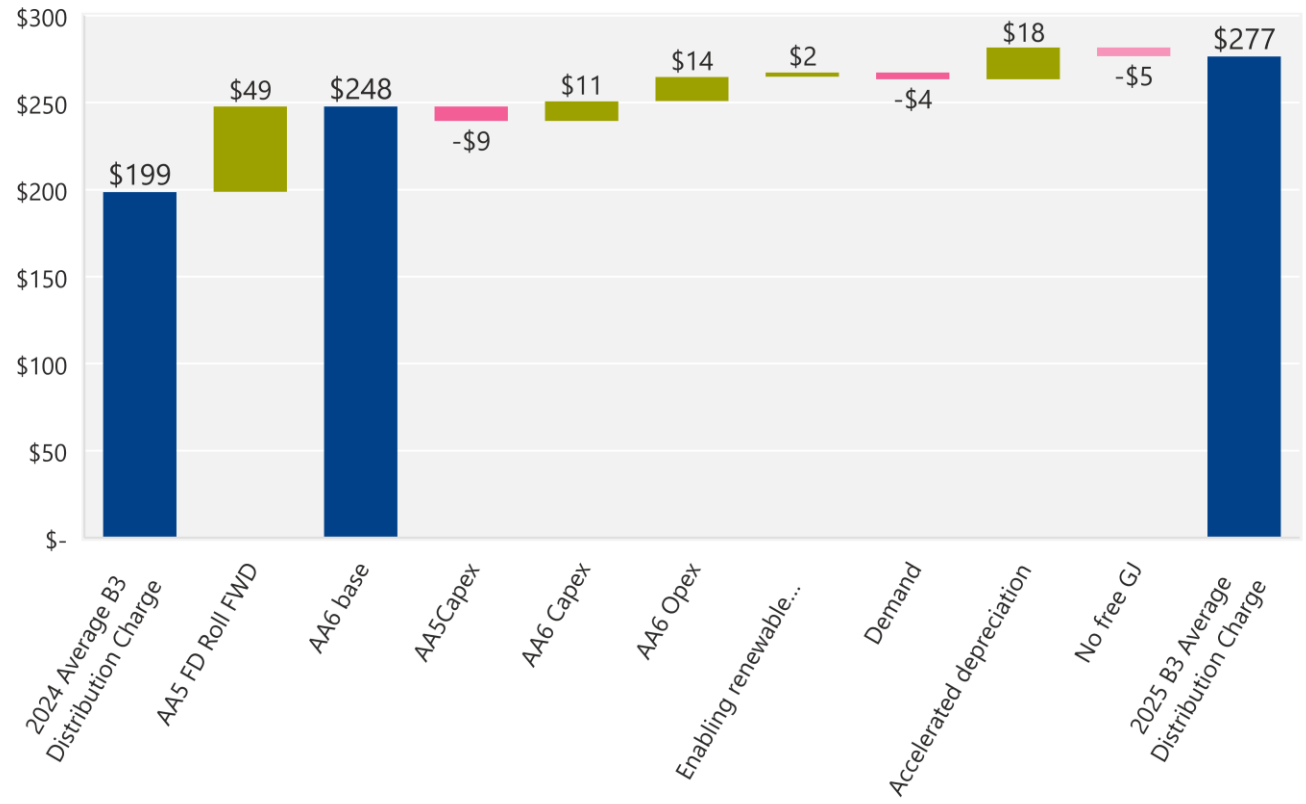
[81] Based on average 6 km distance from transmission pipeline

The rate of return comprises almost 30% of our cost of service[82] and distribution charges for AA6. Consequently, any movement in the rate of return due to movement in market parameters such as the risk-free rate (see Chapter 12) can have a material impact on the final value of tariffs in the ERA's Final Decision in late 2024. For example, we have seen a one-month movement in the risk-free rate (from May 2023 to June 2023) cause a $7 movement in the bill to a residential customer at average B3 gas consumption. Ultimately, the rate of return used to determine AA6 distribution charges will be based on the return in the ERA's Final Decision in the second half of 2024. The return will be determined in accordance with the ERA's 2022 Rate of Return Instrument (*see Chapter 12 for further details*), including market-based risk-free rates estimated in the second half of 2024. For this Plan, the rate of return has been estimated in accordance with the ERA's 2022 Rate of Return Instrument using risk-free rates estimated in June 2023.

In addition, a high inflationary environment is being experienced. This also has had a material impact on our proposed charges for AA6.

The effect of these external factors is that our distribution charges may increase in AA6 by more than we have experienced in previous access arrangements. The low returns environment in the last access arrangement period meant customers benefited from lower prices, but now we are potentially seeing distribution charges returning to historically more typical levels. Figure 16.2 shows the effect of the different components of our proposal on the overall price change for the average B3 tariff customer.

Figure 16.2: Indicative annual distribution charge B3 customer 20234 and 2025



[82] Through the 'Return on' building block

The 'AA6 Base' bar shows the pricing outcome had the AA5 Final Decision been rolled over with the updated rate of return and inflation parameters into AA6. The underspend in AA5 capex and increasing connections to the network are driving reductions in the pricing, while the proposed AA6 opex and capex programs are putting upward pressure on pricing. We have detailed our AA6 proposal for each of these components in the preceding chapters of this document.

For an average residential (B3) customer, the average annual distribution charge will increase by $78 (about $1.50 per week) between 2024 and 2025. If retailers fully pass on this increase, this represents an increase of 12% on an annual retail gas bill at the gazetted retail price.

We are doing what we can, including our ongoing focus on efficiency to manage our costs in AA6. ATCO benchmarks its performance against other gas distributors to ensure a continued drive for efficiency. As shown in Section 2.6, ATCO is one of Australia's most efficient gas distribution operators. ATCO's efficiency results in lower revenue to be recovered from customers as shown by the comparison to Victorian gas distribution networks in Figure 16.3.

Figure 16.3: Revenue per residential customer comparison ($nominal)

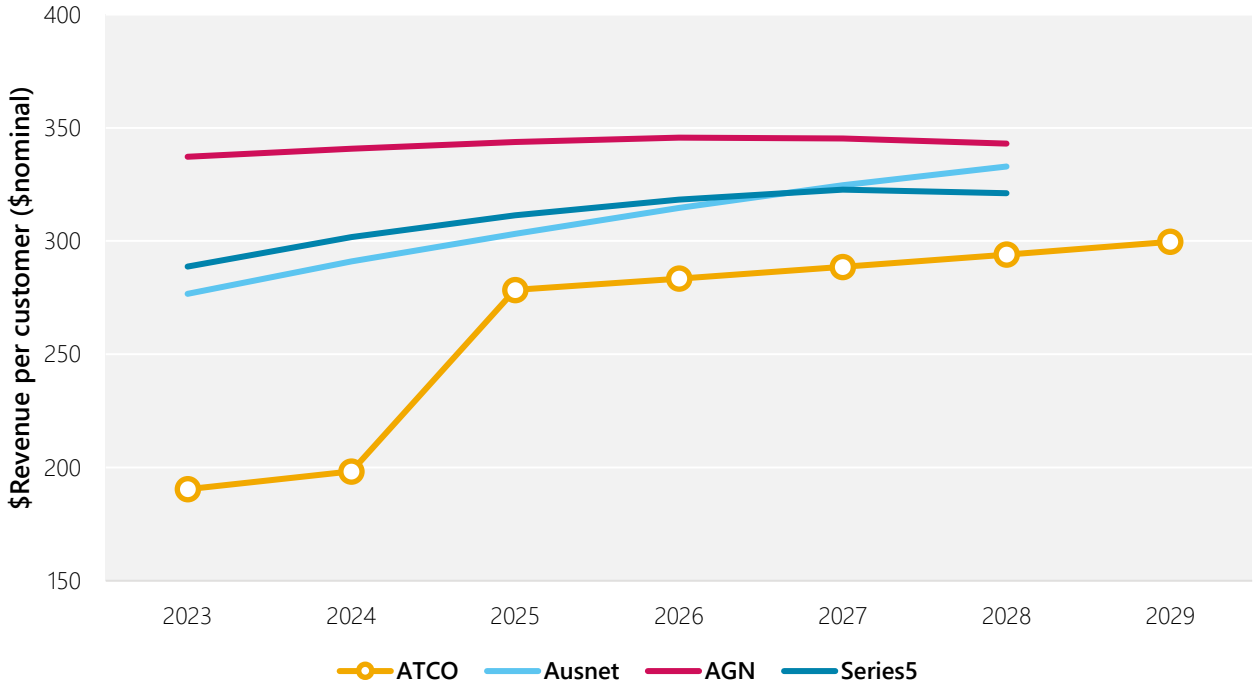


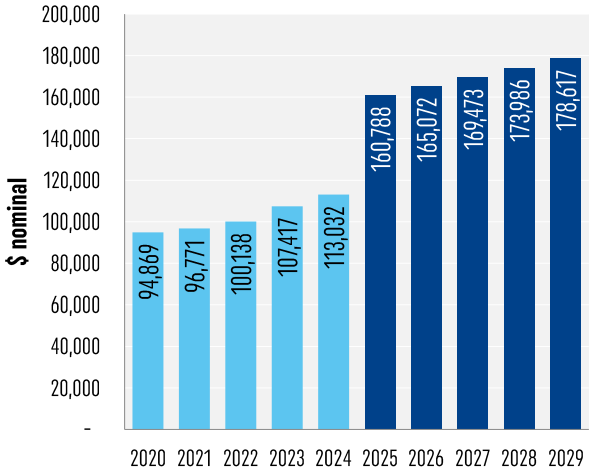
Figure 16.2 illustrates the average bill outcomes for each reference tariff class arising from our 2025-29 Plan. On average, the increase in distribution charges over AA6 compared to AA5 is largely driven by inflation, the regulated rate of return, and accelerated depreciation.

We are mindful of the impact that our pricing may have on consumers, however, in WA there are protections in place for small use customers through the State Government's Household Gas Pricing policy, which sets the maximum retail price.[83] ATCO will continue to work with social services, financial counsellors and retailers to better understand how we can soften the burden of the increase for customers facing financial hardship.

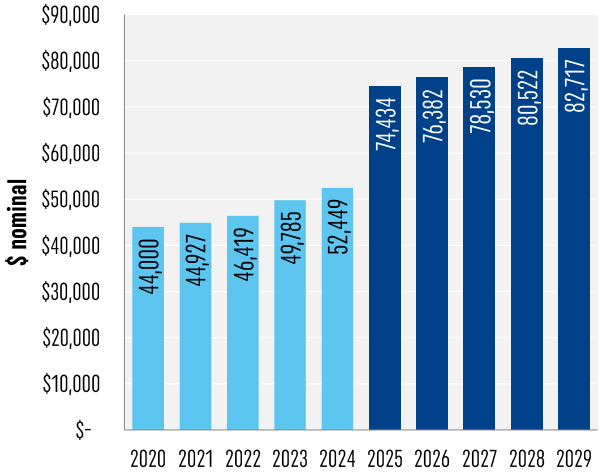
[83] More information can be found here - https://www.wa.gov.au/organisation/energy-policy-wa/household-gas-pricing

Figure 16.4: Average customer bill outcomes summary

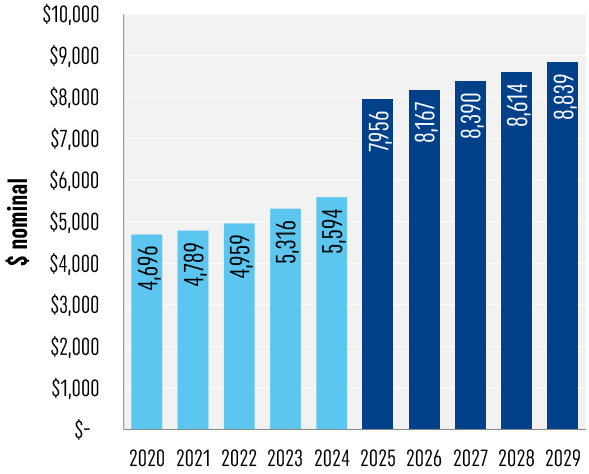
A1: Average bill impact AA5-AA6



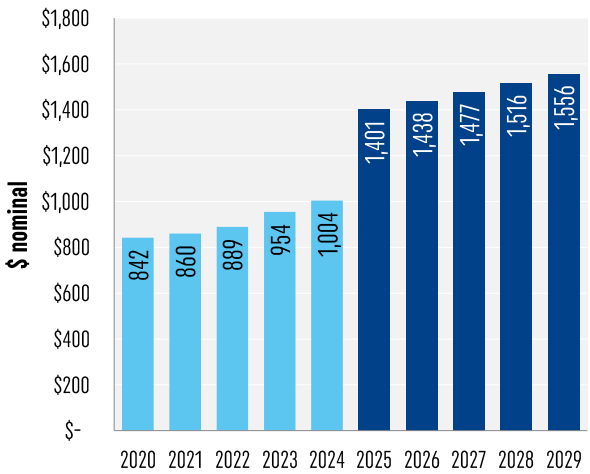
A2: Average bill impact AA5-AA6



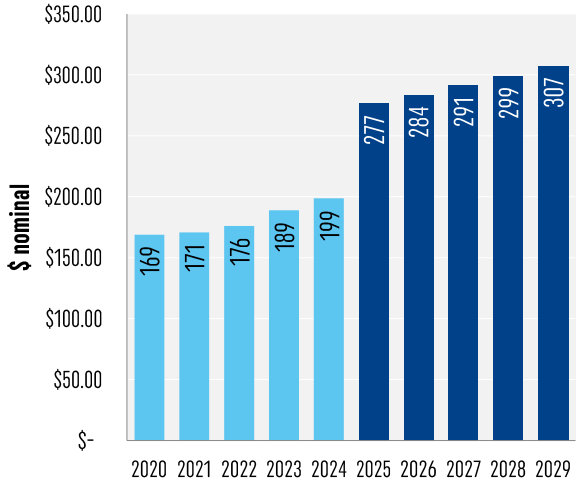
B1: Average bill impact AA5-AA6

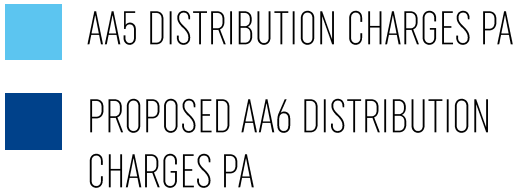


B2: Average bill impact AA5-AA6



B3: Average bill impact AA5-AA6





16.8 INDICATIVE PRICES

This section details indicative prices for each tariff class for AA6. The actual prices charged in each year are likely to differ from these indicative prices due to the annual operation of the tariff variation mechanism. This mechanism allows prices to change due to inflation, the annual update for the cost of debt, and cost pass through events. The tariff variation mechanism is detailed in Chapter 17 and documented in Annexures B, C and D of the proposed access arrangement. Table 16.5 shows the proposed tariffs before any tariff variation is applied.

Table 16.5: Proposed haulage tariffs ($nominal ex-GST)

CHARGING PARAMETER	2025	2026	2027	2028	2029
REFERENCE TARIFF A1					
Standing charge	56,750.79	58,262.41	59,814.29	61,407.50	63,043.15
Demand charge					
First 10 km	239.19	245.56	252.10	258.82	265.71
Distance > 10 km	125.90	129.25	132.69	136.23	139.86
Usage charge					
First 10 km	0.05059	0.05194	0.05333	0.05475	0.05620
Distance > 10 km	0.02549	0.02617	0.02687	0.02758	0.02832
REFERENCE TARIFF A2					
Standing charge	31,399.15	32,235.50	33,094.12	33,975.62	34,880.59
First 10 TJ	3.05	3.13	3.22	3.30	3.39
Volume > 10 TJ	1.61	1.65	1.70	1.74	1.79
REFERENCE TARIFF B1					
Standing charge	1,587.55	1,629.84	1,673.25	1,717.82	1,763.58
First 5 TJ	6.03	6.19	6.36	6.53	6.70
Volume > 5 TJ	5.18	5.32	5.46	5.61	5.76
REFERENCE TARIFF B2					
Standing charge	427.35	438.73	450.42	462.42	474.73
First 100 GJ	9.51	9.76	10.02	10.29	10.56
Volume > 100 GJ	7.08	7.27	7.46	7.66	7.87
REFERENCE TARIFF B3					
Standing charge	178.04	182.78	187.65	192.65	197.78
First 9.855 GJ	8.78	9.01	9.25	9.50	9.75
Volume > 9.855 GJ	7.26	7.45	7.65	7.86	8.07

Customers relying on this information to make business or investment decisions should consider the potential volatility between an indicative price and a final outturn price and the risks inherent in relying on them.

16.9 TARIFF REVENUE

Given the above indicative tariffs, we have confirmed that the expected tariff revenue:

- in net present value terms equates to total revenue;
- for each tariff class, approximates the forecast total revenue for the tariff class; and
- for each tariff class, lies between the lower bound of avoidable cost and the upper bound of stand-alone cost over AA5.

The results of these tests showing compliance are shown in Table 16.6.

Table 16.6: Expected revenue and cost allocation ($ millions real as at 31 December 2023)

TARIFF CLASS	TOTAL COSTS ALLOCATED	STAND-ALONE COSTS	EXPECTED REVENUE	AVOIDABLE COSTS
A1	72.4	205.2	48.2	5.6
A2	35.3	322.8	31.4	4.1
B1	74.5	544.7	64.1	11.0
B2	57.9	546.8	66.3	10.7
B3	872.2	935.6	903.0	127.8
Ancillary services	24.5	24.5	23.7	21.3
Total revenue (unsmoothed)	1,136.7		1,136.7	

16.10 SETTING TARIFFS: REFERENCE ANCILLARY SERVICES

The six reference ancillary services provided in AA5 have been retained in AA6. An additional reference service, Permanent Disconnection, has been added for AA6. The service has been added due to the increasing focus on disconnection services. With about 2,000 services performed each year, at a cost of over $1,000 each, it represents a material part of total revenue.

Tariffs for ancillary services are based on the cost to provide those services and to promote efficient use of the services. Tariffs for ancillary services include:

- The direct cost of operations staff and contractors providing the service.
- The direct administration cost of providing the service.
- An allocation of corporate costs such as accounting services and IT services.

Table 16.7 shows the ancillary services tariffs.

Table 16.7: Ancillary services tariffs ($ nominal ex-GST)

ANCILLARY SERVICE	2025	2026	2027	2028	2029
Applying a meter lock	51.87	53.25	54.67	56.13	57.62
Removing a meter lock	21.38	21.95	22.54	23.14	23.75
Deregistering a delivery point	138.32	142.01	145.79	149.67	153.66
Disconnecting a delivery point	130.52	133.99	137.56	141.23	144.99
Reconnecting a delivery point	180.44	185.24	190.18	195.24	200.44
Permanent Disconnection	1,184.80	1,216.36	1,248.76	1,282.02	1,316.17
Special meter reading	10.66	10.94	11.23	11.53	11.84

16.10.1 CHARGES FOR CANCELLED ANCILLARY SERVICES

Retailers have raised the matter of *charges for cancelled ancillary services*. In AA5 ATCO acted to remove the charges for special meter reads, apply meter lock and remove meter lock cancelled in sufficient time to allow ATCO not to incur costs.

During the AA5 process ATCO responded to retailer requests to remove cancellation charges for special meter reads cancelled more than three days prior to the scheduled service. ATCO similarly removed cancelled service charges relating to applying and removing meter locks that are cancelled with reasonable notice (more than three business days prior to the scheduled service date).

Other services incur cancellation charges due to the short turnaround time from receipt of a service order to the processing of the service such that it is likely costs will have been incurred and need to be recovered.

The Permanent Disconnection service incorporates a reduced cancellation charge for services cancelled less than one business day before the scheduled service. In addition, the Permanent Disconnection service includes a call-out charge for the 'wasted truck visit' in the event that we are unable to undertake the service at the agreed time or need to make multiple visits.

Generally, charges for cancelled services or services unable to be performed due to no access are the same as for a completed service. This is usual practice and reflects practicalities of scheduling services once notification of a service requirement is received and the incurring of costs. Some services such as connection or reconnection must be performed in mandated timeframes and therefore resources are scheduled promptly and cancellations do not allow time to avoid use of those resources.

17. TARIFF VARIATION MECHANISM

CHAPTER HIGHLIGHTS

1. We propose a weighted average price cap tariff variation mechanism similar to AA5:
   a) annual adjustment for CPI (weighted average across eight capital cites); and
   b) an 'X-factor' based on the approved price path and amendments to the ERA's Final Decision tariff model. This will incorporate cost pass through items and annual updates to the debt risk premium.
   c) The X-factor is applied to all tariff charge elements, including the B3 standing charge.
2. Cost pass through items are retained from AA5 with the addition of items relating to changes in law relating to covered gases or the National Gas Objective.
3. The method of updating the debt risk premium is unchanged from AA5.

17.1 INTRODUCTION

The tariff variation mechanism is the procedure that allows our prices to be changed each year over an access arrangement. Our annual price changes are subject to approval by the ERA.

This Chapter sets out the rationale for our selected tariff variation mechanism. It is important to keep the tariff variation process as simple and transparent as possible to ensure that market participants can understand and forecast future tariff changes.

17.2 RATIONALE FOR PROPOSED TARIFF VARIATION MECHANISM

17.2.1 TARIFF VARIATION BY FORMULA (RULE 97)

We propose implementing a tariff variation mechanism that constrains the overall average movement in haulage reference service prices from one year to the next (referred to as a *weighted average price cap* or '*tariff basket*') as contemplated by Rule 97(2)(b).

This form of tariff variation was used during AA5 for all tariff classes, excluding the B3 standing charge. Therefore, it is a familiar method of tariff variation for our customers and the ERA. The 'tariff basket' is a common mechanism known for its administrative simplicity and positive incentive effects, and is adopted by other regulated gas distribution networks.

In AA6, this form of tariff variation will apply to all tariff classes (and all tariff components). This is because all costs are expected to increase with inflation, both fixed and variable and therefore, the tariff variation formula will apply during AA6 in the same way to all tariff classes and charging parameters, including the B3 standing charge. The B3 standing charge is now included because real increases made in previous access arrangement periods do not continue, as the tariff now reflects the fixed cost of the service.

The tariff variation allows average prices to increase by the annual change in CPI, plus or minus the X-factor varied for debt risk premium updates and cost pass through items. The X-factor will be updated annually as part of the tariff variation process by amending the approved AA6 Final Decision tariff model for the debt risk premium and any cost pass through items (described in Section 17.2.1). The approved tariff model is then re-run to calculate the updated X-factor for the tariff variation year.

Using a price cap incentivises ATCO to increase customer connections and usage, generating additional revenue. In future access arrangement periods, customers benefit from costs being spread over more customers and volume. This growth is consistent with an access arrangement that includes accelerated depreciation due to an uncertain future. Adding more customers to the network ensures higher utilisation of the network and allows amortisation of the network over a greater number of customers, resulting in lower costs to individual customers.

In comparison, a revenue cap does not provide any incentive to grow the network for the benefit of customers; revenue remains constant regardless of the growth of the network. Therefore, a price cap form of control is preferable to incentivise to network growth in the long-term interests of customers.

Ancillary reference services will be varied annually by the movement in CPI in the same manner as during AA5.

17.2.2 COST PASS THROUGH (RULE 97(1)(C))

The tariff variation mechanism allows for the cost of 'cost pass through' events to be recovered. Cost pass through events are defined events that:

- incur costs that cannot be, and have not been, reasonably forecast;
- are beyond the control of ATCO; and
- relate to the provision of reference services.

The recovery of costs related to cost pass through events is made by varying the X-factor as described in the previous section. It is proposed that the cost pass through items defined in AA5 are retained for AA6 except for limited specific security of supply expenditure detailed at Annexure B clause 2.2(b)(ii) of the AA5 Access Arrangement, which applied only to certain costs incurred in the last 15 months of AA5.

A new cost pass through item is proposed due to the uncertain timing of proposed legislation changes relating to the National Gas Objective and extending the regulatory framework to include renewable gases. These proposed changes are expected to clarify and increase the scope of conforming expenditure as defined in the NGR. These changes are also expected to be consistent with other legislative changes imposing obligations to reduce greenhouse gas emissions.

In summary, the cost pass through events proposed for AA6 are:

- HHV and gate point costs related to new gas inflows to the network
- any costs relating to a change in law or tax change
- any costs associated with a tax or fee imposed under a law related to GHG emissions
- any costs incurred as a result of, or in anticipation of, a change in law or the NGR related to GHG emissions or extending the regulatory environment to the transport of gases not currently covered by the NGL.

PART D | Other

ATCO

18. INCENTIVE MECHANISMS

CHAPTER HIGHLIGHTS

1. We do not have any incentive mechanisms in our current AA5 access arrangement.
2. ATCO does not believe an efficiency incentive mechanism, such as an opex Efficiency Benefit Sharing Scheme or Capital Expenditure Efficiency Benefit Sharing Scheme, is necessary due to ATCO's benchmarking performance.
3. ATCO believes a network innovation scheme would incentivise innovation projects that would otherwise not be funded to the benefit of consumers. However, AA6 is not an appropriate time to introduce a network innovation scheme (NIS).

18.1 INTRODUCTION

In AA6, we expect the WA energy market to continue changing. There are currently proposed changes to legislation that will allow hydrogen and other renewable gases to be transported through ATCO's gas distribution network. The WA Government has also supported the use of renewable gases through the blending of hydrogen into the gas network in the City of Cockburn.

Through innovation, the gas network has an important role in supporting decarbonisation and needs to balance environmental issues, affordability, and energy security.

A network innovation scheme focuses on both long-term consumer benefits, and short-term benefits through improving operations and the way capex is deployed. Recent incentive mechanisms through the AER provide increased incentives to pursue these shorter-term benefits by allowing service providers to share in the benefits beyond the access arrangement period in which the efficiencies are implemented.

ATCO does not currently have any incentive mechanisms in AA5.

18.1.1 REGULATORY FRAMEWORK

Rule 98 details the requirements for incentive mechanisms and aims to allow service providers to benefit from taking actions, such as innovation, to improve efficiency for the benefit of consumers via lower gas distribution charges.

18.2 STAKEHOLDER FEEDBACK

Table 18.1 summarises the feedback received from our stakeholders and our respective responses.

Table 18.1: Consideration of stakeholder feedback on Incentive Mechanisms

STAKEHOLDER FEEDBACK	OUR RESPONSE
Insufficient info about NIS: how it would be implemented and operated, costs involved and how benefits to consumers would outweigh costs.	We are not proposing to introduce an NIS at this time given the current economic environment and price increases expected in AA6.
Support for the objective of the NIS and funding for preparation activity makes sense. However, there needs to be a link to covered services. The submission needs to include more information on examples.	We are not proposing to introduce an NIS at this time, but should ATCO propose a NIS in the future, we expect that any submission would include examples of projects that it may apply to.

18.3 NETWORK INNOVATION SCHEME

The NGR allow for an access arrangement to include one or more incentive mechanisms to encourage efficiency in providing services. However, the currently used mechanisms in Australia do not provide adequate incentive to invest in innovative technologies that are in the long-term interests of consumers, but individually have outcomes that are too uncertain to meet the regulatory investment test (NGR 79).

In our Draft Plan, ATCO proposed a Network Innovation Scheme (NIS) to address the lack of incentives in the regulatory framework to invest in innovations with longer-term benefits rather than short-term operational efficiency measures.

Given the current economic environment, including the cost-of-living pressures on consumers, ATCO is not proposing the NIS as part of this submission as it has the potential to further increase prices in the short term. We recognise that there remains the need to encourage innovation with longer-term benefits, which is of particular importance given the changes in the energy sector and the emergence of new technologies. In the future we will continue to investigate the potential of a NIS to support our activities for the benefit of consumers.

18.4 OTHER INCENTIVE SCHEMES

ATCO does not have an efficiency incentive scheme for either opex or capex. Despite this, ATCO has consistently ranked among the most efficient gas distribution networks *(see Section 2.6)*.

Based on ATCO's current efficient performance, we are not proposing an incentive scheme for AA6. The current price cap and incentive-based regulatory regime, along with commercial imperatives to lower costs and make efficient use of capital, provide sufficient incentive for the efficient operation of the network and investment by ATCO.

19. FIXED PRINCIPLES

CHAPTER HIGHLIGHTS

1. Two of our fixed principles expire during AA6.
2. A new fixed principle has been introduced to ensure cost recovery of expenditure associated with the emissions reduction objective and renewable gases if we are in the situation that the regulatory framework is not amended ahead of the date of the ERA's Final Decision.

19.1 INTRODUCTION

The purpose of fixed principles is to provide certainty that specific principles will not be subject to review in the following access arrangement (or for a period agreed). This gives certainty and reassurance to both customers and ATCO that a particular principle will go unchanged for a pre-determined period.

We have extended the fixed principles that support the cost pass through mechanism into AA6 and AA7.

At the time of this submission, it is unclear if changes to the NGL and NGR related to emissions reduction and renewable gases will be in force in WA at the time of the ERA's Final Decision. Therefore, we have included a fixed principle to ensure that costs incurred during AA6 to implement emissions reductions strategies and prepare the network for introduction of other gases in anticipation of those legislative amendments, and that are made conforming to that legislation, will be recoverable.

19.2 EXISTING FIXED PRINCIPLES

The current Access Arrangement includes several fixed principles. The purpose of these fixed principles is to provide for:

1. The specification of the straight-line method of depreciation for each group of assets referred to in part 9 of the Access Arrangement.
2. The inclusion of specific costs in the next access arrangement period for cost pass through events related to:
    a) HHV Costs
    b) Physical Gate Point Costs
3. The operation of the tariff variation mechanism across access arrangement periods by:
    a) carrying forward cost pass-through events that occurred in the later part of AA4 period into AA5; and

b) carrying forward cost pass-through events that occurred in the later part of AA5 period into AA6.

19.3 AA6 FIXED PRINCIPLES

19.3.1 PHYSICAL GATE POINT AND HHV COSTS

ATCO does not propose to extend the two fixed principles related to physical gate point costs and HHV costs.

This means that the fixed principle for HHV costs will expire on 25 August 2025, and the fixed principle for gate point costs will expire on 1 January 2031 (unless amended in the AA7 review).

ATCO is not seeking to extend these fixed principles because the fixed principles that facilitate the operation of the tariff variation mechanism across access arrangement periods adequately cater for these costs.

19.3.2 STRAIGHT-LINE METHOD OF DEPRECIATION

ATCO does not propose to extend the fixed principles related to straight-line depreciation. This means that the fixed principle will expire on 25 August 2025. ATCO is not seeking to extend this fixed principle because NGR 77(2)(d), together with Section 9 of the Access Arrangement, describe the calculation of depreciation for the purpose of establishing the opening capital base at the start of the next access arrangement period.

19.3.3 OPERATION OF THE TARIFF VARIATION MECHANISM ACROSS ACCESS ARRANGEMENT PERIODS

ATCO proposes to amend the fixed principles supporting the cost pass through mechanism as follows:

- The fixed principle that supported the operation of the cost pass through mechanism to ensure the recovery of cost pass through events incurred after the lodgement of ATCO 's AA5 proposal has been deleted as that fixed principle will have expired before the commencement of AA6.
- The fixed principle that supports the operation of the cost pass through mechanism to ensure costs, which are cost pass through events incurred after the lodgement of ATCO 's AA6 proposal, are recovered has been amended to reflect the AA6 dates.
- An additional fixed principle has been added to ensure costs that are cost pass through events, incurred after the lodgement of ATCO 's AA7 proposal, are recovered.

19.3.4 EMISSIONS REDUCTIONS AND RENEWABLE GASES

A new fixed principle has been proposed to ensure recovery of any costs incurred after 1 January 2025 to implement emissions reduction strategies and prepare the network for the introduction of hydrogen, biomethane and other renewable gases in anticipation of the proposed amendments to the national gas regulatory framework.

The intent of this new fixed principle is that additional capex and opex incurred prior to the legislative amendments taking effect will be eligible to be treated as conforming expenditure if it meets the

requirements of the National Gas Law and National Gas Rules after they have been amended. ATCO will be able to recover these costs either through the annual tariff variation process or during the next access arrangement submission.

20. TEMPLATE SERVICE AGREEMENT

CHAPTER HIGHLIGHTS

1. We are proposing changes to the template service agreement and introducing a new standard agreement for the Permanent Disconnection service (referred to as the "Cut and Cap" service in the Reference Service Proposal), which is a new reference service for AA6.

20.1 INTRODUCTION

ATCO's template service agreement specifies the terms and conditions for ATCO to provide reference services (other than the reference tariffs, which are detailed in a schedule to the access arrangement).

ATCO's template service agreement has typically been adopted by retailers seeking access to the GDS. It is a major part of our relationship as it governs the conditions (or terms) of access to our network. ATCO will retain the template service agreement for all reference services provided to retailers.

We expect changes to the NGL will be introduced in WA. These changes include the inclusion of renewable gases in the regulatory framework, the expansion of the NGO to include an emissions reduction element, and broad gas pipeline reforms including increased transparency requirements. Based on these proposed changes, we have amended the template service agreement to ensure it remains applicable when renewable gases are transported through the network.

We have also created a new standard agreement to cover where ATCO provides its new reference service – the Permanent Disconnection service (the Permanent Disconnection Agreement). The Permanent Disconnection Agreement will be available on our website and can be used by end users, registered proprietors of a property, and parties authorised on behalf of a registered proprietor of a property (generally, demolition companies).

20.2 STAKEHOLDER ENGAGEMENT

We sought feedback in our Draft Plan regarding the template service agreement and new permanent disconnection agreement. We did not receive any feedback.

20.3 REGULATORY FRAMEWORK

Rule 48(1)(d)(ii) of the NGR provides that a full access arrangement must specify for each reference service, the terms and conditions (other than price) on which the reference service will be provided. Consistent with this rule, the terms and conditions are specified in the template service agreement and the new permanent disconnection agreement.

20.4 NEW PERMANENT DISCONNECTION AGREEMENT

Given the re-classification of ATCO's permanent disconnection service as a reference service, ATCO will introduce a new 'permanent disconnection agreement' for proposed users of this service. As this new permanent disconnection service relates to *end-use customers* (i.e., consumers) and property owners, the template service agreement is not appropriate, as this relates to ATCO's haulage services and is entered into by *retailers*.

We have drafted the permanent disconnection agreement with this in mind. It is relatively short form and somewhat reflects the agreement ATCO provided for this service before it became a reference service.

The permanent disconnection agreement provides:

- An applicant may only seek the permanent disconnection service where:
  - it:
    - is the owner of the relevant property; or
    - has the express written authorisation of the property owner; and
  - the retail account has been closed.
- Any meter located on the property will need to be removed by ATCO either prior to or at the time of ATCO performing the permanent disconnection. Where necessary, ATCO will request authorisation from the retailer for this meter removal service and will charge the retailer for this service (Deregistering a Delivery Point Reference Service).

The proposed permanent disconnection agreement is attached at Annexure G of the Access Arrangement.

20.5 CHANGES TO THE TEMPLATE SERVICE AGREEMENT

We have reviewed the template service agreement against the relevant National Gas Access (Western Australia) Legislation and Regulatory Instruments and have amended or updated the agreement. We have made some changes to reflect learning from the previous negotiations from AA5 and further amendments to reflect new and revised legislation and regulations, including proposed amendments to extend the natural gas frameworks to include renewable gases.

In considering the changes required to the template services agreement, ATCO has sought to do four main things:

1. Update the template services agreement for hydrogen and renewable gases
2. Update the template services agreement for changing market conditions (for example a cyber security clause has been added due to the increasing importance of cyber security issues)
3. Update the template services agreement so it more accurately reflects actual operations – for example, the existing odorisation clause envisaged actions that were directly contrary to what happens in practice
4. Correct provisions that are ambiguous and tidy-up some of the drafting.

The proposed revised template service agreement is attached at Annexure F of the Access Arrangement. Further detail on the changes is set out in the sections below.

20.5.1 HYDROGEN AND RENEWABLE GASES UPDATES

Several changes have been made to the template service agreement to facilitate the potential introduction of hydrogen and other gases. Specifically clause 5.8, the change to the definition of Gas, the introduction of the concept of Gas Blend and injection facility and the separate definitions of Natural Gas and Other Gas. Clause 5.8 deals with the conditions for connection to the network of facilities capable of injecting Other Gases and Gas Blends. While these amendments envisage various reforms to the NGL coming into effect in WA (see Section 2.9), the template service agreement remains fit for purpose in the event that these reforms do not eventuate.

20.5.2 CHANGING MARKET CONDITIONS

We have included a new clause (Clause 7.8) about cyber security. The clause imposes obligations on each party to ensure its information technology systems have protections, consistent with good industry practice, to guard against unauthorised access and malicious attacks. The clause is not prescriptive and leaves it to each party to determine how it complies with these requirements (subject to the party complying with good industry practice).

20.5.3 UPDATES TO REFLECT ACTUAL OPERATIONS

We have amended the existing odorisation clause (Clause 6.9) because the envisaged actions were directly contrary to what happens in practice. We have amended the clause because ATCO does not odorise gas nor does it have facilities to do so. Currently retailers and upstream facilities arrange this and the clause has been amended to require the counterparty (being the person with the contractual relationship with the transmission pipeline operators) to procure odorisation.

20.5.4 SECURITY

We have amended the security clause (clause 16.2) to clarify some of its drafting to make clear reference tariffs will change not only due to CPI escalation (i.e. they may change due to pass through events). The quantum of security required may need to change whatever the cause of tariff adjustment.

We did not consider clause 16.2 dealt properly with the specific issues raised where a counterparty wishes to provide a cash deposit rather than a bank guarantee. We have therefore inserted a new clause 16.3 to deal with these specific issues.

Associated with clause 16.3 is a new clause 16.4 to deal with Personal Property Securities Act (PPSA) issues. With cash deposits, ATCO will need to register its interest in any cash deposits it holds on the PPSA register, otherwise if a counterparty becomes insolvent or other secured creditors enforce their security, ATCO's interests in the cash it holds will lose out to any liquidator or secured creditor with security over the counterparty's assets generally.

20.5.5 OTHER CHANGES

The remaining changes address a miscellaneous list of issues, including:

- **Counterparty** – The counterparty to the template service agreement was described as User. However, we realised this was confusing as the National Gas Law also uses the term "user" to refer to users generally. In places the template service agreement used "User" when it meant the counterparty but also "User" to represent all Users or other Users. Given this we have relabelled the counterparty as the "Counterparty". In executed template service agreements, our intent is to replace the reference to Counterparty with the actual name of the Counterparty to the relevant template service agreement.
- **Gas Customer** - We have also sought to better differentiate end-users by introducing the concept of "Gas Customer".
- **Clause 1(e)** - We think the condition precedent the Counterparty has obtained all approvals should apply for the benefit of both parties and so should only be capable of waiver by agreement of both parties. It would be problematic for ATCO if the Counterparty did not have all necessary approvals to perform under the Agreement.
- **Clauses 5.5(d) and 5.9(b)** have been added to briefly address the process for constructing new delivery points and receipt points. The clauses provide requests for constructing new facilities will be processed in accordance with applicable laws and any charges determined in accordance with requirements of applicable law. As noted in clause 7.4 of the Access Arrangement, for many delivery point facilities there will be no additional charges. A separate agreement dealing with the construction process will be required for all new receipt points. For new delivery points, whether a separate agreement relating to the construction process is required will depend on the scale of the construction required. ATCO notes that, in the future, if the changes made to the National Gas Rules on the east coast are applied in Western Australia it will need to develop an interconnection policy.
- **Clause 5.7(a)** – we have reworded to clarify this clause.
- **Clause 5.9** - has been added to make clear new receipt points (whether for natural gas or otherwise) may only be added to the ATCO GDS if an interconnection arrangement is in force.
- **Clause 6.4(d)** – we have added this so counterparties better understand the nature of the losses which may be caused by off-specification gas. The clause does not change the existing liability regime but makes clearer the types of losses which may arise if off-specification gas is introduced into the ATCO GDS.
- **Clause 7.4(b)** – we considered the previous wording unclear and have clarified it.
- **Clause 14.8** – we did not consider it appropriate ATCO would need to obtain consent of each user to sell the ATCO GDS (given this would require regulatory approval anyway and all users would be protected by that process). Given this, we have streamlined the assignment/novation clause to allow the agreement to be transferred as part of any sale of the gas distribution system. Any other assignments will require ATCO to obtain the Counterparty's consent (not to be unreasonably withheld).
- **Clause 15.1(g)** – we found this clause very difficult to follow and have reworded it to reflect what we consider it was intended to mean.

- **Delivery point -** We have clarified the references to Delivery Point in the template service agreement to distinguish better between those the counterparty has a right to use and all delivery points on the system. The defined term Delivery Point means a point the counterparty has a right to use. The defined term System Delivery Point means all delivery points on the ATCO GDS.
- **Schedules 1 – 3** - In schedules 1 to 3 we have revised the language to reflect the fact that removal of a delivery point requires both deregistration of the delivery point (being a reference service at a fixed reference tariff) and removal of metering facilities (which for services A1, A2 and B1 is charged on a cost-pass through basis). See clause 9 of Schedules 1 and 2 and clause 8 of Schedule 3.
- **Annexure A** - We considered Annexure A relating to gas specification was written in a confusing manner and have sought to clarify it. Essentially the gas specification is to reflect that required by law. The exception is CO2 and oil where even if the law allows a broader specification, for system integrity issues ATCO requires the values for these parameters not to exceed the limits in Annexure A.
- In addition to the above, there are several minor corrections (cross-referencing, terminology) and some wording clarifications, we expect these are self-explanatory.

21. POLICIES & NON-TARIFF COMPONENTS

CHAPTER HIGHLIGHTS

1. We are removing our obligation to annually report on extensions and expansions as we expect that the ERA will include this in the annual Regulatory Information Notice.
2. We are proposing a five-year period for AA6, with the AA7 period commencing on 1 January 2030.

21.1 INTRODUCTION

This Chapter outlines matters not directly related to the reference tariffs but must form part of our Access Arrangement. These include:

- Application procedure
- Capacity trading requirements
- Extension and expansion requirements
- Changing receipt and delivery points
- Supplier curtailment methodology
- Review submission and revision commencement dates.

21.2 APPLICATION PROCEDURE

The application procedure set out in the access arrangement details the process that will be followed when a prospective user wishing to obtain access to a Pipeline Service, submits an application to ATCO. The application procedure is specified in our access arrangement and is unchanged from AA5.

21.3 CAPACITY TRADING REQUIREMENTS

The capacity trading requirements provide for the transfer of capacity to a third party. The capacity trading requirements are specified in our access arrangement and the template service agreement.

We have not identified any changes required to the capacity trading requirements for AA6.

21.4 EXTENSION AND EXPANSION REQUIREMENTS

The extension and expansion requirements aim to specify whether the access arrangement will apply to incremental services to be provided as a result of a particular extension to, or expansion of the capacity of, the pipeline and deal with the effect of the extension or expansion on tariffs. These requirements are specified in the access arrangement.

Our current extension and expansion requirements provide for the following:

- ATCO to apply to the ERA if a HP pipeline extension is to be undertaken to determine how it will be treated under the access arrangement.
- All pipeline extensions designed to operate at 1,900kPa or less to be treated as covered under the access arrangement.
- All expansions to the capacity of the GDS to be treated as covered under the access arrangement.

The current extensions and expansions requirements in the access arrangement include annual reporting of extensions and expansions. We expect that this reporting will be included in the annual Regulatory Information Notice provided to the ERA in the future and so this reporting requirement has been deleted from the access arrangement.

21.5 CHANGING RECEIPT AND DELIVERY POINTS

The changing receipt and delivery point provisions allow a user to change a receipt or delivery point subject to certain conditions. These provisions are specified in our access arrangement and the template service agreement.

We have not identified any requirement for any changes to the current changing receipt and delivery points provisions for AA6. However, we have made clear that new Receipt Points (or Physical Gate Points) may only be added to the GDS if there is a legally enforceable Interconnection Arrangement in force between ATCO and the party operating the facilities immediately upstream of that Receipt Point or Physical Gate Point. Such an agreement will be of particular importance in the case of renewable gases, as controls may be required to ensure the introduction of those gases at a receipt point occurs in a way that does not adversely affect the ATCO GDS.

We have also clarified the process around constructing new delivery points and that this cost will be priced in accordance with applicable law. A separate agreement may be required to regulate the construction process depending on the scale of construction required. For example, a simple domestic connection to an existing main would not require an agreement around construction, but a major upgrade to supply a new or expanding industrial customer would.

21.6 SUPPLIER CURTAILMENT METHODOLOGY

We have included a new annexure that details our supplier curtailment methodology in anticipation that this will be required once the regulatory framework is amended for renewable gases.

Our methodology was already largely detailed in the template service agreement and is based on the principle to mitigate or avoid a situation which may threaten the reliability of gas supply or public safety.

The circumstances where ATCO may curtail the injection of gas are detailed in the template service agreement and are unchanged from AA5. The process for curtailment of the injection of gas is also detailed in the template service agreement and is unchanged from AA5.

21.7 REVIEW SUBMISSION AND REVISION COMMENCEMENT DATES

We propose that the duration of AA6 will be five years.

The review submission date for AA7 will be 1 September 2028. This is consistent with the timing of revisions provided for under our current access arrangement. Our experience is that this review submission date allows sufficient time to consider the proposed revisions.

The revision commencement date for AA7 will be 1 January 2030.

APPENDIX A

APPENDIX A

ATCO

A1. ABBREVIATIONS

ABBREVIATION	DESCRIPTION
AA4 / AA5	ATCO's fourth/fifth Access Arrangement
AA5 FD	The ERA's Final Decision on ATCO's AA5 submission
AA6	ATCO's sixth Access Arrangement (2025-29)
ACQ	Annual Contract Quantity
AER	Australian Energy Regulator
AHI	Asset Health Index
ALARP	As low as reasonably practicable
ALS	Asset Lifecycle Strategies
AMP	Asset Management Plan
ATCO	ATCO Gas Australia
BST	Base Step Trend (method)
Capex	Capital Expenditure
CBD	Central Business District
CCUS	Carbon Capture Utilisation and Storage
CIBD	Commercial & Industrial and Builders & Developers
CO2	Carbon Dioxide
CO2-e	Carbon Dioxide Equivalent
CORE	Core Energy Group
CP	Corrosion Protection
CRG	Customer Reference Group
CSAT	Customer Satisfaction
DMIRS	Department of Mines, Industry Regulation and Safety
EDD	Effective Degree Day
EOL	End-of-life
ERA	Economic Regulation Authority
ERP	Enterprise Resource Planning
GDS	Gas Distribution System
GDO	Gas Distribution Officer
GHG	Greenhouse Gas
GIS	Geographic Information System

ABBREVIATION	DESCRIPTION
GSOO	Gas Statement of Opportunities
GSP	Gross State Product
HHV	Higher Heating Value
HIA	Housing Industry Association
HP	High Pressure
HPR	High pressure regulator
HR	Human Resources
ILI	Inline Inspections
IP	Intellectual Property
IT	Information Technology
KPI	Key Performance Indicator
kWh	Kilowatt hours
LNG	Liquefied Natural Gas
MHQ	Maximum Hourly Quantity
MIRN	Meter Identification Reference Number
MPR	Medium pressure regulator
MRP	Mains Replacement Prioritisation
NGER	National Greenhouse and Energy Reporting
NGL	National Gas Access (Western Australia) Law
NGR	National Gas Rules (WA)
NIS	Network Innovation Scheme
NPV	Net Present Value
Opex	Operating Expenditure
OPSO	Over-pressure shut-off
OT	Operational Technology
PE	Polyethylene
PGC	Portfolio Governance Committee
PIG	Pipeline Inspection Gauge
PMD	Pressure Monitoring Devices
PP&E	Property Plant & Equipment
PVC	Unplasticised Polyvinyl Chloride
RAB	Regulatory Asset Base
RORI	Rate of Return Instrument
RPP	Revenue and Pricing Principles

ABBREVIATION	DESCRIPTION
SaaS	Software as a Service
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SCADA	Supervisory Control and Data Acquisition
SOCI	Security of Critical Infrastructure Act 2018
TAB	Tax Asset Base
tCO2-e	Tonnes of Carbon Dioxide Equivalent
TJ	Terajoule
TRIFR	Total Recordable Injury Frequency Rate
UAFG	Unaccounted for Gas
WA	Western Australia
WACC	Weighted Average Cost of Capital