



Goldfields Gas Pipeline

2025-29 Access arrangement revision

Proposal overview

TABLE OF CONTENTS

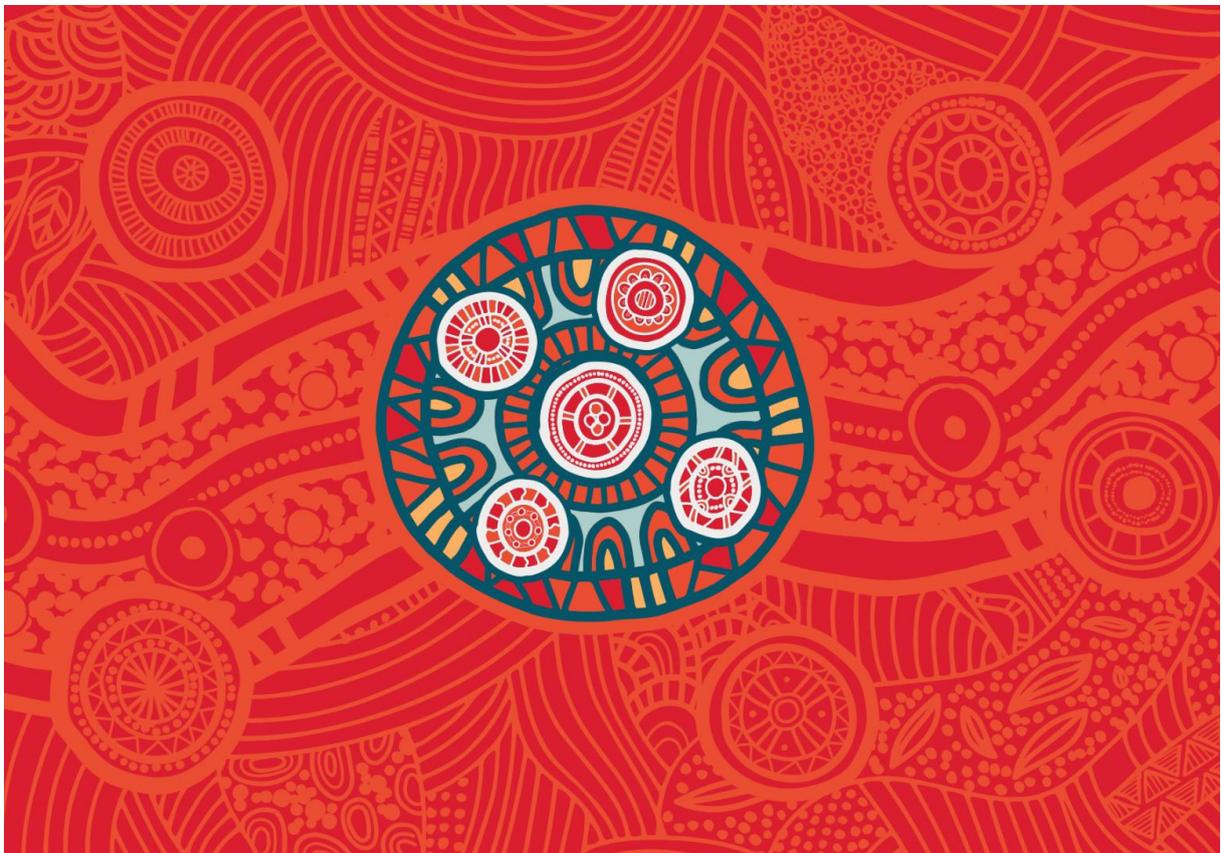
Acknowledgement of Country	3
Foreword	4
What we're proposing	5
1. Introduction	8
2. Context, challenges, opportunities	13
3. Our engagement	17
4. Reference service	26
5. Demand forecasts	31
6. Cost allocation method	38
7. Revenue building block	46
8. Return on capital and inflation	51
9. Reference service tariff	56
10. Capital expenditure	63
11. Operating expenditure	76
12. Depreciation and asset lives	95
13. Emissions reduction	107
14. Tariff variation mechanism	114
15. Access and queuing	125
16. Other matters	133
17. Glossary	134
Appendix A – Summary of revisions to access arrangement	135

ACKNOWLEDGEMENT OF COUNTRY

At Goldfields Gas Transmission, we acknowledge the Traditional Owners and Custodians of country on which we operate.

We acknowledge their connections to land, sea and community.

We pay our respects to Elders past and present and commit to working in a fair and ethical manner that respects First Nations peoples' rights and interests.



FOREWORD

We are pleased to submit our revised access arrangement to the Economic Regulatory Authority (ERA) for the Goldfields Gas Pipeline for the five-year period from 1 January 2025 to 31 December 2029.

We are focused on ensuring the Goldfields Gas Pipeline is a sustainable operation and can continue to deliver the reliable services that our valued Western Australian customers depend on every day.

We know that the role of gas within the energy system will evolve as we work towards emissions reduction. Gas will continue to be indispensable for costly-to-electrify energy applications. For this reason, many of our customers acknowledge the critical role gas will play in their own decarbonisation journeys.

Our customers have told us that reliability and security of supply was paramount. Furthermore, customers underscored the potential safety concerns and the substantial financial consequences associated with any interruptions to their operations and production.

As the custodians of this pipeline, we are entrusted with the crucial task of ensuring the reliability, affordability, and sustainability of this vital asset, both in the short and long term. In the following pages, we present our plans for the 2025-29 regulatory period, outlining key strategies and investment plans that will maintain safe, secure, and reliable service delivery while keeping costs in check.

We understand the impact increasing costs have on our customers, and the need to keep tariffs as low as possible. Australia's current high interest rate and inflation environment has impacted the revenue and tariff outcomes for the covered Goldfields Gas Pipeline. Acknowledging the high cost environment, our five-year plan is to invest in only what needs to be done to maintain safety, reliability, and security of services.

We invite our customers to read this information and provide your feedback to the ERA via their website at www.erawa.com.au or to us directly at:

Email: ggpaccess@apa.com.au

Thank you

Aidan Trend
General Manager Goldfields Gas Transmission



WHAT WE'RE PROPOSING

The Goldfields Gas Pipeline (GGP) 2025-29 access arrangement proposal presents our five-year plan for the GGP. These plans have been formed with feedback gained from ongoing engagement with our customers. Our customers tell us that a safe and reliable gas transportation service is paramount to their needs. While usage of gas is expected to evolve in the future, we believe it will continue to play a crucial role for GGP customers, many who are working towards decarbonising their operations and facilities.

We recognise our customers operate in a high cost and competitive environment. Our plans invest in only what is needed to provide value to our customers during the 2025-29 access arrangement period.

The 2025-29 access arrangement proposal enables us to continue to provide what our customers demand – a reliable, safe, and secure gas transportation services. In the following pages, we present our plans, outlining key strategies and investment plans that will maintain safe, secure, and reliable service delivery while keeping costs in check.

Revenue and reference service tariffs

Proposed total revenue for the 2025-29 period is forecast to be \$348.6 million (real \$2023). This is an increase of \$123 million (54 per cent) in real terms compared to the approved total revenue for 2020-24. The proposed increases are primarily driven by higher interest rates compared to the previous period.

The total revenue is used to calculate the reference service tariff. The reference service tariff is structured into three parts and the changes from the 2024 regulator approved tariff to the proposed 2025 tariff shows significant increases.

Component	Unit	2024 (ERA approved)	2025 (Proposed)	Variance
<i>Toll</i>	\$/GJ MDQ	0.127527	0.162241	27%
<i>Capacity reservation</i>	\$/GJ MDQ km	0.000773	0.001249	62%
<i>Throughput</i>	\$/GJ km	0.000208	0.000332	59%

Reference service

Of the services identified in GGT's reference service proposal, in December 2022, we proposed to specify the firm transportation service as the single reference service on the GGP. The ERA accepted GGT's proposal.

The GGP 2025-29 access arrangement proposal results in the tariff for the firm transportation service for covered GGP. The tariff serves as an important benchmark for commercial negotiations.

Demand forecasts

The proposed demand forecasts for covered GGP include forecasts from Yarraloola receipt point and the receipt point from the recently commissioned NGI. The APA-owned NGI is a separate pipeline that connects into the GGP. The forecast capacity flowing from NGI to GGP has been treated as covered capacity. This has increased the demand forecasts for covered GGP in 2025-29 compared to forecasts 2020-24.

Operating expenditure

To ensure the ongoing provision of secure and dependable services to our customers, we propose operating expenditure of \$130.8 million for the 2025-29 period. This is \$21 million (19%) higher than actual (2020-22) and forecast (2023-24) operating expenditure in the current period. It is \$31 million (31%) higher than the \$100 million approved by the regulator in the 2020-24 period.

The operating expenditure is for activities related to maintaining an ageing asset, increased expenditure on Information Technology, and a step up in cost related to new Security of Critical Infrastructure legislation.

Capital expenditure

Over 2025-29, the purpose of the GGP will remain the same: to provide a safe, reliable, and secure supply of energy to our larger mining and smaller end-use customers. We are proposing to invest of total of \$69.4 million for replacement and stay in business programs, Information Technology & Operational Technology (ITOT), and security of critical infrastructure programs.

A key internal driver is that GGP is now entering a new lifecycle phase as it approaches 30 years of age and many of its components are nearing the end of their useful life. Investment requirements are growing due to the increasingly complex external environment. Over the last five years we have seen significant cost increases and supply shortages, particularly in remote areas, greater focus on emissions reductions, heightened focus on cyber and physical security.

Depreciation & asset lives

GGT is proposing to retain the current accounting approach to determining depreciation. We are proposing to change the approach to calculating the asset lives by capping asset lives to the weighted average remaining life of the pipeline and laterals class. This is a modest change in recognition of the energy transition and the potential gradual shift away from fossil fuels to more renewable sources amongst GGP customers.

Uncertainty about future role of gas use has been recognised and acceptance of shortening asset lives to accelerate depreciation has featured in recent regulatory decisions.

Tariff variation – cost pass through events

Our operating environment can be unpredictable and events beyond our control can materially change our expenditure within a regulatory period. In recent years, we have observed unexpected events more frequently including natural disaster events, cyber security events, and volatility due to global events.

To mitigate these risks, we propose a wider range of cost pass through events for high cost events that could not have reasonably been forecast ahead of time.

Access and queuing

The access arrangement sets out procedures for customers seeking access to services provided by the covered GGP. We are proposing changes to streamline and simplify the provisions and ensure that they are fit for purpose for customers and better reflect a commercial environment.

Benefits to customers of the proposal

Our access arrangement proposal is consistent with the expenditure that a prudent organisation acting efficiently would incur. The benefits to customers are:



Affordability

Keeping the reference tariff as low as possible while maintaining safety, security, and reliability of the GGP.



Safety and integrity

Asset management is aligned to good industry practice to minimise risk to as low as reasonably practicable and provide safe, reliable, and secure services



Orderly transition

Starting to transition GGP tariffs early (to recoup efficient investment) to prevent future price shocks as energy sector transitions to lower carbon energy sources.



Security critical infrastructure

Maintaining system security by safeguarding critical infrastructure against threats in line with obligations under Security of Critical Infrastructure framework. We have done this in an efficient and proportionate way.



Prudent

APA operations align with AS 2885 – The Standard for The Standard for Gas and Liquid Petroleum Pipelines. APA seeks to reduce risk to as low as reasonably practicable in a manner that balances cost and risk. We have carefully considered regulatory obligations and good industry practice in developing the access arrangement proposal. The proposal will allow GGP to operate in a safe way and ensure integrity and reliability of services for gas customers and consumers. Forecast capital and operating expenditure is underpinned by the principle of minimising risk to as low as reasonably practicable in line with good industry practice. The proposed expenditure is of a nature that a prudent service provider would incur.



Efficient

As part of APA Group, GGP benefits from economies of scale and scope compared to having to incur costs on a stand-alone basis. APA is ASX listed and is subject to market scrutiny and greater discipline to minimise costs. This provides assurance that costs are efficient. Procurement of work for GGP will be done in alignment with APA procurement policy which will deliver best value for customers.

I. INTRODUCTION

I.1 Purpose

This Proposal Overview presents the proposed revisions to the Goldfields Gas Pipeline (GGP) access arrangement. The proposed revisions and supporting material set out our plans to enable GGP to continue to provide reliable, safe, and secure pipeline services to customers.

In addition to business as usual customer engagement, during the development of the proposal, we engaged with customers about the access arrangement and what was important to them. Our customers told us that reliability of the pipeline services was paramount to their needs.

GGT's five-year plan is to make sure that we continue to meet the needs of customers for reliable, safe, and secure service. To this end, our proposal includes programs for necessary replacement of pipeline assets, operations and maintenance, enhanced cyber security, upgraded information and operational technology, and meeting safeguard mechanism obligations.

The Proposal Overview, Summary Plan, revised Access Arrangement, Access Arrangement Information, and programs and business cases provides material to support plans for the 2025-29 period.

The proposed revisions to the GGP access arrangement are for the period from 1 January 2025 to 31 December 2029 (2025-29 or AA5).

I.2 About Goldfields Gas Pipeline

Gas plays an important role in the growth, development, and connectivity in Western Australia. Among this state's energy infrastructure, GGP stands as a critical conduit, facilitating the transportation of natural gas to some of the largest operations and industries in Australia.

GGP provides critical pipeline services to customers involved in mining and mineral processing who make a significant contribution to the WA economy. GGP also provides gas for power generation in regional communities and the Kalgoorlie distribution network for commercial and residential users.

The GGP is owned by an unincorporated joint venture, Goldfields Gas Transmission Joint Venture (GGT JV), The owners comprise Southern Cross Pipelines Australia Pty Ltd, Southern Cross Pipelines (NPL) Australia Pty Ltd and Alinta Energy GGT P/L.

On 1 November 2023, APA acquired Alinta Energy Pilbara Holdings Pty Ltd including Alinta's share of the GGP. APA Group now owns 100 per cent of GGP and we are evaluating longer term plans for the future of the GGT JV.

Goldfields Gas Transmission Pty Limited (GGT) is the operator of the GGP for and on behalf of each of the owners.

At 1,378-kilometre long, GGP is the second longest pipeline in Australia, starting in Yarraloola in the northern Pilbara region to Kalgoorlie in the south. The 47-kilometre Newman lateral is also part of the GGP.

The GGP also interconnects with the Eastern Goldfields Pipeline System at Leonora. In the south, the GGP connects with the Kalgoorlie to Kambalda Pipeline. In June 2023, the Northern Goldfields Interconnect (NGI) commenced operations and connects to GGP approximately 40 kilometres south of Leonora. The NGI will have the potential to add capacity to the GGP.

Although the GGP services a small number of customers, it provides a critical service that is reliable and cost efficient enabling Western Australia to prosper in the short and long term.



~21

Critical large customers



1

Town supplied (Kalgoorlie)



4

Depots supporting maintenance of the pipeline



~50%

Scheme pipeline



~1,400km

Transmission pipeline (covered)



109TJ

Per day nameplate capacity (scheme section)



39PJ

Gas transported each year



Source of map: Western Australia Gas Bulletin Board

1.3 Regulatory framework

Under the National Gas (Western Australia) Act 2009, the GGP pipeline and other related assets are covered by the access regime of the National Gas Law (NGL) and the National Gas Rules (NGR).¹ We refer to the fully regulated parts of GGP as ‘covered GGP’.

In accordance with the NGL and NGR, GGT is required to submit proposed revisions for the Goldfields Gas Pipeline (GGP) access arrangement to the Western Australian Economic Regulation Authority (ERA). The review submission date for the 2025-29 revisions is 1 January 2024.

The proposed revisions to the access arrangement are for covered GGP only. The GGP access arrangement provides the terms and conditions for a third-party user to gain access to the regulated pipeline service. Covered GGP has one reference service which is a firm transportation service.

The proposed GGP access arrangement revision must comply with the requirements in the NGL and NGR. The ERA will assess GGT’s proposal against these regulatory requirements.

1.3.1 The National Gas Objective and revenue and pricing principles

The ERA’s assessment will be based on whether the proposed access arrangement is consistent with the national gas objective (NGO) set out in section 23 of the NGL:

“The objective of this Law is to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, quality, safety, reliability and security of supply of natural gas”.

Section 24 of the NGL contains the revenue and pricing principles (RPP) which provides regulatory guidance on:

- Revenue recovery. A scheme pipeline service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in providing reference services, and complying with a regulatory obligation or making a regulatory payment

¹ GGP comprises two notional pipelines, which are in reality the same physical pipeline. The non-covered parts of GGP are not subject to full regulation under the access arrangement. References to the NGL and NGRs in this document relate to those instruments as applied in Western Australia

- Efficiency incentives. A scheme pipeline service provider should be provided with effective incentives to promote economic efficiency with respect to reference services the service provider provides
- Risk and reward. A reference tariff should allow for a return commensurate with the regulatory and commercial risks involved in providing the reference service to which that tariff relates.

The NEO and RPP are aimed at ensuring efficient outcomes for the long term interest of consumers. This proposal has been prepared with the objective of meeting the long term interest of the GGP customers.

1.3.2 NGR requirements for access arrangement proposals

The NGR contains requirements for access arrangement revision proposals including:

- Full access arrangement proposal content (Rule 48)
- AAI (access arrangement information) content related to price and revenue regulation (Rule 72)
- Full access arrangement revision proposal submission (Rule 52(1)).

A completed checklist outlining GGT's compliance with the applicable regulatory requirements relating to submission of this access proposal is provided in the document GGP-AA5-Compliance checklist-1 January 2024-Public.

1.4 Proposal documents

GGT has submitted a set of documents that form the GGP access arrangement revision proposal. The main documents are:

Proposal overview document (this document)	GGP 2025-29 Access Arrangement	GGP 2025-29 Access Arrangement Information	GGP tariff model
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This proposal overview provides supporting information on:

- What we're proposing
- Context, challenges, and opportunities
- Our engagement with customers
- Reference service
- Demand forecasts
- Cost allocation method

- Revenue building block
- Return on capital and inflation
- Reference service tariff
- Capital expenditure
- Operating expenditure
- Depreciation and asset lives
- Emissions reduction
- Tariff variation amendments – cost pass through
- Access and queuing
- Other matters – incentive mechanism
- Appendix A has a summary of proposed changes to the GGP Access Arrangement.

A list of all the GGP access arrangement supporting material can be found in the document index.



Next Steps

The access arrangement revisions proposal has been submitted to the ERA who will commence the assessment process.

Customers and stakeholders have opportunity to engage with the ERA's public consultation process through the ERA's website www.erawa.com.au.

In addition, if you have any questions regarding the proposed revisions, please contact us by sending an email to: ggpaccess@apa.com.au.

2. CONTEXT, CHALLENGES, OPPORTUNITIES

2.1 Delivering value

Although the GGP services a small number of customers, it provides a critical service that is reliable and cost efficient enabling Western Australia to prosper. Ways that the GGP delivers value to customers and Western Australia more broadly are discussed below.



Economic enabler – The GGP is crucially important to the Western Australia economy. It delivers high economic value to its customers which enables Western Australia to prosper. More than 4,000 new jobs have been supported through new connections over the last 5 years.



Growth and utilisation – We have continually increased capacity in the pipeline to meet the needs of our customers. Over the last 20 years there has been a 100 per cent increase in non-scheme pipeline capacity. In addition, the GGP is well utilised with the pipeline delivering to fully contracted nameplate capacity.



Transition to renewables – There is an ongoing need for GGP for reliable energy supply. The GGP supports and enables a faster transition to renewables by providing important peak generation when renewables are not available.



Resilience – the GGP has been resilient to extreme weather events. To ensure customers can access a continuous supply even during extreme weather events, our employees bring line pack up prior to cyclones to prevent outages and maintain services.



Reliability and security – the GGP is a very reliable pipeline with high levels of reliability and security. Over the last 20 years, our customers have experienced minimal interruption to supply. Over the last three years 99.9 per cent of nominations have been delivered. In addition, there has only been one event that firm service curtailed during the last three years and four events where non-firm services have been curtailed during the last five years.



Safety – Safety is our number one priority. The GGP has a strong safety record amongst employees, contractors, and the public.

2.2 Challenges

The GGP encounters challenges that are also experienced by our customers, stemming from the remote and harsh operating environment we both navigate. We are also collectively navigating the energy transition as the role of gas evolves within the energy system. These challenges are discussed below.



High cost to serve environment – The GGP traverses some of the most remote parts of Australia which means there is a high cost to serve. This together with the GGP being an ageing asset impacts costs of operating and maintaining the GGP. Efficiency of and affordability has been front of mind in developing this plan.



Competition – GGP is seeing a greater shift by customers to use alternatives energy sources such as trucked diesel, trucked LNG, and on-site or grid-connection renewable energy. GGP is facing greater competition from these alternative energy sources.



Demand Forecasts – Capacity receipted from Yarraloola receipt point is fully contracted but we are not planning to expand the GGP given that we are seeing greater competition from other energy sources. The APA-owned NGI is providing greater flexibility for operation of the GGP at no cost to the GGP.



Energy transition – means GGT needs to start managing the potential risk of lower utilisation in future. This is the driver for the GGT proposing a change to the way depreciation is calculated by capping the lives of assets.



Safeguard Mechanism reforms – GGP is captured by the Safeguard Mechanism, and we are meeting requirements the regulatory obligation in a way to minimise costs to customers. Safeguard Mechanism strategy involves emissions reduction at Wiluna compressor, changes to the way compressors are operated. We are also forecasting the need to purchase carbon credits to help meet Safeguard Mechanism targets.

2.3 Looking forward

Our customers place high importance on a reliable, safe, and secure gas supply, not only in the present but also for the foreseeable future. Although the usage of gas is expected to evolve in the future, it is likely to continue playing a crucial role as our customers work towards decarbonising their operations and facilities.

Recognising that our customers operate in a high cost environment we will continue to provide value to our customers during the 2025-29 access arrangement period. GGP proposes to provide safe and reliable service by doing the following:

- Maintain reliability of the GGP, which our customers tell us is paramount. This will primarily be achieved by replacing obsolete, unsupported components which have limited or no spare parts availability. We are forecasting an increase to replace obsolete gas engine alternators (which power our compressor stations) and key equipment at our mainline line valves and offtake stations.
- Maintain the integrity of the pipeline by conducting an inline inspection to identify, monitor and rectify defects and prevent a catastrophic pipeline failure. As these inspections occur on a 10-yearly interval this represents a relative increase compared to previous period expenditure.
- Maintain the safety and security of the pipeline by addressing physical security risks across the pipeline including remediating site fencing, installing electronic access systems, and upgrading closed-circuit television facilities.
- Maintain the performance of rotating plant by undertaking overhauls to optimise performance and reduce lifecycle operating costs.
- Minimise Safeguard Mechanism costs and support the achievement of emission reduction targets by changing the way we operate compressors and installing dry gas seals at Wiluna compressor station. This represents an uplift in capex where no emissions focussed work has previously been undertaken.
- ITOT is necessary to support everyday business functions and technical operations of pipelines and services they provide. Modernising ITOT systems, such as Enterprise Resource Planning and Grid Solutions will enable better delivery of services to customers.
- Maintain investment required to meet the requirements of the Security of Critical Infrastructure Act 2018 (the SoCI Act). Investment on cyber and physical security is necessary to address threats to critical infrastructure like the GGP and maintain secure and reliable services for customers.
- Ensuring a smooth energy transition through proactively prevent future price shocks as the energy sector reduces emissions. We propose to cap asset lives to no more than the weighted average remaining life of the pipeline. This will facilitate an orderly energy transition by helping to smooth out future prices.

Plan on a page



Replacement programs

\$53 million of capital expenditure will fund replacement (stay in business) programs so the reliability and performance of the GGP is maintained.



Expansion programs

There are no significant expansion programs forecast for the GGP during the 2025 to 2029 period.



Information technology, operational technology (ITOT) and cyber

About \$5.2 million of capital expenditure and an additional \$2 million of operating expenditure will fund ITOT transformation driven by a combination of external factors with shifts to cloud-based computing and internal factors driving the need to update ageing and obsolete legacy technology.



Asset lives

To proactively prevent future price shocks as the energy sector reduces emissions, we propose to cap asset lives to no more than the weighted average remaining life of the pipeline. This will facilitate an orderly energy transition and help smooth out future prices.



Security of critical infrastructure (SoCI)

SoCI has introduced new regulatory obligations that require critical power, water, and communications network to be protected from cyber-attacks and other threats. SoCI related programs will allow compliance with these new obligations and enhance ongoing security for customers.



Safeguard mechanism

GGP is captured under the Safeguard Mechanism so is obligated to reduce carbon emissions. To meet obligations, we forecast additional capital expenditure of about \$4 million and operating expenditure of \$3.5 million for carbon credits.



Operating expenditure

Covers inspection, maintenance and business support and is necessary for the proper functioning of the pipeline. We forecast opex of \$131 million over the five-year regulatory period or an average of \$26 million per year.



Changing demand profiles

In line with customer insights, we expect demand for capacity to remain constant on the GGP to support reliability as customers shift to more renewable sources.



Tariffs

For the 2025-29 period we propose to maintain existing tariff structures. However, as customers decarbonise their operations, we will consider the tariff structures for the 2030-34 access arrangement period.

3. OUR ENGAGEMENT

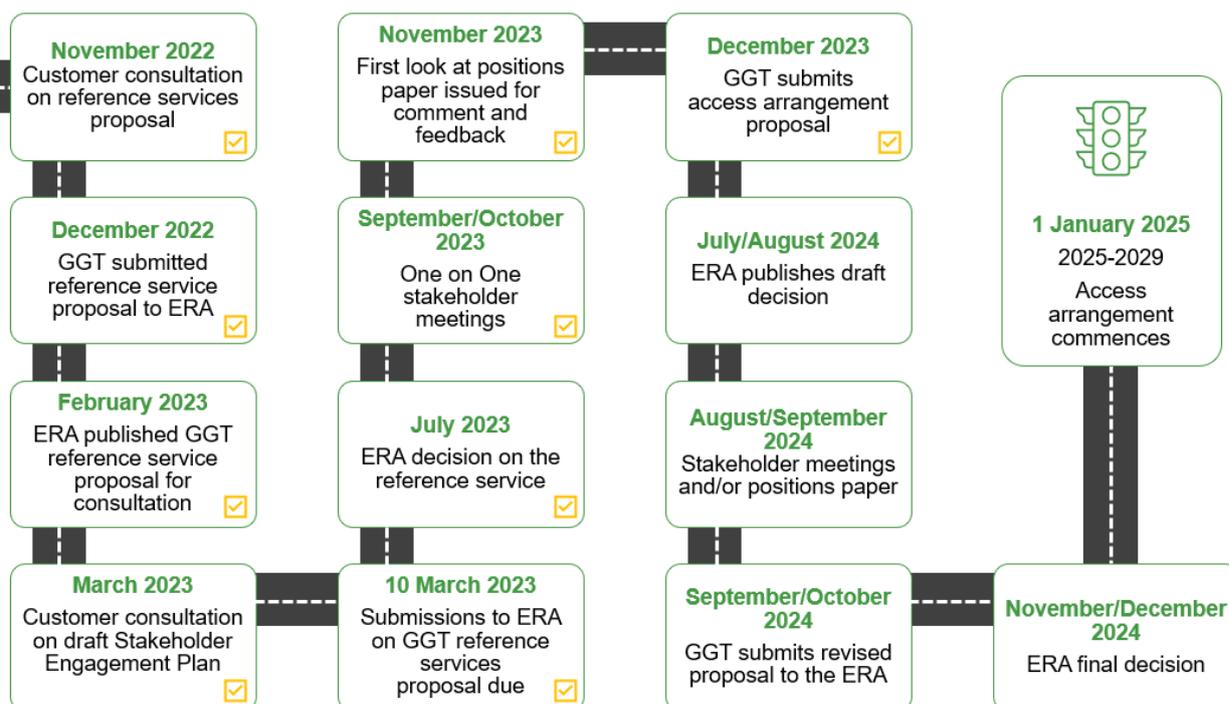
3.1 Engagement approach

In undertaking our engagement, we are consulting with customers to understand their perspectives and ensure that their preferences help shape our 2025 to 2029 access arrangement. GGT maintains consistent and ongoing communication with our customers, facilitated by our dedicated account managers within the Commercial team who respond to their immediate needs and proactively engage with them.

We recognise our pivotal role in the energy supply chain and how our operations are crucial in delivering economic value to our customers and supporting the transition to renewable energy sources.

Our approach has centred on engaging individually with key customers in a confidential face to face environment, so we can better understand the value they attach to the GGP and their future energy supply plans. These interactions have played an instrumental role in shaping this revised 2025 to 2029 Access Arrangement.

Following the ERA's release of its draft decision, our intention is to reconnect with our customers, as outlined in the engagement roadmap below.



3.2 Purpose and objectives

Purpose

The primary purpose of the engagement was to:

- gain a comprehensive understanding of the value our customers see in GGP and what their key priorities are in relation to the services provide by the GGP
- understand broad customers views and plans on decarbonisation
- garner feedback on key changes to expenditure driven by critical infrastructure
- share and seek feedback initial considerations for the 2025-2029 access arrangement, and
- provide customers with an opportunity review and challenge initial positions prior to finalisation of the access arrangement.



Objectives

Objectives for this consumer engagement were to:

- provide easy to understand, relevant and meaningful information to our largest customers to enable their effective participation in discussions about GGP and the focus areas – customer priorities, decarbonisation, and critical infrastructure
- listen to and explore customer thoughts and views on GGP and each focus area, and
- understand customer perspectives and ensure that their preferences shape our revised access arrangement.

Phases and goals of engagement

 Engagement plan	 Reference services	 Customer priorities	 Review	 Validate
Seek comments and suggestions on the depth and breadth of engagement plan	Understand customer views on GGP's reference services proposal	Increase our understanding of what customers value most and gauge reactions to key considerations	Test the initial positions set out for the access arrangement with our customers	Communicate the ERAs draft decisions and validate the revised access arrangement

3.3 Engagement plan

To help customers and other stakeholders understand the regulatory process and ways that they can engage, we prepared a draft stakeholder engagement plan. The draft plan sought feedback from customers on the proposed engagement approach. No feedback was received in response to the draft stakeholder engagement plan.

3.4 Reference services proposal

As part of GGT's regular engagement with its customers to discuss commercial, operational, and regulatory issues, we sought to understand the needs of customers including:

- gas demand and utilisation
- coordination of planned maintenance activities and availability of services
- future needs, and
- any regulatory impacts on customers.

In preparing the reference service proposal, GGT engaged with GGP customers to discuss the reference service proposal for the forthcoming access arrangement process.

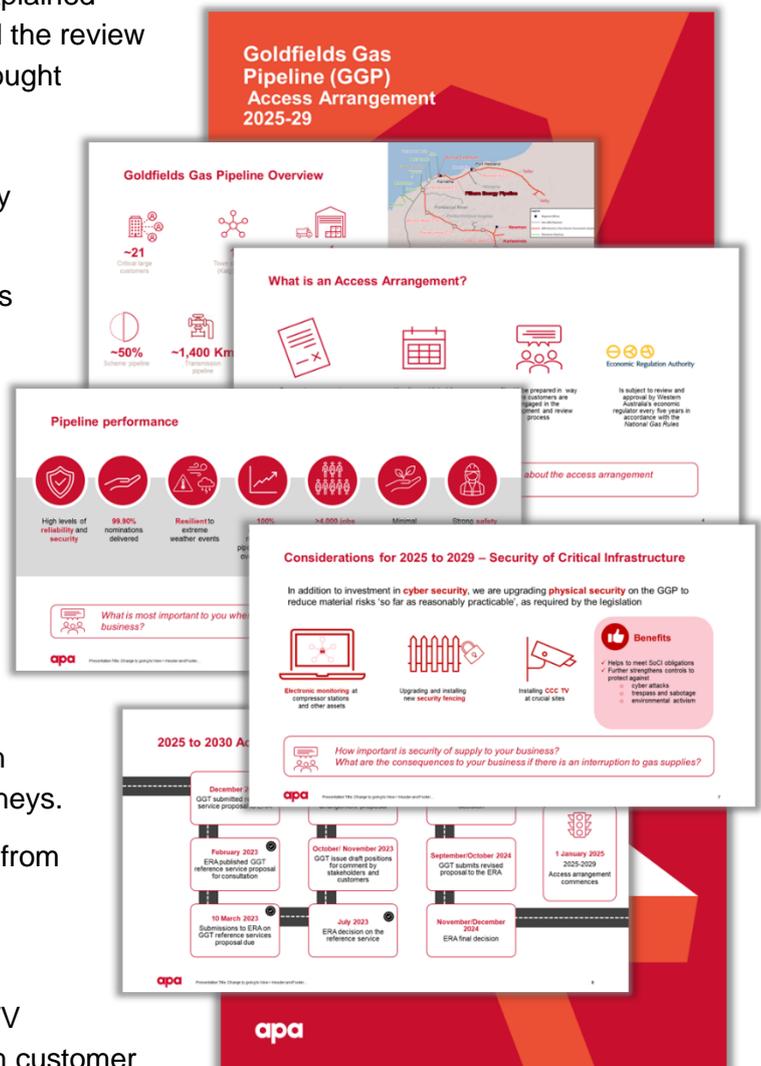
In summary, customers provided the following feedback:

- Customers were supportive of GGT offering the services as proposed.
- Customers were supportive of the firm transportation service being the single reference service for the forthcoming access arrangement period.
- Customers considered the current firm transportation service as the single reference service, was suitable given the current gas pipeline utilisation uncertainty.
- It was recognised that gas pipeline utilisation uncertainty was driven by increasing penetration of renewable energy and emission reduction initiatives in Western Australia.
- Customers considered that greater adoption of renewables will require more customised and flexible energy solutions in the future.

3.5 Understanding customer values and priorities

We undertook a series of customer interviews to delve deeper into customer views on the access arrangement and the services they receive from the GGP. To date, we have conducted interviews with 13 GGP customers. In these interviews we:

- Provided an overview of the GGP, explained access arrangements, and discussed the review and approval process. We actively sought feedback on whether additional information regarding the access arrangement process was required by customers.
- Explored GGP's performance in terms of safety, reliability, nominations delivered, and capacity growth. Customers were asked to prioritise aspects most significant to them concerning the services GGP provides to their business.
- Dived into the key considerations for the 2025 to 2029 period and talked to customers about their decarbonisation targets, primary focuses, and the role of gas firming in supporting their decarbonisation journeys.
- Explained new obligations stemming from SoCI legislation and the expected additional investments required for compliance, including electronic monitoring, security fencing and CCTV installation. We sought feedback from customer on the importance of supply security to their business and the consequences of any interruptions to supply.
- Talked through the timeline for the review of the 2025 to 2029 access arrangement and future touchpoints for further engagement related to that.



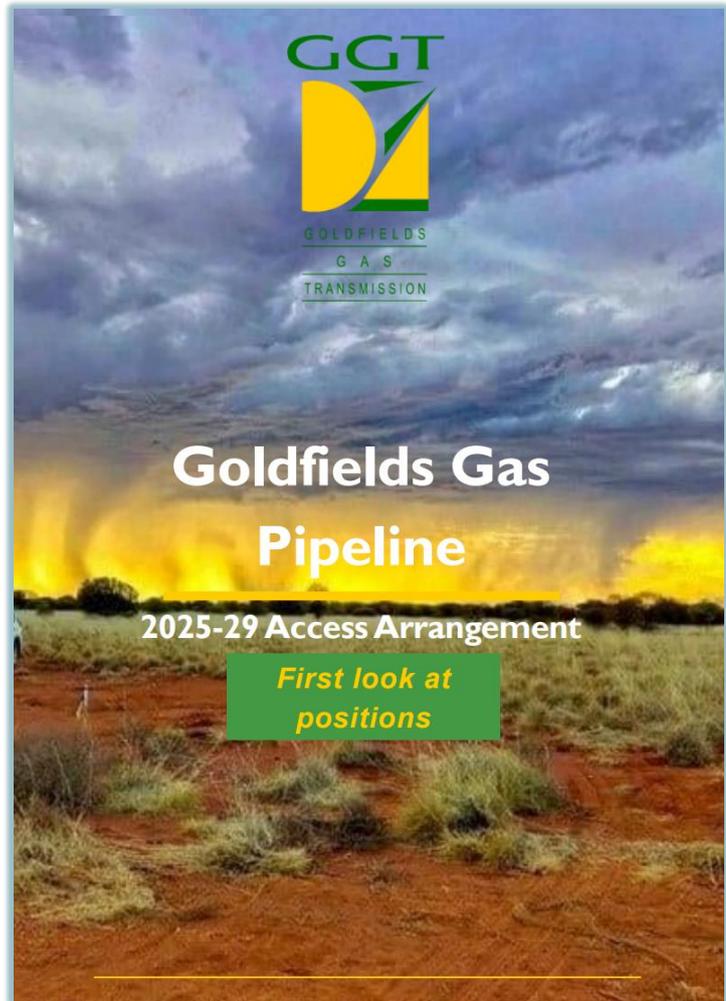
Following these interviews, we shared a first look at positions paper with our GGP customers to gather their feedback discussed below.

3.6 Testing key positions for the 2025 to 2029 access arrangement

We sought feedback from customers on our plans for the 2025-29 regulatory period. The first look at positions paper outlined our key strategies and investment plans that will maintain safe, secure, and reliable service delivery. The paper can be found [here](#).

The paper specifically covered:

- What is an access arrangement?
- Overview of the GGP
- Our engagement including what we heard and how we responded
- Key positions for 2025 to 2029
- Delivering value to customers including focus areas for investment in the 2025-29 access arrangement period
- An overview of our plans for operating and capital expenditure
- A summary of the building block revenue components and how the 2025-29 period compared to the 2020-24 period
- Key drivers for the proposed change in revenue
- Changes in the reference service tariff.



3.7 What we heard and how we responded

We have focused our engagement on priority issues where customers can have the greatest impact and where their opinion would genuinely influence and guide the access arrangement.

Priority Issue	What we heard	How we responded
 <p>Understanding of Access Arrangements</p>	<p>At the outset of our customer interviews, we delivered a brief introduction regarding the GGP and explained the process for developing an access arrangement. Most interviewed customers already possessed a certain level of comprehension regarding the access arrangement process, and as a result, they did not require additional information.</p> <p>Additionally, a subset of customers expressed minimal concerns about the access arrangement process, primarily because they had negotiated service agreements in place.</p>	<p>Customers with limited understanding of the access arrangement process received additional clarification and explanation.</p> <p>We are committed to maintaining ongoing engagement with all customers throughout the access arrangement process and will ensure updates are provided as needed.</p>
 <p>Reliability</p>	<p>When asked what is most important to customers when thinking about the services GGP provides to their business, reliability and security of supply emerged as the most important priority.</p> <p>All customers interviewed stressed the importance of reliability and security. Several customers mentioned that while they have limited backup diesel generation capacity, their production processes come to a halt without access to gas.</p> <p>Furthermore, customers underscored the potential safety concerns and the substantial financial consequences associated with any interruptions to their operations and production. One customer highlighted the significance of timely notification in the event of a supply interruption, as it plays a pivotal role in their preparations to prevent facility damage. Another customer noted reputational impacts.</p>	<p>GGT recognises the utmost significance that customers attribute to the reliability and security of gas supply. To maintain the current levels of reliability and performance of the pipeline, we propose a continuation of stay in business (replacement) capital expenditure programs, for example:</p> <ul style="list-style-type: none"> • Inline inspections (\$13 million) • Wiluna emissions reduction (\$4 million) • Turbine overhauls (\$2 million) <p>The total investment to ensure continued reliable operation of the GGP amounts to \$69.3 million over the upcoming period.</p>
 <p>Tariffs</p>	<p>One customer queried whether there will be a Maximum Hourly Quantity (MHQ) product included in the upcoming access arrangement.</p>	<p>Due to the evolving landscape of renewable energy, MHQ products and services are most effectively addressed on a case-by-case basis. This allows for a more tailored approach, enabling individual renewable and usage profiles to directly influence the service or option that best suits the customer's needs.</p>

Priority Issue	What we heard	How we responded
 <p>Decarbonisation</p>	<p>Around half of the interviewed customers expressed distinct decarbonisation goals, although there was variation in both their level and timing.</p> <p>To meet these objectives, customers are exploring or actively implementing renewable energy sources like wind, solar, and battery technologies.</p> <p>Furthermore, some are investigating the enhancement of their operations by electrifying key industrial processes with a view to reducing emissions.</p> <p>As a result, customers are anticipating potentially lower consumption of gas overall but increased capacity requirements and higher MHQ.</p> <p>Most interviewed customers noted the indispensable role of natural gas in current or future decarbonisation strategies.</p> <p>Due to their remote locations and the primary emphasis on renewables in these strategies, gas firming becomes crucial. This is because renewables alone may not be cost-effective or dependable enough to sustain their current operations and production.</p>	<p>The role of gas within the energy system will evolve as we work towards emissions reduction.</p> <p>Gas will continue to be indispensable for demanding or costly-to-electrify energy applications.² For this reason, many of our customers acknowledge the critical role gas will play in their own decarbonisation journeys.</p> <p>Based on the insights gathered from our customers, we anticipate that capacity demanded will remain consistent.</p> <p>At GGT, we are committed to supporting our customers at various stages of their decarbonisation journey by ensuring safe, reliable, and secure gas transportation services.</p> <p>We do not foresee a need for capacity expansion in the short term and, as a result, have not proposed any expansion programs.</p> <p>To proactively prevent future price shocks as the energy sector reduces emissions, we propose to commence an orderly transition by capping asset lives to the life of the main pipeline. This is to accelerate depreciation of the pipeline and smooth future tariffs.</p> <p>We may consider changing the tariff structure in the subsequent access arrangement period (2030 to 2034), if the growing impact of renewables alters how the pipeline is utilised.</p> <p>It's important to note that the GGP is subject to the Federal Government's Safeguard Mechanism, discussed below.</p>

² [The Role of Gas Infrastructure in Australia's Energy Transition, June 2023](#) considers the potential role for gas infrastructure in supporting the transition of the Australian energy system to net-zero emissions. The report was commissioned by AGIG, APA Group and Jemena and authored by Boston Consulting Group.

Priority Issue	What we heard	How we responded
 <p>Safeguard Mechanism</p>	<p>During our customer interviews, we provided an overview of the Safeguard Mechanism and its potential implications for the GGP. One customer expressed interest in gaining a deeper understanding of how the GGP aligns with the Safeguard Mechanism and how it is applied across both the covered and uncovered sections.</p>	<p>The Safeguard Mechanism places an obligation on us to achieve emissions reduction targets on the GGP. Programs to reduce emissions include Wiluna emissions reduction, leak detection and repair, and compressor engine overhauls. We are also reducing emissions through changes to the way GGP compressors are operated. In October, the government advised of updates to the definition of production variables. We are considering the implications and anticipate we may need to buy carbon credits. Our preliminary estimate is this will cost about \$3.5 million for covered GGP. This estimate constitutes about 60 per cent of the total expenditure allocated to covered GGP portion in accordance with our cost allocation method.</p>
 <p>Critical Infrastructure</p>	<p>During discussions with customers regarding the new Security of Critical Infrastructure (SoCI) legislation, which has required us to upgrade both cyber and physical security, we inquired about the significance of security to their operations and the potential repercussions should there be a disruption in gas supply. Without exception, all customers underscored the critical importance of a secure supply of gas. Some customers did mention they had backup options, typically in the form of diesel generators. However, they pointed out that relying on diesel was costly, offered limited capacity, and represented a suboptimal energy supply solution. The majority of customers unequivocally stated that any interruption in gas supply would result in a halt in production, with immediate and substantial financial repercussions for their businesses, for some running into millions of dollars per day. Customers also noted potential safety implications discussed further below.</p>	<p>GGP is now subject to the new obligations mandated by SoCI legislation, leading to an increase in investment in cyber and physical security. Beyond these obligations, customers have strongly emphasised the critical importance of a secure gas supply. In response to both these new obligations and customer feedback we are increasing expenditure on physical security at key sites. GGP will be allocated a share of corporate-wide cyber program costs to meet obligations and protect pipeline services. This investment is not only essential for fulfilling our SoCI obligations but also serves to protect the pipeline and the services it provides against potential heightened risks from cyberattacks, trespass, and more recently, environmental activists.</p>

Priority Issue	What we heard	How we responded
 <p>Affordability</p>	<p>Although reliability was of paramount importance for all customers, a subset of customers also noted that affordability of the service was also a priority.</p> <p>A few customers expressed the challenges they encounter when balancing the volatility of gas and commodity prices and the remaining operational life of their facilities against the economic feasibility of investing in renewables as part of decarbonisation strategies.</p> <p>As a consequence of relying on renewables and the evolving role of gas firming in the future, one customer noted that the pipeline will need to support a higher maximum hourly quantity while transporting less gas overall.</p> <p>Another customer expressed concern that increases to reference service tariffs arising from the revised access arrangement might also affect negotiated tariffs.</p>	<p>We understand the impact increasing costs have on our customers, and the need to maintain tariffs as low as possible.</p> <p>Australia’s current high interest rate and inflation environment has impacted the revenue and tariff outcomes for covered GGP. Interest rates and inflation are key inputs into the calculation of revenue allowances and tariffs for the reference service.</p> <p>The proposed increases in reference service tariffs in the 2025 to 2029 access arrangement are primarily driven by higher interest rates and inflation, with a lesser amount related to increases in operating expenditure essential for the pipeline’s reliability, safety, and security.</p> <p>We also have large, fixed costs, like other pipeline operators. This means that even though not everyone is using the pipeline all the time, we still must provide and maintain it so that it is ready whenever needed.</p> <p>We continually work on enhancing our operational efficiency to ensure cost increases are minimised.</p>
 <p>Safety</p>	<p>Multiple customers raised concerns about potential safety repercussions resulting from a disruption in their gas supply, which include:</p> <ul style="list-style-type: none"> • The potential shutdown of underground ventilation systems, with backup supply only offering sufficient ventilation for worker escape. • The risk of damage to critical equipment and the impact on the integrity of the equipment. • The unexpected shutdown of equipment utilised in mining and processing operations. 	<p>Safety is a core value at GGT. We consider safety as the critical first step in how we operate our business in a way that ensures business integrity.</p> <p>At GGT, safety means we focus on managing the personal safety of our staff and contractors as a priority. This also means the safe management and operation of our assets.</p> <p>Asset management is aligned to good industry practice to minimise risk to as low as reasonably practicable and provide safe, reliable, and secure services.</p> <p>We propose to invest \$69 million in capital expenditure programs to ensure the continued safe and reliable operation of the GGP.</p>

4. REFERENCE SERVICE

4.1 Overview

Rule 47A of the NGR require a full regulation pipeline service provider to submit to the ERA a reference service proposal prior to the full access arrangement proposal.

Of the services identified in GGT's reference service proposal, we proposed the firm transportation service as the single reference service on the GGP. The ERA accepted GGT's proposal.

Consequently, GGT's total revenue proposed for the covered in the GGP 2025-29 access arrangement proposal is reflected in the calculation of the tariff for the firm transportation service. The tariff serves as an important benchmark for commercial negotiations.

4.2 NGR requirements

The reference service proposal that GGT submitted in accordance with rule 47A:

- Identified the GGP and included a reference to a website where a description of the pipeline can be inspected.
- Set out a list of all the pipeline services that GGT can reasonably provide on the GGP, and a description of those pipeline services fitting the characteristics in subrule 47A(2):
 - Type of service
 - Priority of service relative to other pipeline services of the same type
 - Receipt and delivery points.
- Identified, from the services in this list, at least one pipeline service to specify as a reference service and provide relevant supporting information.

In deciding on the reference service proposal, the ERA had regard to the reference service factors as set out in NGR.³ These factors are:

- Actual and forecast demand for the pipeline service, and the number of prospective users of the service
- The extent to which the service is substitutable with another pipeline service to be specified as a reference service
- The feasibility of allocating costs to the service.

³ NGR, rule 47A(15).

- The usefulness of specifying the pipeline service as a reference service in supporting access negotiations and dispute resolution for other pipeline services, such that:
 - Reference services serve as a comparison for the assessment of other pipeline services by a user or prospective user when negotiating access to those other services
 - A reference tariff serves as a price benchmark for other pipeline services
 - Reference service terms and conditions serve as a template for the terms and conditions of other pipeline services.
- The likely regulatory cost for all parties (including the ERA, users, prospective users, and the service provider) in specifying the pipeline service as a reference service.

A summary of the determination of the covered GGP reference service is discussed below.

4.3 What we proposed

On 21 December 2022, GGT submitted the reference service proposal for covered GGP. The proposal included a list of pipeline services that covered GGP can reasonably provide, as outlined in Table 4-1.

Additional detail on each of these services can be found in the reference service proposal.⁴

Table 4-1 Services that can reasonably be provided using the Goldfields Gas Pipeline

Service	Description
Firm transportation service	<ul style="list-style-type: none"> • Transportation from a receipt point to a delivery point. • Highest priority service • Available between any receipt point and any delivery point.
Interruptible transportation service	<ul style="list-style-type: none"> • Transportation from a receipt point to a delivery point. • Lower priority service (may not be available on a given day). • Available between any receipt point and any delivery point.
Firm parking service	<ul style="list-style-type: none"> • Pipeline storage of gas • Highest priority right to store
Interruptible parking service	<ul style="list-style-type: none"> • Pipeline storage of gas • Lower priority service (may not be available on a given day).
Firm loan service	<ul style="list-style-type: none"> • Borrowing of gas from pipeline line pack. • Highest priority right to borrow.
Interruptible loan service	<ul style="list-style-type: none"> • Borrowing of gas from pipeline line pack. • Lower priority service (may not be available on a given day).

⁴ GGT, Goldfields Gas Pipeline Reference Service Proposal, December 2022, pp. 8-12.

Service	Description
In-pipe trade service	<ul style="list-style-type: none"> Facilitation of trade of gas between pipeline users.
Interconnection service	<ul style="list-style-type: none"> Provision, or facilitation, of interconnection to the pipeline.

Of the services identified in the reference service proposal, it was proposed to specify the firm transportation service as the single reference service on the GGP.⁵

4.3.1 Firm transportation service

Pipeline service users requiring highly reliable gas supplies typically require a correspondingly reliable gas transportation service. To meet this requirement, most gas transmission usage is driven by the business needs of pipeline users. Those business needs are, in turn, driven by the end users of gas transported by pipeline users. Users transporting gas to facilities or end pipeline service providers offer firm transportation service.

Firm transportation service is the most reliable service the provider can make available on its pipeline. Should the interruption or curtailment of pipeline services be necessary, firm transportation service has priority ahead of other types of transportation service and other services using pipeline capacity. To allow provision of the firm transportation service to continue, firm transportation service is not interrupted or curtailed until all other services have been interrupted or curtailed to the extent necessary.

Firm transportation service is a service between any GGP receipt point, and any delivery point on the pipeline. The specific receipt and delivery points to which the firm transportation service rates are specified in the user's gas transportation agreement.

The firm transportation service was proposed to be a reference service for the following reasons:

- High demand for the service.
- Feasible to allocate cost to the service.
- Useful in supporting access negotiations and dispute resolution for other pipeline services.
- Low regulatory cost for administering the service.
- All current gas transportation agreements with users of the covered pipeline are agreements for the provision of firm service.

⁵ GGT, Goldfields Gas Pipeline Reference Service Proposal, December 2022, p. 4.

- Inquiries from prospective users of the GGP have usually been for access to firm service (although different prospective users have sought different terms and conditions on which that service is to be provided).

Customers were supportive of the firm transportation service being the single reference service for the forthcoming access arrangement period.⁶ On this basis, a firm transportation service was proposed and no other service.

4.4 What the ERA decided

On 21 June 2023, the ERA accepted GGT's reference service proposal to specify the firm transportation service as the single reference service for the GGP. In making their decision, the ERA had regard to the reference service factors and the outcome of consultations held by the ERA and GGT.⁷

The ERA considered that there may be grounds to specify the interruptible transportation service as an additional reference due to expected demand as the covered pipeline was fully contracted at the time of the reference service proposal. It was however noted that:

- The GGP interconnection with the Northern Goldfields Interconnect pipeline may reduce the demand for the interruptible transportation service in the future.
- Pipeline users and consumers are better informed about their preferences than the regulator. And that in the absence of any submissions from users (including prospective users), the ERA accepts GGT's proposal to specify the firm transportation service as the only reference service.⁸

4.5 Amendment to Access Arrangement

In the Access Arrangement we have amended the name of the reference service from 'firm service' to 'firm transportation service'. It is the same service and the term firm transportation service clarifies that it is a transportation service as opposed to another type of service.

The reference tariff, terms and conditions on which each reference service will be provided are set out in the proposed Goldfields Gas Pipeline Access Arrangement. The GGP access arrangement has been revised to reflect the change in the name from 'firm service' to 'firm transportation service'.

4.6 Other supporting material

Further information can be found in:

⁶ GGT, Goldfields Gas Pipeline Reference Service Proposal, December 2022, p. 13.

⁷ ERA, Reference service proposal decision for the Goldfields Gas Pipeline, 21 June 2023, p. 1.

⁸ ERA, Reference service proposal decision for the Goldfields Gas Pipeline, 21 June 2023, p. 1.

- GGP-AA5-Proposed revised access arrangement (tracked)-1 January 2024-Public
- GGP-AA5-Proposed revised access arrangement-1 January 2024-Public
- GGT reference service proposal and ERA determination service can be found on the ERA's website.⁹



⁹ ERA website at <https://www.erawa.com.au/gas/gas-access/goldfields-gas-pipeline/access-arrangements/access-arrangement-for-period-commencing-2025>

5. DEMAND FORECASTS

5.1 Overview

This section sets out the proposed demand forecasts for covered GGP. We have applied a future-looking approach based on contracted capacity information.

The proposed demand forecasts for covered GGP include forecasts from Yarraloola receipt point and the receipt point from the recently commissioned NGI. The APA-owned NGI is a separate pipeline that connects into the GGP. The forecast contracted capacity flowing from NGI into GGP has been treated as covered capacity. This has increased the demand forecasts for covered GGP over 2025-29 compared to forecasts for 2020-24.

The approach to forecasting demand from the NGI to GGP and proposed demand forecasts are discussed in this section.

5.2 NGR requirements

The NGR require access arrangement information for a transmission pipeline access arrangement proposal (such as GGP) to include:

- the usage of the pipeline over the earlier access arrangement period showing:
 - minimum, maximum, and average demand for each receipt or delivery point; and
 - user numbers for each receipt or delivery point;¹⁰ and
- a forecast of pipeline capacity and utilisation of pipeline capacity over the access arrangement period and the basis on which the forecast has been derived (to the extent it is practicable to forecast pipeline capacity and utilisation of pipeline capacity over the access arrangement period);¹¹ and
- the forecasts or estimates must be supported by a statement of the basis of the forecast or estimate, and the forecast or estimate must be arrived at on a reasonable basis and represent the best forecast or estimate possible in the circumstances.¹²

This section sets out the actual and forecast information, and the basis for the demand forecasts in accordance with Rule requirements.

¹⁰ National Gas Rules, rules 72(1)(iii)(A) and (B).

¹¹ National Gas Rules, rule 72(1)(d).

¹² National Gas Rules, rule 74.

5.3 What demand information is used for

Demand forecasts reflect our expectations about the future use of covered GGP customers for firm transportation services. Covered GGP provides firm transportation services to mining and mineral processing operations in the Pilbara, Mid-West, and Goldfields-Esperance regions of Western Australia (WA). These operations predominantly produce iron ore, gold, and nickel for export to international markets.

The demand forecasts are used to calculate the average tariff for the reference service – the firm transportation service. The firm transportation service tariff is structured into three tariff components. Each tariff component is allocated a portion of the allowed revenues. The allocation of revenue is based on the underlying cost structure of the GGP. The revenue allocated to the tariff components is divided by the unit measure relating to each of the tariff components to determine the unit rate for each tariff component.

Expectations about future demand for pipeline services are important for determining future investment decisions for the pipeline and whether augmentation of the pipeline may be needed. Demand, in turn, is influenced by the tariff.

5.4 Demand in 2020-24 period

At the time the demand forecasts were prepared for the 2020-24 period, all the existing capacity of the GGP available for firm service provision was contracted by users. In 2019, the demand forecast for the 2020-24 period for pipeline services (capacity and throughput) was derived on the following basis.¹³

- Forecast demand for pipeline services was expected to be consistent with existing gas transportation agreements
- The GGP was forecast to be fully contracted over the access arrangement period
- Throughput forecasts were based on a three-year average of actual load factors
- Forecast gas usage by major users of the GGP was expected to be consistent with the commodity forecasts for gold, nickel, and iron ore.

¹³ Goldfields Gas Transmission, Goldfields Gas Pipeline, Access Arrangement Revision Proposal Supporting Information, January 2019, p. 11

Table 5-1 Comparison of ERA 2019 approved forecasts and actual demand

Demand forecasts (capacity and throughput) for pipeline services						
ERA approved forecasts	Unit	2020	2021	2022	2023	2024
Maximum capacity	TJ/day	110.53	110.53	110.53	110.53	110.53
Average capacity	TJ/day	110.53	110.53	110.53	110.53	110.53
Average throughput	TJ/day	90.71	90.71	90.71	90.71	90.71
Actual demand (capacity and throughput) for pipeline services						
	Unit	2020	2021	2022	2023	2024
Maximum capacity	TJ/day	108.53	111.42	115.67	na	na
Average capacity	TJ/day	108.53	109.49	110.77	na	na
Average throughput	TJ/day	96.78	94.57	97.23	na	na
Variance between forecast and actuals						
	Unit	2020	2021	2022	2023	2024
Maximum capacity	TJ/day	-2.00	0.89	5.14	na	na
Average capacity	TJ/day	-2.00	-1.04	0.24	na	na
Average throughput	TJ/day	6.07	3.86	6.52	na	na
Variance between forecast and actuals						
	Unit	2020	2021	2022	2023	2024
Maximum capacity	%	-1.8%	0.8%	4.7%	na	na
Average capacity	%	-1.8%	-0.9%	0.2%	na	na
Average throughput	%	6.7%	4.3%	7.2%	na	na

As shown in the table, the variances in average throughput ranged from 4.3% to 7.2% higher than forecast. This indicates that customers were transporting more gas than had been forecast in 2019 and an indication of greater utilisation of the pipeline.

5.5 Impact of Northern Goldfields Interconnect

The NGI will enable gas to flow from the west coast to the GGP. The capacity of the NGI is listed as ~76 TJ/day on the WA Gas Bulletin Board.¹⁴ As previously discussed, the flow of gas from NGI, may create additional capacity on the GGP. We have treated the forecast contracted capacity from the NGI to GGP as covered capacity based on provisions in the GGP access arrangement.

To date, level of contracting for the NGI services has been slower than anticipated, and slower than experience on other pipelines. The slow uptake has been due to several unforeseen circumstances including Covid related issues, higher costs of operations, lags in planning

¹⁴ As viewed on 06 December 2023 [Gas Bulletin Board \(WA\) \(aemo.com.au\)](https://www.aemo.com.au/gas/bulletin-board/wa)

approvals, and supply chain problems. These factors have impacted the viability of several mining projects.

This makes forecasting the NGI capacity for the purposes of the GGP access arrangement challenging.

GGT has considered two cases for NGI forecasts:

- Case 1 – Base current contracted capacity for injections from NGI into GGP
- Case 2 – Base case plus highly probable contracting.

Case 1 reflects the current contracted positions of the NGI. Base 2 reflects Case 1 and a forecast of highly probable contracted capacity. Based on cautious but positive market sentiment¹⁵, we have chosen to use Case 2 which is a more confident outlook.

The proposed forecasting approach is discussed in the next section.

5.6 Forecast demand in 2025-29 period

The proposed approach to demand forecasting is consistent with the approach adopted for the 2020-24 access arrangement period. We have applied a future-looking approach based on actual and highly probable contracted capacity for Yarraloola and NGI.

5.6.1 Forecast method

The proposed demand forecasts for covered GGP include forecasts from Yarraloola receipt point and the receipt point from the recently commissioned NGI. GGT has adopted a future-looking approach to forecasting demand for covered GGP services.

The proposed approach to forecasting demand for covered GGP firm transportation services for the 2025-29 period, involves two main steps:

1

Forecasting injections from Yarraloola receipt point

- The proposed forecast for Yarraloola receipt point is based on:
- Current contracted capacity for the covered portion of GGP¹⁶ for the 2025-29 period
 - Expectations about probable renewals of contracts that expire during the 2025-29 period
 - Throughput calculated using the average of actual load factors in the 2020-24 access arrangement period (resulting in a load factor of 0.9).

¹⁵ In a media statement on 28 July 2023, APA stated that ““The NGI also demonstrates that we are backing Western Australia’s resources sector. We are investing ahead of demand, supporting the government’s long-term growth plans in areas like critical minerals and providing confidence to project owners that reliable energy is available to bring new projects to market”. Media statement can be viewed here <https://www.apa.com.au/news/asx-releases/2023/apa-media-release---northern-goldfields-interconnect-pipeline-officially-opened/>

¹⁶ Most of these contracts are for negotiated service under a separate Gas Transportation Agreement. The contracted information is used to calculate the reference service tariff.

2

Forecast injections from NGI receipt point

The proposed forecast for NGI receipt point is based on:

- Currently contracted capacity plus highly probable contracted capacity (Case 2 information as provided by APA)
- Removal of contract capacities that transport gas along the NGI delivery points and do not flow into GGP (information as provided by APA)
- Expectations about renewals of contracts that expire during the 2025-29 period
- The NGI throughput has been based on the Yarraloola receipt point average throughput (load factor 0.9).

5.6.2 Demand forecasts for 2025-29

Based on the above methodology, our view of demand forecasts for GGP firm transportation services during the period 2025-29 period are shown in the following table. In case 2, NGI adds 22.8 to 32.8 TJ/day of capacity to the demand forecast for GGP.

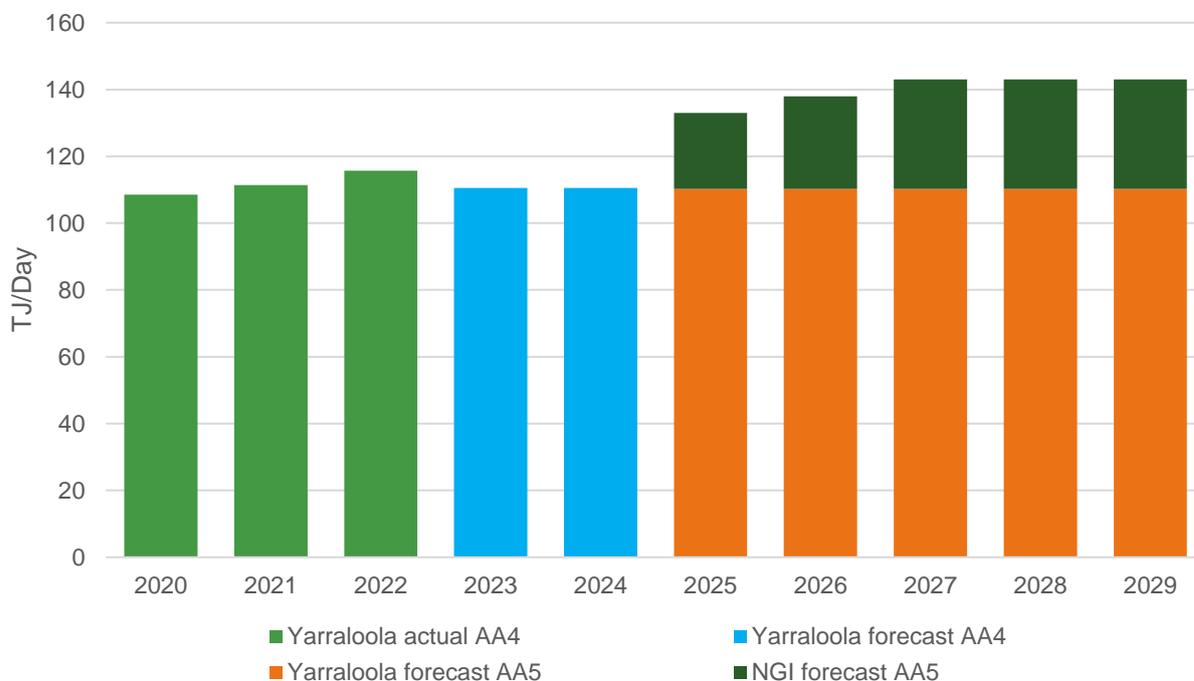
Table 5-2 GGP 2025-29 demand forecasts - Yarraloola receipt point and NGI receipt point

	2025	2026	2027	2028	2029
	Forecast	Forecast	Forecast	Forecast	Forecast
Total Contracted Capacity (TJ/day)					
Yarraloola	110.2	110.2	110.2	110.2	110.2
NGI (Case 2)	22.8	27.8	32.8	32.8	32.8
Total	133.0	138.0	143.0	143.0	143.0
Throughput (TJ/day)					
Yarraloola	93.3	93.3	93.3	93.3	93.3
NGI (Case 2)	19.7	24.0	28.3	28.3	28.3
Total	113.0	117.3	121.6	121.6	121.6

Source: GGT and APA

The ten-year trend in forecast and actual maximum capacity for covered GGP is shown in the chart below. The impact of the NGI is to increase the maximum capacity of the demand forecasts for covered GGP by an average 30TJ/day over 2025- to 2029 representing an increase in average maximum capacity of about 27%.

Figure 5-1 Ten-year trend – forecast and actual demand (TJ/day)



5.7 Demand forecasts meet NGR requirements

In accordance with NGR Rule 74, the demand forecasts for covered GGP are arrived at on a reasonable basis and represents the best forecasts and estimates possible in the current circumstances.

The contracted capacity information for Yarraloola is based on GGT confidential customer information - the best source of information for forecast demand. In the current circumstances, capacity for Yarraloola is fully contracted or expected to be fully contracted for the 2025-29 period. As Yarraloola receipt point is fully contracted there is little to no scope for variation.

The NGI receipt point is based on publicly available information and APA confidential customer information. The demand forecast prepared for NGI receipt point is a combination of current contracted capacity and highly probable contracts in the 2025-29 period. The information is consistent with the information APA has provided to the market. The information is the best information in the current circumstances.

The forecasts for throughput for both Yarraloola and NGI is based on the average of actual load factors in the 2020-24 access arrangement period for Yarraloola receipt point. This information is currently available for 2020, 2021, and 2022. The throughput averaging method is consistent with the approach used to prepare the forecasts for the 2020-24 access arrangement. This method reflects the best approach for NGI as there is currently no throughput history for NGI.

5.8 Other supporting material

Further information can be found in:

- GGP-AA5-Attachment 5.1-Demand forecast report-1 January 2024-Public
- GGP-AA5-Attachment 5.2-Demand forecast model-1 January 2024-Public
- GGP-AA5-Attachment 5.2-Demand forecast model-1 January 2024-Confidential
- GGP-AA5-Access arrangement information-1 January 2024-Public



6. COST ALLOCATION METHOD

6.1 Overview

The cost allocation requirements of the NGR and the principles and approach GGT has applied in preparing the access arrangement revision proposal are summarised in this section.

Currently, about half of GGP is subject to full regulation (covered), the other half to light regulation. As such, for regulatory purposes the GGP is two notional pipelines - the covered pipeline and the uncovered pipeline. The cost allocation approach for GGP requires several steps including the allocation of costs between the covered and uncovered portions of the GGP, and an allocation of shared corporate costs from the APA Group (APA).

GGT's cost allocation approach is consistent with the approach approved by the ERA in the 2019 Final Decision on Proposed Revisions to the GGP Access Arrangement for 2020 to 2024 (ERA 2019 Final Decision).¹⁷

6.2 NGR requirements

The allocation of the total revenue and costs to reference services and other services for the purpose of reference tariff determination and cost recovery are governed by rules 93 and 95 of the NGR.

Under Rule 93, total revenue is to be allocated between reference and other services in the ratio in which costs are allocated between reference and other services. Costs are to be allocated between reference and other services as follows:

- costs directly attributable to reference services are to be allocated to those services
- costs directly attributable to pipeline services that are not reference services are to be allocated to those services, and
- other costs are to be allocated between reference and other services on a basis (which must be consistent with the revenue and pricing principles) determined or approved by the regulator.¹⁸

Rule 95 sets out the way revenue and costs are to be allocated to tariffs. A tariff for a reference service provided by means of a transmission pipeline must be designed to:

- generate from the provision of each reference service the portion of total revenue referable to that reference service; and

¹⁷ ERA (2019), Final Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, 19 December 2019, paras 155-156, and 325.

¹⁸ NGR, Rule 93.

- (as far as is practicable consistently with the above requirement) to generate from the user, or the class of users, to which the reference service is provided, the portion of total revenue referable to providing the reference service to the particular user or class of users.¹⁹

The portion of total revenue referable to a reference service is to be determined as follows:

- costs directly attributable to each reference service are to be allocated to that service; and
- other costs attributable to reference services are to be allocated between them on a basis determined or approved by the regulator. The basis must be consistent with the revenue and pricing principles.²⁰

Similarly, the portion of total revenue referable to providing a reference service to a particular user or class of services is to be determined as follows:

- costs directly attributable to supplying the user or class of users are to be allocated to the relevant user or class; and
- other costs are to be allocated between the user or class of users and other users or classes of users on a basis set out by the regulator. The basis must be consistent with the revenue and pricing principles.²¹

6.3 What cost allocation is used for

The GGT Cost Allocation Method (CAM) is used to allocate GGT costs between covered and uncovered GGP, and to allocate shared corporate costs from the APA Group (APA) to covered GGP. The allocation of costs between covered and uncovered GGP is used for:

- Allocation of actual costs for reporting information to the regulator and other internal reporting, and preparation of access arrangement revisions
- Allocation of forecast costs for access arrangement revisions.

The forecast costs are used for the determination of regulated tariffs for reference services. In the case of GGP, all costs allocated to covered GGP are used to determine the regulated tariff for the reference service – the firm transportation service. There are no other reference services provided by covered GGP.

The cost allocation principles and approach has been developed to align with the NGR requirements. GGT has ensured that the cost allocation complies with the ERA's cost allocation approach set out in the ERA 2019 Final Decision.

¹⁹ NGR, Rule 95(1).

²⁰ NGR, Rule 95(2).

²¹ NGR, Rule 95(3).

6.4 GGP cost allocation principles

GGT has followed the principles in the NGR to allocate costs to GGP. GGT has also been guided by the ERA's 2019 Final Decision for the 2020-24 period.²²

Most costs fall into two categories:

 <p>Directly attributable costs to the pipeline service provider</p>	 <p>Other directly attributable costs to the pipeline service provider</p>
<p>Expenses that are clearly associated with a specific asset. Such costs are coded to the asset or to a project relating to the asset. This is done through creation of a purchase order at the time of purchase or direct employees charging their time to the asset or project. The employees charge their times using an hourly rate derived from employee payroll costs.</p>	<p>Expenses that are directly attributable to a number of the service providers. To give a true reflection of the cost of running an asset, it is necessary to allocate a portion of such costs to the relevant assets that have benefited from the activity provided. For example, APA's Integrated Operations Centre (IOC) assets.</p>

6.4.1 Allocation of opex between GGP covered and GGP uncovered

GGP operating expenditure is classified as follows:

- **APA operations costs** - the expenditures which GGT incurs through its sourcing of engineering and field services for the GGP under an Operating Agreement with APT Pipelines (WA) Pty Ltd
- **GGT operations costs** - the expenditures which GGT incurs through its direct sourcing of services to support the provision of pipeline services using the GGP
- **APA commercial operations** - the expenditures which GGT incurs through its sourcing of commercial and related services for the GGP through a Commercial Services Agreement with APT Goldfields Pty Ltd

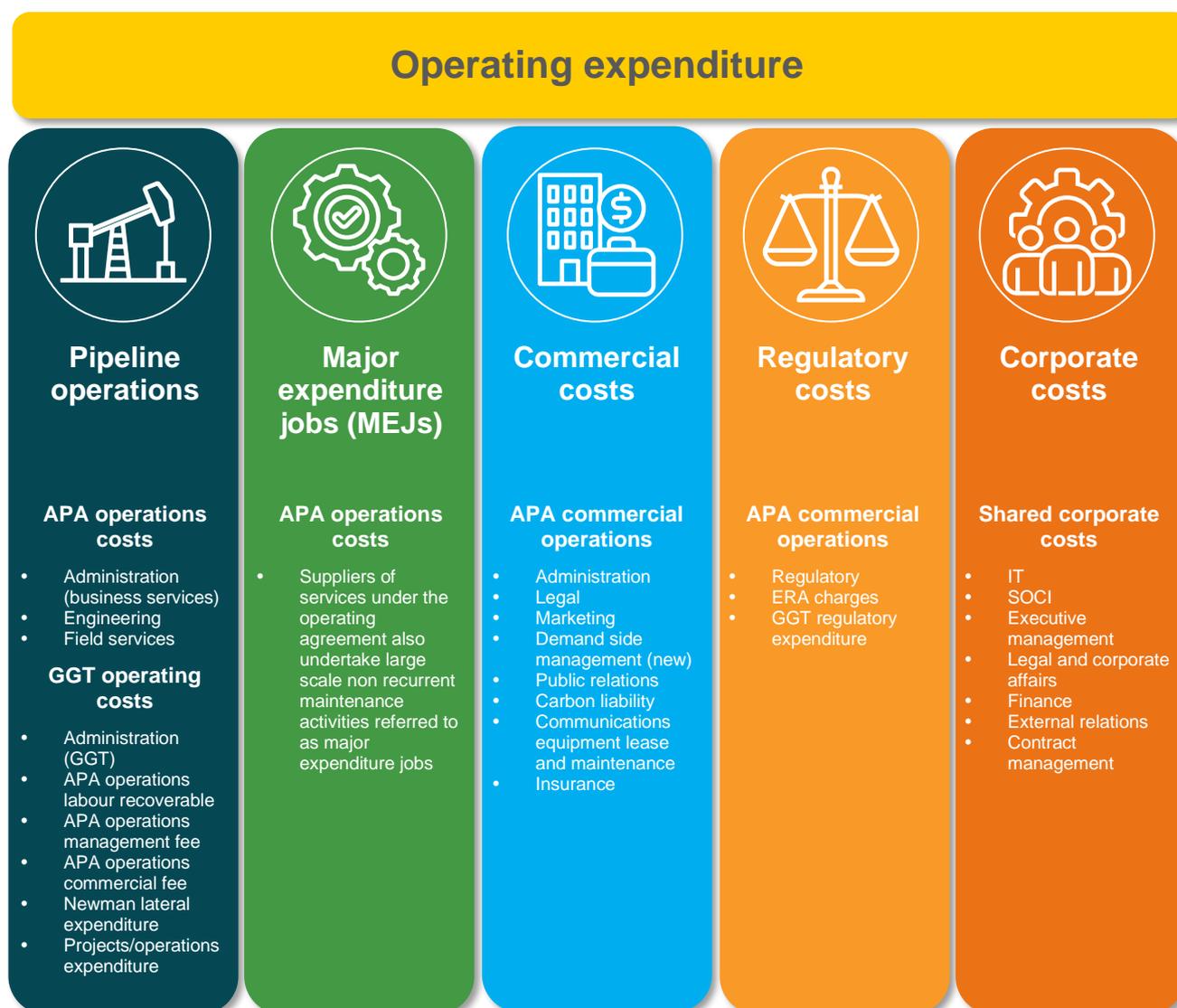
²² ERA (2019), Final Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, 19 December 2019, paras 155-156.

- **Shared corporate expenditure** – corporate expenditures for head offices and national services (discussed in Section 6.4.3)

Figure 6-1 shows how the above classifications map to the regulatory cost categories.

These costs are discussed in more detail in Attachment 6.1 Cost allocation method.

Figure 6-1 Mapping of opex classifications to regulatory cost categories

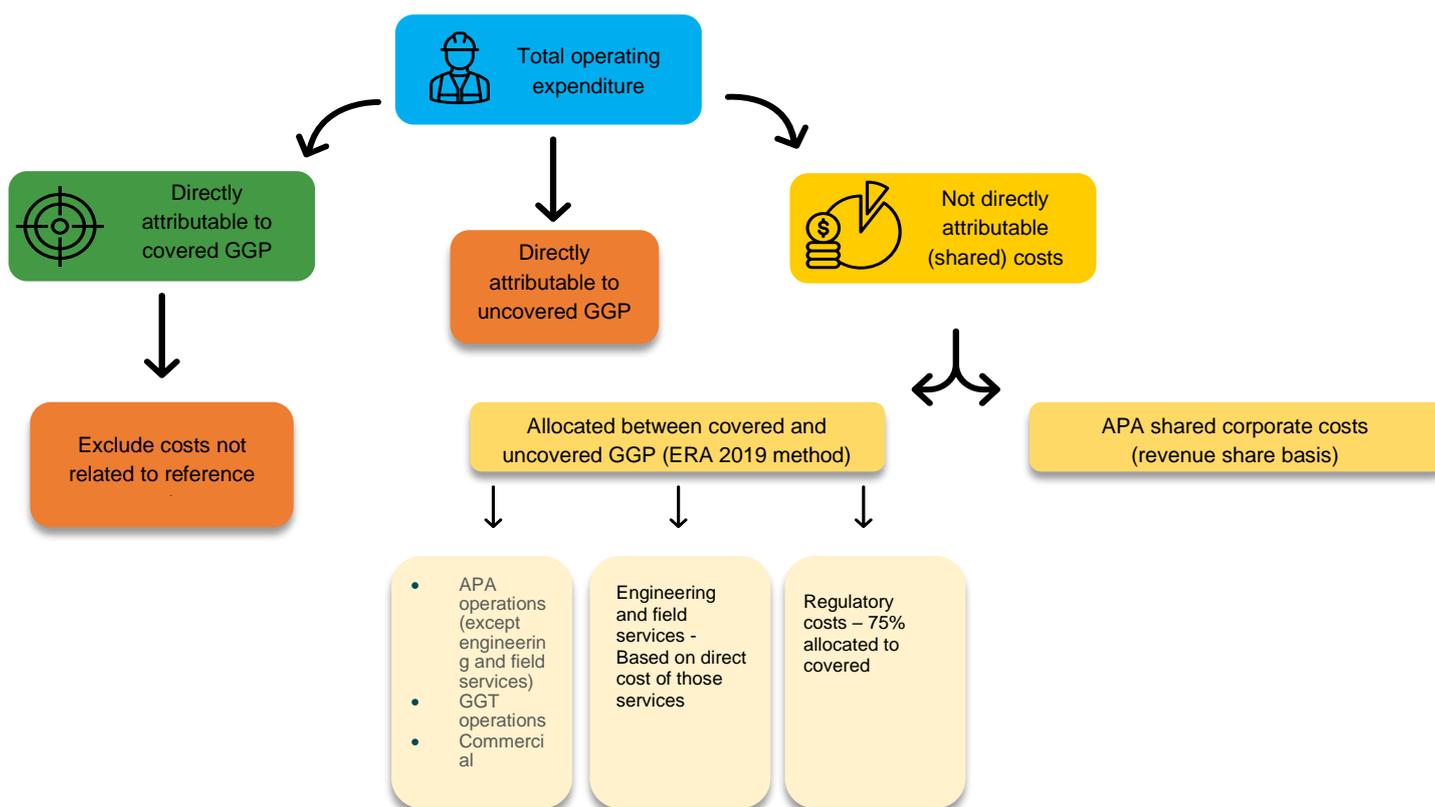


The cost allocation method for GGP aligns with the ERA 2019 Final Decision:²³

- APA operations costs (except for engineering and field services) and commercial and GGT operations operating expenditure (except for regulatory expenditure) would be allocated to the covered pipeline according to the ratio of the number of terajoules per day (TJ/d) of contracted capacity provided using the covered pipeline to the number of TJ/d of contracted capacity provided using the whole GGP (covered and uncovered pipelines) in the year in which the expenditure was incurred.
- Regulatory costs are to be allocated 75% to the covered pipeline.
- APA operations expenditures within the engineering and field services categories would be allocated to the covered pipeline based on the expected relative direct costs of those services.

Figure 6-2 provides a summary of GGT’s cost allocation methodology for GGP operating expenditure.

Figure 6-2 Cost allocation approach for GGP operating expenditure



Allocations of shared corporate costs are discussed in Section 6.4.3.

²³ ERA (2019), Final Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, 19 December 2019, paras 155-156.

6.4.2 Allocation of capex between GGP covered and GGP uncovered

Where it is possible to assign a GGP capital expenditure to the covered or uncovered portion of the pipeline, such expenditures will be allocated to the covered and uncovered portion accordingly.

Under the circumstance where it is not possible to assign the GGP capital expenditures to the covered or uncovered portion of the pipeline, allocation of the capital expenditure to each of the portions has been carried out in the following manners:

- **Compressor related capital expenditure:** where there are both covered and uncovered compressor units installed at a compressor station, the allocation of capital expenditure between services provided using the covered pipeline and services provided using the uncovered GGP assets is the ratio of (a) the number of covered pipeline compressor units at that compressor station to (b) the total number of compressor units at the station.
- **Non-compressor related capital expenditure:** capital expenditures are allocated to the covered pipeline in the following ratios:
 - For distance related assets (such as ILI projects) the ratio between the number of TJ/km/day of contracted capacity provided using the covered pipeline to (b) the number of TJ/km/day of contracted capacity provided using the GGP (the covered pipeline plus the uncovered GGP assets) during the year.
 - For all other assets the ratio between the number of TJ/day of contracted capacity provided using the covered pipeline to (b) the number of TJ/day of contracted capacity provided using the GGP (the covered pipeline plus the uncovered GGP assets) during the year.

6.4.3 Allocation of shared corporate expenditure between GGP covered and GGP uncovered

GGP benefits from APA corporate services. APA incurs capital and operating expenditure for the services provided from corporate functions (corporate expenditure) that support the operations of APA's assets. For financial accounting purposes, corporate expenditure is recorded at the APA corporate level and is not directly recorded among its assets. However, as corporate expenditure provides a shared benefit to these assets, APA allocates each asset a portion of this expenditure.

A share of corporate operating expenditure has historically been allocated to the covered pipeline under the 'corporate costs' opex category. However, the covered portion of the GGP has never been allocated a share of APA's corporate capital expenditures for regulatory purposes. This is despite GGP benefitting from the use of APA's shared corporate assets since being acquired by APA on 18 August 2004. APA has begun apportioning these costs in the current access arrangement (2020 to 2024) and will continue to in the future.

APA shared corporate expenses are allocated to each asset on a revenue basis. That is, the revenue earned by GGP relative to the total revenue of all of APA's assets. APA applies this approach consistently for all assets, including other regulated assets. The revenue-based approach is an accepted approach by regulators.

APA considers the revenue-based allocation approach to be a reasonable and appropriate due to:

- The diverse nature of APA's asset classes, including gas (transmission, distribution and storage), electricity (transmission) and generation (gas, solar and wind).
- The diverse end users of each asset, from large mining companies to individual consumers.

Using customer numbers, total throughput, or any allocator other than revenue would result in an allocation of costs that is not proportionate to the relative benefit of each of APA's assets.

We note that the ERA has previously accepted revenue as an allocator where no more reasonable approach exists.²⁴ We consider that using revenue will result in a reasonable allocation method for corporate costs.

6.5 Cost allocation

The NGI has increased demand forecasts for contracted capacity and throughput on the covered GGP in the 2025-29 period. New capacity is treated as covered capacity in accordance with the GGP access arrangement.

Accordingly, we have changed the proportion of GGT costs allocated to covered GGP to reflect the increase in contracted capacity for covered GGP. The cost allocation percentages for allocating GGT incurred costs between covered and uncovered for the forecast period (2025-29) have increased the proportion of costs allocated to covered capacity.

Table 6-1 Cost allocation percentages for GGT costs between covered and uncovered GGP

Ratio of contracted covered capacity to total capacity			
YRP & NGI	Covered capacity	141.5	61%
	Uncovered capacity	90.7	39%
	Total capacity	232.2	100%

Ratio of terajoules kilometres of contracted covered capacity to terajoules kilometres total contracted capacity (TJ x KM)			
YRP & NGI	Covered capacity	117,607.3	70%
	Uncovered capacity	49,622.3	30%
	Total capacity	167,229.7	100%

²⁴ ERA, *Final decision on proposed revisions to the Dampier to Bunbury Natural Gas Pipeline access arrangement 2021 to 2025*, 1 April 2021, p. 290.

6.6 Other supporting material

Further information can be found in:

- GGP-AA5-Attachment 6.1-Cost allocation method-1 January 2024-Public
- GGP-AA5-Attachment 6.1-Cost allocation method-1 January 2024-Confidential
- GGP-AA5-Attachment 6.2-Cost allocation model-1 January 2024-Confidential

7. REVENUE BUILDING BLOCK

7.1 Overview

Revenue needed to maintain a reliable and secure pipeline for the 2025-29 period is presented in this section. The forecast total revenue has increased compared to the approved revenue for 2020-24 period. This increase is mostly due to higher interest rates and operating costs.



\$158.5M



Return on capital

Based on the available data, the estimated regulated Weighted Average Cost of Capital (WACC) for the calendar year 2025 is 7.41%.



\$101.2M



Regulatory depreciation

Regulatory depreciation (return of capital) recovers the outstanding cost of previous investments that GGP has made to ensure ongoing reliable operation.



\$55.2M



Inflationary gain

Adjustment to avoid double-counting of inflation when nominal WACC is applied to nominal value of the asset base. The inflationary gain is forecast to be negative.



\$130.8M



Operating expenditure

GGP's operating activities are focused on continuing to deliver safe, secure, and reliable services.



\$13.2M



Tax allowance

Tax is calculated by applying the statutory income tax rate and allowed imputation credits to estimated taxable income.



\$348.6M



Building block revenue (2025-29)

The maximum revenue is a forecast of the revenue proposed to be earned by GGP for the period.



\$225.7M



Building block revenue (2020-24)

The revenue allowed for the current regulatory period, which is 35% below the proposed revenue for 2025-29.

GGT has calculated the total revenue requirements for the GGP reference service tariff using the building block approach in accordance with the NGR Rule 76. The components of the building block are used to calculate the reference tariff for the reference service.

7.2 NGR requirements

Rule 76 requires that total revenue is to be determined for each year of the access arrangement period using the building block approach. The building blocks are:

- a return on the projected capital base for the year
- depreciation on the projected capital base for the year
- forecast of operating expenditure for the year
- the estimated cost of corporate income tax for the year
- any results from operation of an incentive mechanism (not applicable to GGP).

7.2.1 Proposed total revenue

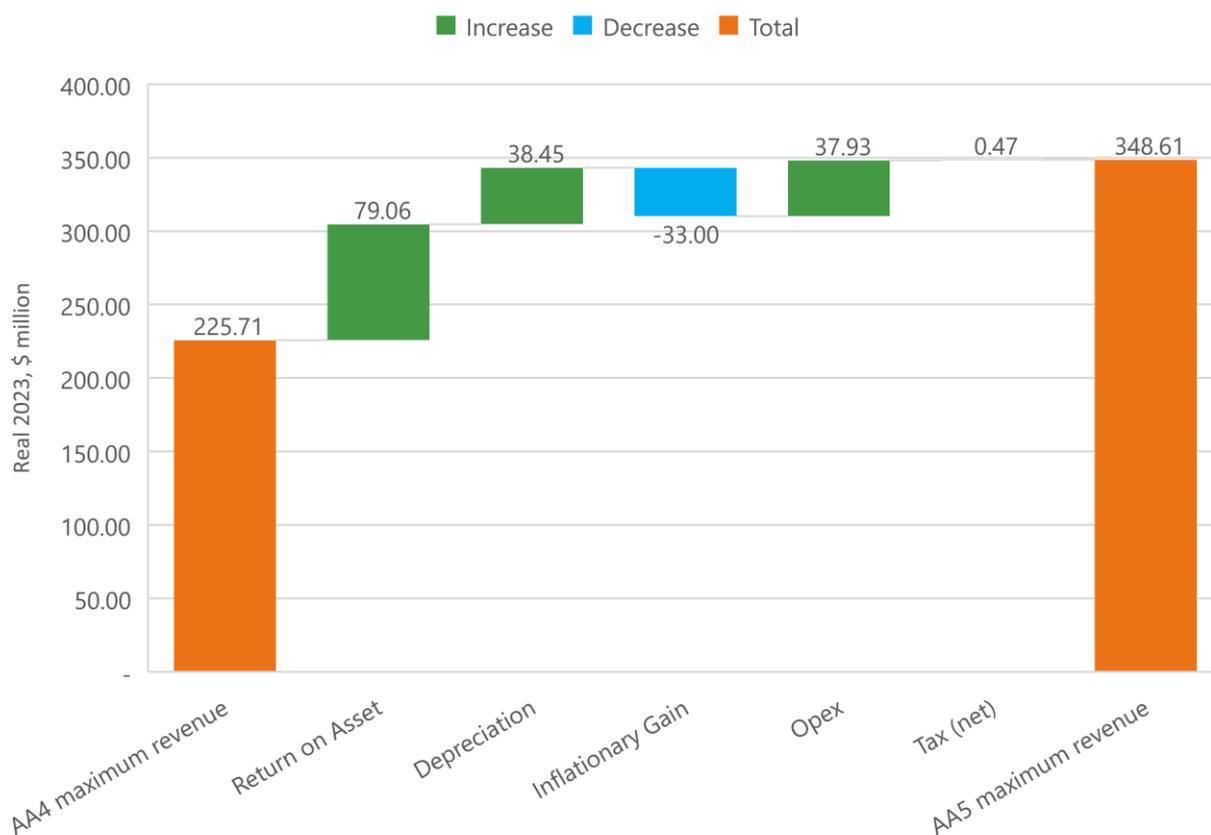
Proposed total revenue for the 2025-29 period (AA5) is forecast to be \$348.6 million (real \$2023). This is an increase of \$123 million (54 per cent) in real terms compared to the approved total revenue for 2020-24 (AA4).

Table 7-1 Proposed total revenue for AA5 period (Real \$2023, \$m)

Real \$2023 \$m	2025	2026	2027	2028	2029	Total
Building blocks						
Return on Asset	31.92	32.64	32.11	31.28	30.53	158.48
Depreciation	21.08	21.09	20.76	19.73	18.58	101.24
Inflationary Gain	-11.11	-11.36	-11.17	-10.88	-10.62	-55.15
Opex	25.52	25.98	26.16	26.79	26.35	130.80
Tax (net)	2.82	2.46	2.58	2.69	2.70	13.24
Total Building Block Revenue	70.24	70.80	70.44	69.60	67.53	348.61

The increase in forecast total revenue is mainly driven by a combination of higher interest rates and inflation, a moderate uplift in operating expenditure and a small amount of revenue related to investments that will increase the reliability and security of the pipeline.

Figure 7-1 Drivers of change between AA4 and AA5 maximum revenue (Real \$2023, \$m)



Source: AA4 revenue from ERA 2019 GGP Tariff model

7.3 Capital base

Rule 77(2) requires the opening capital base for the later access arrangement period is to be:

- the opening capital base as at the commencement of the earlier access arrangement period, plus
- conforming capital expenditure during the earlier access arrangement period, plus
- any amounts to be added to the capital base under rule 82 (capital contributions), rule 84 (surcharges) or rule 86 (reuse of redundant assets), less:
- depreciation over the earlier access arrangement period, redundant assets, and disposals.

We have calculated the value of the capital base for the 2025-29 period shown in Table 7-2 following the rule requirements. The value of the capital base (in real terms) has fallen slightly from the opening value of \$441.6 million in 2025 to the closing value of \$410 million at the end of 2029. This represents a fall of \$31.7 million or 7.2%.

Table 7-2 Opening capital base for 2025-29 period

Real \$2023 \$m	2025	2026	2027	2028	2029
Opening Capital Base	441.649	451.510	444.306	432.706	422.392
Capital expenditure	30.943	13.882	9.158	9.412	6.182
Depreciation	21.083	21.085	20.758	19.726	18.583
Asset Adjustment (Rules 82, 84, 86)	0.000	0.000	0.000	0.000	0.000
Closing Capital Base	451.510	444.306	432.706	422.392	409.991

7.4 Return on capital

Return on capital is an allowance that allows businesses to receive a return on its regulated capital base. The return on capital is usually a key driver of revenues. Interest rates are an important input into the calculation of the return on capital in the building block approach set out in the regulatory framework. Based on the available data, the estimated regulated WACC for the calendar year 2025 is 7.41%.

More information can be found in **Section 8**.

7.5 Depreciation

Depreciation is an allowance that allows capital investors to recoup their investment over the life of an asset. Generally, depreciation is calculated as straight line depreciation, where the opening value of the asset is depreciated in equal amounts over the remaining number of years in the asset's technical or economic life.

GGT is proposing to change the approach to calculating the asset lives by capping asset lives to the weighted average remaining life (WARL) of the pipeline and laterals class.

The proposed approach aims to proactively prevent future price shocks as the energy sector reduces emissions which will help smooth out future prices.

More information can be found in **Section 12**.

7.6 Opex

Opex includes inspection, maintenance and business support activities and is necessary for the proper functioning of the pipeline.

To ensure the ongoing provision of secure and dependable services to our customers, we propose opex of about \$26 million per annum (on average) for the 2025-29 period. This is in line with actual and estimated operating expenditure in the current period but represents a 41 per cent increase compared to the opex allowed by the ERA in the 2020-24 period.

This increase can be attributed to rising labour costs related to the maintenance of ageing assets, increased corporate expenses, primarily driven by information technology, and the necessary expenditure to meet new legislative requirements, such as SoCI

More information can be found in **Section 11**.

7.7 Corporate income tax

Under Rule 87A, the estimated cost of corporate income tax (ETC_t) of a service provider for each regulatory year of an access arrangement period is to be estimated in accordance with the following formula:

$$ETC_t = (ETIt \times rt) (1 - \gamma)$$

Where:

- ETIt is an estimate of the taxable income for that regulatory year that would be earned by a benchmark efficient entity as a result of the provision of reference services if such an entity, rather than the service provider, operated the business of the service provider
- rt is the expected statutory income tax rate for that regulatory year (30%), and
- γ is the allowed imputation credits for the regulatory year.

GGT has estimated the cost of tax in each regulatory year of the access arrangement period by applying this formula. Annual taxable income has been estimated as total revenue in each regulatory year less expenses allowed for income tax purposes. These expenses are the cost of debt financing, forecasts operating expenditure, and tax depreciation.²⁵

The estimated cost of corporate income tax has been reduced by an amount representing the value of the imputation or franking credits available under the dividend imputation provisions of Australian taxation law. The value of those credits has been estimated using an estimate of 0.50 for the factor gamma (γ) in the formula of rule 87A(1). This is the value of gamma specified by the ERA's 2022 Rate of Return Instrument. The estimates of the cost of tax in each year of the access arrangement period, are shown in the summary of total revenue set out in Table 7-1 Proposed total revenue for 2025-29 period above.

7.8 Other supporting material

Further information can be found in:

- GGP-AA5-Access arrangement information-1 January 2024-Public
- GGP-AA5-Tariff model-1 January 2024-Public
- GGP-AA5-Tariff model-1 January 2024-Confidential

²⁵ Depreciation on the historical cost of the assets comprising the GGP which may be depreciated for tax purposes (the tax asset base), calculated using the straight line method with the asset lives determined for taxation purposes by the Australian Taxation Office.

8. RETURN ON CAPITAL AND INFLATION

In recent years, Australia has been experiencing a high interest rates and high inflation period. The rate of return and inflation assumptions proposed for the 2025-29 period are based on information provided by the ERA. Using the ERA information, the value of Weighted Average Cost of Capital (WACC) applied in this proposal is 7.41%.

8.1 Rate of return

Return on capital is one of the revenue building blocks used to calculate the reference tariff. Return on capital is calculated by applying a rate of return to the project capital asset base and is a component of the building block method specified in the NGR.

GGT has estimated the rate of return for the access arrangement period using ERA's 2022 Final Gas Rate of Return Instrument (**RORI** or **instrument**). The instrument sets out the methods ERA uses to estimate the allowed rate of return and value of imputation credits.

The RORI fixes some parameters while allowing others to be updated with observed financial market information. Where required, GGT has updates these parameters in accordance with the RORI.

The 2022 RORI estimates the rate of return as the nominal vanilla weighted average cost of capital (**WACC**). WACC is calculated as:

$$WACC = E(r_e) \frac{E}{V} + E(r_d) \frac{D}{V}$$

where:

- $E(r_e)$ is the expected rate of return on equity
- $E(r_d)$ is the expected rate of return on debt
- E/V is the proportion of equity in the total financing (comprising equity and debt)
- D/V is the proportion of debt in the total financing

8.1.1 Return on equity

The return on equity is the return that investors require from a firm to compensate them for the risk they take by investing their capital. The RORI uses the Sharpe-Lintner Capital Asset Pricing Model (SL-CAPM) to estimate the return on equity.²⁶ The formula for the SL-CAPM is:

$$E(r_e) = R_f + \beta_i(R_m - R_f)$$

where:

- R_f is the risk free rate
- β_i is the equity beta
- $(R_m - R_f)$ is the market risk premium (**MRP**)

GGT has applied an equity beta of 0.7 and a MRP of 6.10% as outlined in the RORI.²⁷ The risk free rate was calculated as 4.19% using a placeholder averaging period of the 20 trading days to 31 August 2023, in accordance with the RORI.²⁸

8.1.2 Return on debt

The return on debt is the return that debt holders require from a firm to compensate them for the risk they take in providing debt financing to the company. The estimate of the return on debt will comprise the sum of the debt risk premium, the debt risk free rate, plus an additional margin for debt raising costs and debt hedging costs.²⁹

GGT has applied debt raising costs of 0.165% and debt hedging costs of 0.123% as outlined in the RORI.³⁰ The debt risk free rate (4.285%) and debt risk premium (1.986%) were calculated using a placeholder averaging period of the 20 trading days to 31 August 2023, in accordance with the RORI.³¹

8.1.3 Gearing

A business can choose to finance assets either by raising debt or by raising equity capital. The gearing ratio is the proportion of a business' capital base financed by debt and is calculated by dividing debt by the sum of debt and equity. The gearing ratio is used to weight the expected required returns on debt and equity to derive the WACC.

²⁶ ERA, 2022 final gas rate of return instrument, 16 December 2022, p. 15.

²⁷ ERA, 2022 final gas rate of return instrument, 16 December 2022, pp. 17-18.

²⁸ These estimates will be updated using GGT's nominated equity averaging periods for the final determination on AA5.

²⁹ ERA, 2022 final gas rate of return instrument, 16 December 2022, p. 8.

³⁰ ERA, 2022 final gas rate of return instrument, 16 December 2022, p. 19.

³¹ These estimates will be updated using GGT's nominated debt averaging periods for the final determination on AA5.

GGT has applied a gearing ratio of 55% in accordance with the RORI.³²

8.1.4 Rate of return

GGT has applied an estimated a rate of return of 7.41% to calculate revenue for the 2025-29 period in accordance with the ERA RORI. This estimation is outlined in Table 8-1.

Table 8-1 Rate of return – Weighted average cost of capital

Component		Value
Rate of return on equity	Risk free rate	4.19%
	Equity beta	0.7
	Market risk premium	6.10%
	Return on equity	8.46% = 4.19% + (6.10%*0.7)
Rate of return on debt	Debt risk premium	1.986%
	Debt risk free rate	4.285%
	Debt raising costs	0.165%
	Hedging costs	0.123%
	Return on debt	6.559% = 1.986%+4.285%+0.165%+0.123%
Gearing	Gearing	55%
WACC	Post tax nominal WACC	7.41% = 45*8.46%+55%*6.559%
	Post tax real WACC	4.71%

8.2 Basis of financial information

8.2.1 Rule requirements

Rule 73 of the NGR, sets out the requirements for the basis on which financial information is to be provided.

1. Financial information must be provided on
 - a) a nominal basis; or
 - b) real basis; or
 - c) some other recognised basis for dealing with the effects of inflation.

³² ERA, 2022 final gas rate of return instrument, 16 December 2022, p. 7.

2. The basis on which financial information is provided must be stated in the access arrangement information
3. All financial information must be provided, and all calculations made, on the same basis and using any applicable financial models published by the AER under these Rules.

8.2.2 Basis of financial information

Financial information in the access arrangement supporting material and models is provided in both nominal and real terms. Financial information expressed in real terms is at 31 December 2023.

Inflation data used to convert financial information into real 2023 dollars has been obtained from several sources:

- **Dates prior to 31 December 2023:** Financial values prior to 31 December 2023 have been escalated using December quarter CPI published by the Reserve Bank of Australia (**RBA**).³³
- **31 December 2023 & 31 December 2024:** Annual 2023 and 2024 CPI is not yet available, as such, the rate of inflation for 2023 and 2024 is based on the RBA's August 2023 Statement on Monetary Policy.³⁴ These estimates will be updated using actual CPI once available.
- **Dates after 31 December 2024:** Financial values after 31 December 2024 are de-escalated using the forecast rate of inflation approach prescribed in the ERA 2022 Rate of Return Instrument (**2022 RORI**).

In the 2022 Rate of Return Instrument, the ERA states:³⁵

The expected rate of inflation will be required:

- *For the roll forward of the regulated asset base and for indexing purposes to determine annual depreciation allowances.*
- *To back out the expected inflation underpinning the nominal building block allowances in the tariff variation mechanism, to allow accounting for subsequent actual inflation.*

³³ RBA, *Tables 1 and 2. CPI: Index Numbers; All groups CPI; Australia.*

³⁴ RBA, *Table 5.1: Output Growth and Inflation Forecasts*

³⁵ ERA, *2022 final gas rate of return instrument*, 16 December 2022, p. 20.

In the 2022 RORI, ERA states that it will apply the Treasury bond implied inflation approach for estimating expected inflation. This will be applied as follows:

- Estimating the expected inflation rate based on a term of five years
- Using the yields on two types of bonds: Commonwealth Government Treasury bonds, and Commonwealth Government Treasury-indexed bonds.

To prepare the access arrangement revision, GGT has obtained information from ERA on the estimate of expected inflation. The estimate provided by ERA was 2.58% using a placeholder averaging period of the 20 trading days to 31 August 2023.³⁶ Forecast inflation will be updated with actual CPI information once available.

Table 8-2 provides the inflation rates over AA4 and AA5.

Table 8-2 CPI and inflation information

	Period end CPI	Period end inflation	Deflation factor (convert nominal to real 31 December 2023)
2020	117.200	0.86%	1.163
2021	121.300	3.50%	1.124
2022	130.800	7.83%	1.043
2023	136.359	4.25%	1.000
2024	140.791	3.25%	0.969
2025	144.423	2.58%	0.944
2026	148.149	2.58%	0.920
2027	151.971	2.58%	0.897
2028	155.892	2.58%	0.875
2029	159.914	2.58%	0.853

8.3 Other supporting material

Further information about the calculation of the WACC can be found in:

- GGP-AA5-Tariff model-1 January 2024-Public
- GGP-AA5-Tariff model-1 January 2024-Confidential

³⁶ This estimate will be updated using GGT's nominated averaging periods for the final determination on AA5.

9. REFERENCE SERVICE TARIFF

9.1 Overview

The reference service tariff for the firm transportation service has been calculated from the building block revenue and the demand forecasts. The tariff proposed for the reference service is the same structure and revenue allocation approach as proposed for previous access arrangements. We anticipate that this may need to change in the future.

The tariff for the firm transportation service has increased due to the increase in the building block revenue as discussed in Section 8. The increase is mostly due to the higher interest rate and inflation environment, along with higher operating expenditure forecasts.

9.2 NGL and NGR requirements

9.2.1 Revenue and pricing principles

The Revenue and Pricing Principles in section 24 of the NGL pertain to the design of tariffs and tariff structures for reference services. The Revenue and Pricing Principles provide for:

- A service provider to be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in providing reference services least the efficient costs the service provider incurs in providing reference services; and complying with a regulatory obligation or requirement or making a regulatory payment.
- A service provider should be provided with effective incentives to promote economic efficiency with respect to reference services the service provider provides. The economic efficiency that should be promoted includes:
 - efficient investment in, or in connection with, a pipeline with which the service provider provides reference services, and
 - the efficient provision of pipeline services, and
 - the efficient use of the pipeline.
- Regard should be had to the capital base with respect to a pipeline adopted in any previous full access arrangement decision.
- A reference tariff should allow for a return commensurate with the regulatory and commercial risks involved in providing the reference service to which that tariff relates.
- Regard should be had to the economic costs and risks of the potential for under and over investment by a service provider in a pipeline with which the service provider provides pipeline services.
- Regard should be had to the economic costs and risks of the potential for under and over utilisation of a pipeline with which a service provider provides pipeline services.

9.2.2 Cost allocation

In accordance with NGR Rule 93, total revenue is allocated to the only reference service approved for covered GGP - the firm transportation service.

The cost allocation approach to GGP requires several steps including the allocation of costs between the covered and uncovered portions of the GGP, and an allocation of shared corporate costs. The cost allocation approach is discussed in Section 6.

9.2.3 Equalisation of revenues

Under NGR Rule 95, a reference service tariff for a transmission service must be designed to:

- generate from the provision of each reference service the portion of total revenue referable to that reference service
- as far as is practicable consistently with the above requirement, generate from the user, or the class of users, to which the reference service is provided, the portion of total revenue referable to providing the reference service to the users (as far as is practicable consistently

The proposed reference tariff has been designed to meet the Rule 95 requirements.

9.3 Approach to setting tariffs and tariff structures

Cost allocation

The cost allocation method described in Section 6, is used to allocate costs to the covered portion of GGP. Costs that are directly attributable to GGP are allocated between the covered and uncovered portions of GGP. Shared corporate costs are allocated to the covered portion of GGP based on a revenue approach.

There is only one reference service provided by the covered GGP. Therefore, total building block revenue is allocated exclusively to the firm transportation service.

The way tariffs are set under the NGR, requires the proposed total building block revenue (based on a build-up of costs) to be equal with the total revenue forecast to be earned from the reference tariff over 2025 to 2029. (Noting that most customers are on a negotiated tariff, for simplicity, we assume that all covered capacity on the GGP is on the reference tariff).

The proposed reference tariff has been calculated from the total building block revenue, and the forecasts of capacity and throughput for covered GGP (discussed in Section 5). The demand forecasts represent our best estimates of demand for firm transportation service using the covered GGP.

In its simplest form, the proposed revised reference tariff is calculated by dividing the forecast total building block revenue by the forecast capacity and throughput.

GGT is proposing to retain the three-part reference tariff structure which comprises:



Toll

Price per GJ of contracted capacity (MDQ) referred to as the toll component



Capacity reservation

Price per GJ MDQ kilometre referred to as the capacity reservation component



Throughput

Price per GJ kilometre referred to as the throughput component

This three-part structure reflects the underlying capital and operating cost structures used to provide pipeline services to individual customers at different locations along the GGP. For the most part, the GGP capital costs are invested in pipeline and related assets. These costs are 'sunk' in that there is no alternative use for them, and they are mostly fixed, in that the costs do not vary with how much customers use them.

Corporate capital costs included shared capital costs, information technology and operational technology costs, and cyber security programs are fixed in that they do not vary with use.

Operating expenditure is a mix of fixed and variable costs. The greater the volume of gas through a compressor station, the greater the impact on wear and tear and operations costs. A recent example of variable costs includes the costs associated with the purchase of carbon credits to meet Safeguard Mechanism obligations. The production variable used to establish the baseline is based on throughput (as discussed in Section 13).

To calculate each component of the reference tariff, the present value³⁷ of the building block revenue is allocated to each tariff component in a way that reflects the underlying costs.

The present value building block revenue is allocated in the following way:

- 11.3 per cent is allocated to the toll component
- 72.2 per cent is allocated to the capacity reservation component
- 16.5 per cent is allocated to the throughput component.

³⁷ The present value is lower than future value to account for the time value of money.

9.4 Justification for the tariff structures

GGT's approach to setting the tariffs and tariff structures aligns with the Revenue and Pricing Principles (RPP) and the NGR requirements.

Key considerations in considering GGP tariff structures:

- Recover efficient costs.
- Efficiency signals.

9.4.1 Revenue

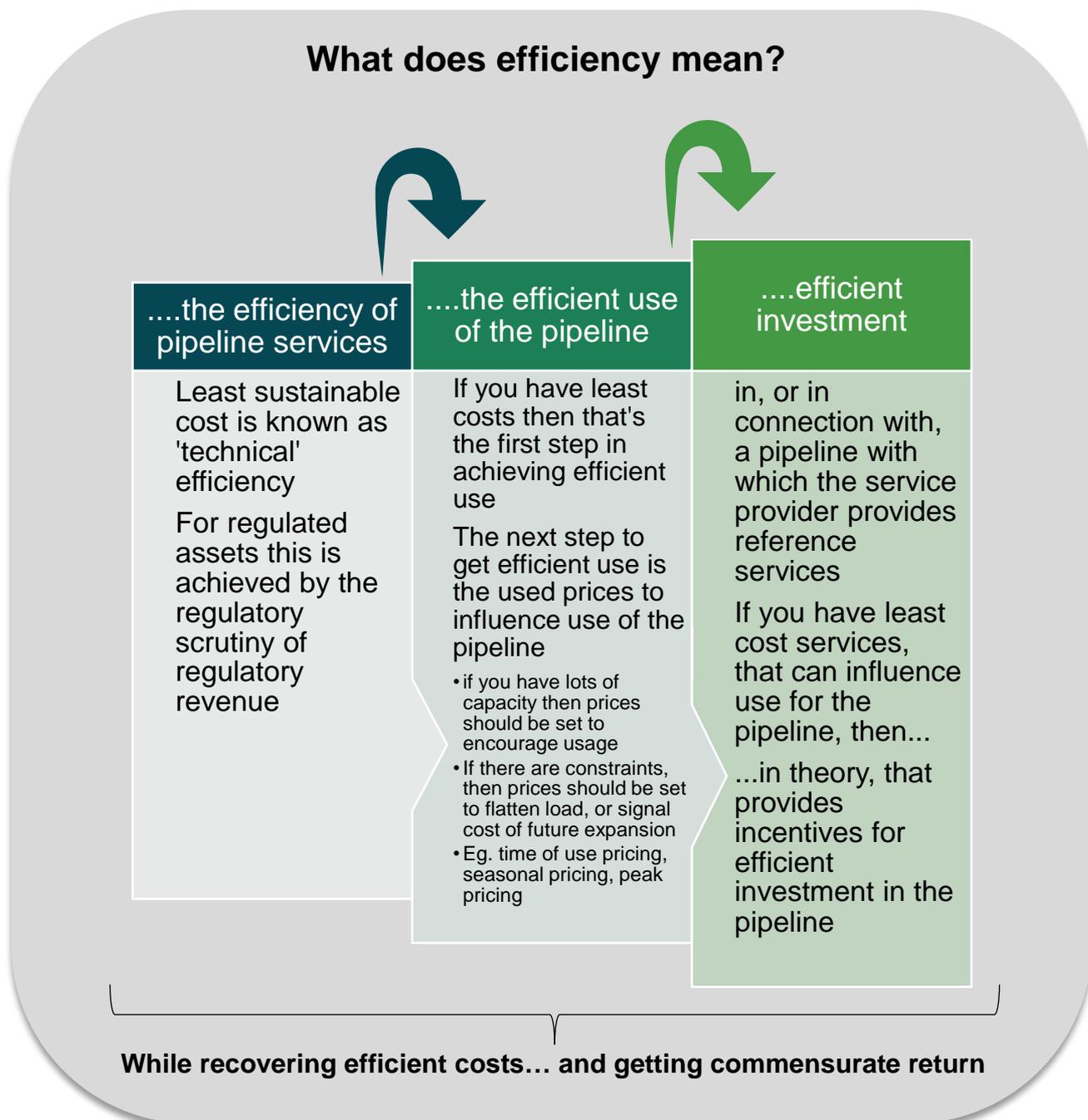
The proposed building block revenue for the provision of the reference service is converted into a tariff for the firm transportation reference service. The allowed revenue is based on cost of service and for covered GGP. The costs include a rate of return on capital which is intended to reflect the commensurate level of risk and return in a regulated environment.

The covered GGP reference service tariff is designed to equalise the total building block revenue and the revenue from customers for services provided by the pipeline. In this way the regulated tariff meets the first limb of the RRP.



9.4.2 Efficiency

The efficiency principles in the RRP reflect the three aspects of efficiency, which are productive efficiency, allocative efficiency, and dynamic efficiency.



Technical efficiency relates to the least sustainable cost or good value.

The proposed building block revenue discussed in section [8] as calculated in accordance with the NGR requirements represents the regulatory efficient cost of providing the reference service (as if all customers were on the reference service). The role of the regulator in assessing GGT

access arrangement is to ensure that the costs proposed are needed (prudent) and that they represent good value (efficient) – and not necessarily the least cost option – for the long term benefits of consumers.

GGP enjoys the benefits of economies of scale and scope in that corporate costs can be shared across all of APA. The benefit to GGP customer is that costs are much lower than is GGT was required to incur these costs on a stand-alone basis.

Efficient use (allocative efficiency) is intended to ensure that the tariffs for the reference service on efficient costs are passed on to customers in a way that best reflects the costs driven by customer usage.

The three-part tariff structure is applied to signal the amount of the pipeline capacity, distance, and volume of the pipeline used by each customer. The tariffs recover costs from customers based on how much capacity (MDQ) is contracted for, the distance from the contracted receipt and deliver point, and the volume of gas transported on the pipeline. The current structure allocates cost in a way that reflects use of the pipeline.

The tariff structure aims to make the tariff reflective of the costs of the resources used to provide the firm transportation service. Tariffs that reflect costs and are passed on to customers can influence longer-term investment decisions. In the case of pipelines, when there is no spare capacity on the pipeline, or a queue for capacity starts to form, at the current level of tariffs, it provides a signal to owners to expand or extent capacity.

While there is no spare capacity on the GGP, there are no plans to expand the GGP. The Northern Goldfields Interconnect has provided opportunity for some customers to flow gas from the NGI receipt point as an alternative to the Yarraloola receipt point. The NGI itself is not subject to this access arrangement.

9.5 Proposed tariff and tariff structures

The increases in the total building block revenue discussed in the previous section reflect the high interest rate and high inflation environment. These factors together with increased investment by GGT to meet reliability, safety and security requirements have all contributed to increases in regulatory revenue and reference service tariff.

The ERA approved reference service tariff for 2024 and the proposed 2025 tariff are shown below. Tariff increases are shown in real terms (Table 9-1) and nominal terms (Table 9-2).

Table 9-1 2024 ERA approved and 2025 proposed tariff (real \$2023)

Component	Unit	2024 (ERA approved)	2025 (Proposed)	Variance
<i>Toll</i>	\$/GJ MDQ	0.127527	0.162241	27%
<i>Capacity reservation</i>	\$/GJ MDQ km	0.000773	0.001249	62%
<i>Throughput</i>	\$/GJ km	0.000208	0.000332	59%

Table 9-2 2024 ERA approved and 2025 proposed tariff (nominal)

Component	Unit	2024 (ERA approved)	2025 (Proposed)	Variance
<i>Toll</i>	\$/GJ MDQ	0.131672	0.171836	31%
<i>Capacity reservation</i>	\$/GJ MDQ km	0.000798	0.001323	66%
<i>Throughput</i>	\$/GJ km	0.000215	0.000351	63%

If interest rates and inflation had remained more in line with historical levels, the changes in the tariff components would have been a 6 per cent decrease in the toll charge and increases of 20 per cent in the capacity reservation charge and 17 per cent in the throughput charge.

9.6 Future tariff considerations

Customers have told GGT of plans to decarbonise by investing in renewable energy sources. Although there is variation in both their level and timing. To meet these objectives, customers are exploring or actively implementing renewable energy sources and investigating the electrification of key industrial processes with a view to reducing emissions.

As a result, some customers are anticipating potentially lower consumption of gas overall but increased capacity requirements and higher MHQ in the longer term. Gas firming becomes crucial because renewables alone may not be cost-effective or dependable enough to sustain their current operations and production.

Based on the insights gathered from our customers, we anticipate that capacity demanded will remain consistent in the short term.

If volumes of throughout do start to fall because of customers shifting to renewables, then GGT may consider changing the tariff structure to more to capacity based charging relative to throughput.

So far, only two customers are showing sufficient and sustained levels of renewables penetration. As discussed in Section 5, in recent years there has been an increase rather than a reduction in throughput. Our capacity planning modelling indicates that there would be a significant drop in MDQ throughput once renewables penetration levels are >60%.

We intend to engage with customers about any intentions to redesign the tariff structures in advance of the next access arrangement revision.

9.7 Other supporting material

The Access Arrangement has been amended to reflect the proposed tariffs. The proposed revision to the access arrangement can be found in:

- GGP-AA5-Proposed revised access arrangement (tracked)-1 January 2024-Public
- GGP-AA5-Proposed revised access arrangement-1 January 2024-Public

10. CAPITAL EXPENDITURE

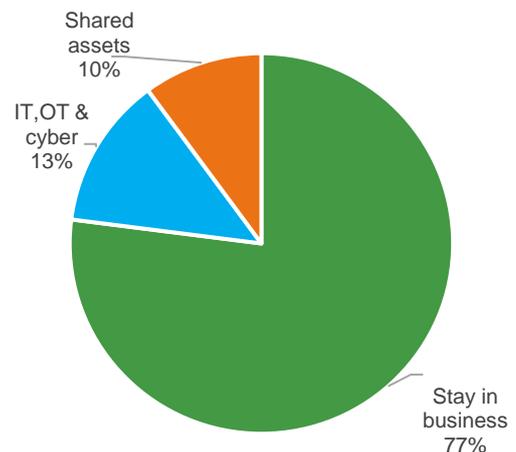
10.1 Overview

Capital expenditure (capex) covers the investments needed to ensure safe, secure, and reliable operation of the GGP. We are proposing to invest a total of \$69.3 million for replacement and stay in business programs, Information Technology & Operational Technology (ITOT), and security of critical infrastructure programs.

This includes major asset replacement and maintenance programs as well as our significant in-line inspection program scheduled to occur in 2025. Stay in business investments make up 77 per cent of our total forecast capital expenditure for the 2025 to 2029 period.

Information and operational technology together with cyber costs accounts for 13 per cent of our proposed capital expenditure program. The balance is related to shared corporate costs such as property and national programs.

A key internal driver is that GGP is now entering a new lifecycle phase as it approaches 30 years of age and many of its mechanical, electrical, and control components are nearing the end of their useful life. Investment requirements are growing due to the increasingly complex external environment. Over the last five years we have seen significant cost increases and supply shortages, particularly in remote areas, greater focus on emissions reductions and heightened focus on cyber and physical security.



10.2 NGR requirements

The National Gas Rules sets out that for capex to be added to the capital base it must be conform to the new capital expenditure criteria. This requires capex to be:³⁸

- as incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services.
- justifiable on the basis of overall positive economic value, necessary to maintain/improve the safety of services, maintain the integrity of services or maintain capacity to meet current levels of demand; and

³⁸ NGR, Rule 79.

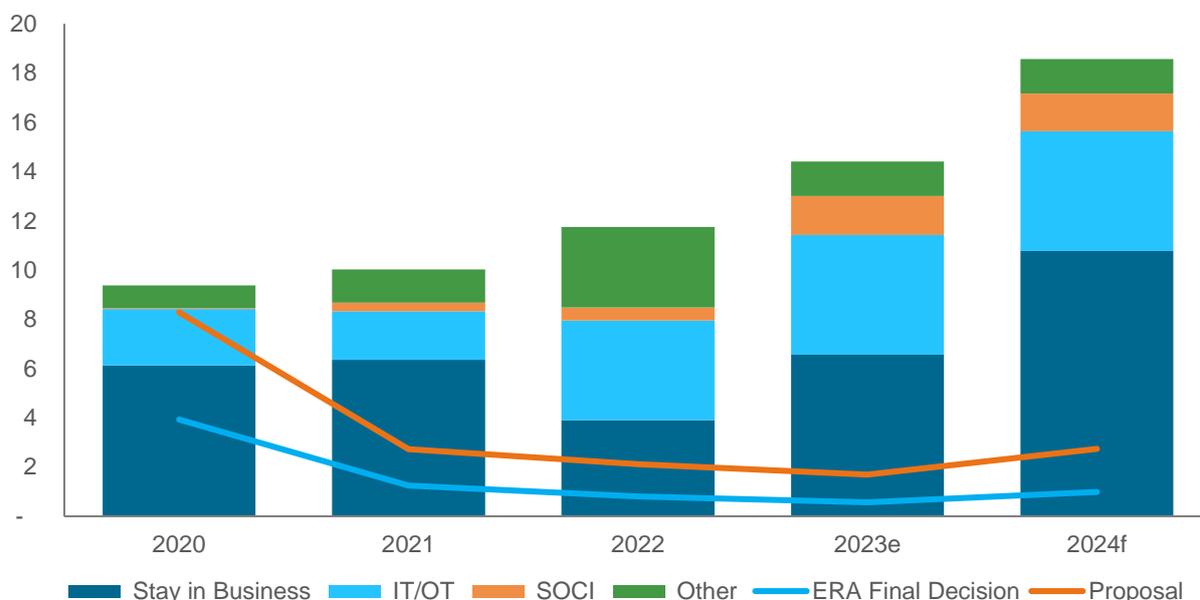
- properly allocated between reference services as well as covered and uncovered services.

As we outline below, there has been substantial developments over the last 5 years. In turn accepted good industry practice has evolved over time. As an example, all large gas pipeline businesses in Australia, including APA, now have a climate change and transition plan or strategy with targets or goals to help achieve net-zero. This change reflects community, political and regulatory (for instance through the safeguard mechanism) expectations on our business.

10.3 Capital expenditure 2020-24 (AA4)

For the 2019-25 period we initially forecast \$17.55 million in capex, while the AER accepted a forecast of \$7.55 million. As illustrated by Figure 10-1, outturn capex in 2020-24 is significantly higher coming in at \$64.14 million.

Figure 10-1 GGP capex over 2020-24 compared to actuals and allowance (Real \$2023, \$m)



The increase in expenditure, relative to the forecast, was primarily because entire categories of spend were not anticipated and were not included in the forecast. This included all ITOT costs, cyber security expenditure to comply with the SOCI Act, as well as costs to maintain the physical security of the pipeline. Over 2020-24 period this expenditure cost \$30.41 million or just under half of outturn capex.

The second main reason for forecasting inaccuracy was due to uncertainty in the scope of key programs.

For instance, while equipment failures (which put reliability at risk) were known when the 2020-24 forecast was prepared, investigations into the cause of these issues had not yet been completed. A provisional forecast of \$4.9 million was included to replace the Gas Engine Alternators (GEA) at Yarraloola and Ilgarari.

However, the works required at Yarraloola were more extensive than anticipated requiring a new fuel gas skid and the design and fabrication of a new enclosure and battery room. The covered

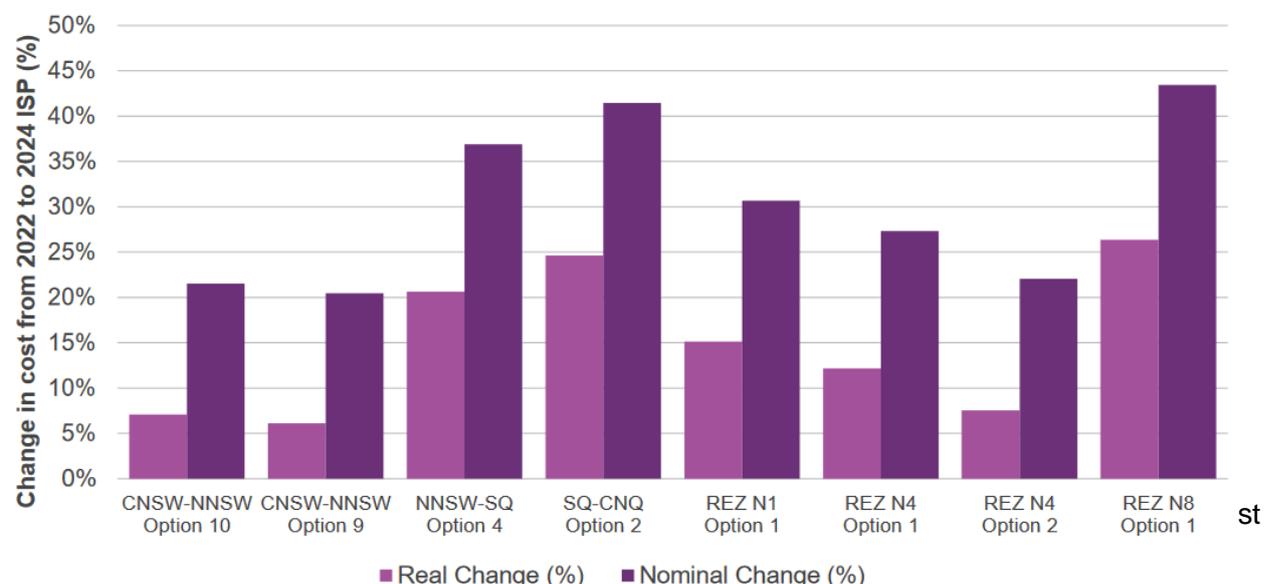
component of reliability improvement works at Yarraloola over 2020-24 will cost about \$6.9 million.

The third reason for forecasting inaccuracy was significant increase in post-COVID market prices. This is partly due to global and local supply chain constraints and, where available, higher costs for specialised equipment, support and labour, particularly in remote areas in which the GGP operates.

These cost pressures are not unique to the GGP. We note that:

- The WA Wage Price Index is currently the highest in the nation sitting at 4.6% (Q3 2023).
- AEMO has found that the cost to undertake transmission projects has increased by about 30% in real terms between the 2022 and 2024 Integrated System Plans.³⁹ This is shown in Figure 10-2 below.
- Ai Group’s price and wages indicators⁴⁰ indicate that input prices and wages have been in ‘expansion’ territory since just after the start of AA4 (mid 2020) and remain substantially elevated.

Figure 10-2 Change in AEMO cost estimates for comparable projects between 2022 ISP and 2024 ISP



The implications of external trends, such as the wider energy transition, on forecasting risks have been recognised by overseas regulators.⁴¹

³⁹ AEMO 2023, 2023 Transmission Expansion Options Report, p. 3. Available [here](#).

⁴⁰ AI Group Australian Industry Index. Available [here](#)

⁴¹ For instance, in response to the general uncertainty with the transition to net-zero, Ofgem included five categories of uncertainty mechanisms in its RIIO-2 framework Ofgem 2020, *RIIO-2 Final Determinations – Core Document*, p.5 and p.56. Available [here](#).

10.4 Benchmarking GGP capex

We have benchmarked our capex costs to other major pipelines and found our forecast capex is comparable to the other large gas pipelines around Australia, once pipeline age and level of compression is considered.

Average forecast capex over the 2025-29 period is \$13.9 million compared to the average capex of \$19.8 million of all large pipelines. The other major Western Australia pipeline, the Dampier to Bunbury Natural Gas Pipeline, incurs around \$30 million per year (although this pipeline is older and has higher levels of compression).

Table 10-1 Average capex incurred by Australia's largest transmission gas pipelines⁴² (\$Dec 2023)

Pipeline	Capacity (TJ/day)	Length (km)	Compressor stations	Commissioned	Historic capex	Forecast capex
Victorian Transmission System	2,012	1,992	7	1969	53.4	49.6
Moomba to Adelaide Pipeline System	241	1,184	8	1969	15.2	N/A
Roma to Brisbane Pipeline	336	438	3	1969	19.1	8.9
Moomba to Sydney Pipeline	489	2,001	3	1976	81.3	N/A
Dampier to Bunbury Natural Gas Pipeline	845	1,539	10	1984	28.7	31.8
Amadeus Gas Pipeline	145	1,658	1	1986	7.5	3.6
Queensland Gas Pipeline	145	807	2	1989	5.7	N/A
Covered Goldfields Gas Pipeline	109	1,378	4	1996	12.6	13.9
South West Queensland Pipeline	453	937	3	1996	38.0	N/A
Carpentaria Gas Pipeline	119	840	2	1998	4.3	N/A
Eastern Gas Pipeline	350	822	4	2000	12.7	N/A
Tasmanian Gas Pipeline	129	740	0	2002	0.1	N/A
SEA Gas Pipeline	314	700	2	2004	1.6	N/A
Wallumbilla Gladstone Pipeline	1,588	543	0	2014	0.7	N/A

10.5 Forecast capital expenditure in 2025-29 (AA5)

We have considered customer requirements, external factors, and the life-stage of the GGP to develop a prudent and efficient investment program. In several areas, increased investment is required, particularly where work cannot be deferred without risking the ongoing safety, security, and reliability of the pipeline.

⁴² Data obtained Part 23 disclosures, the AER's Gas Transmission operational performance data, and regulatory decisions etc. Historic capex based on the average of the most recent 5-years of data available. Forecast capex from regulatory decisions.

This uplift in investment has already commenced in 2020-24 (and in some cases completed) and will continue over the 2025-29 period. The investment drivers are not GGP specific and have led to higher levels of investment across all energy assets across Australia.

We have been able to mitigate the cost impact of these factors by drawing on APA-wide dedicated specialist teams and unparalleled depth of knowledge and expertise from Australia's largest pipeline owner and operator. We have also found opportunities to optimise our operations and investment plans. For instance, we have developed a new operating philosophy to leverage the Northern Goldfields Interconnect (NGI) to maintain security of supply while reducing emissions and fuel gas use.

Forecast capex for 2025-29 is \$69.3 million, 8% above the 2020-24 period. This increase in capex is primarily due to the In-line inspection program, where costs are only incurred every 10 years. Removing the impact of the line inspection program results in 2025-29 capex 12% lower than in 2020-24.

Figure 10-3 Capex over 2020-24 and 2025-29 (real \$2023, millions)

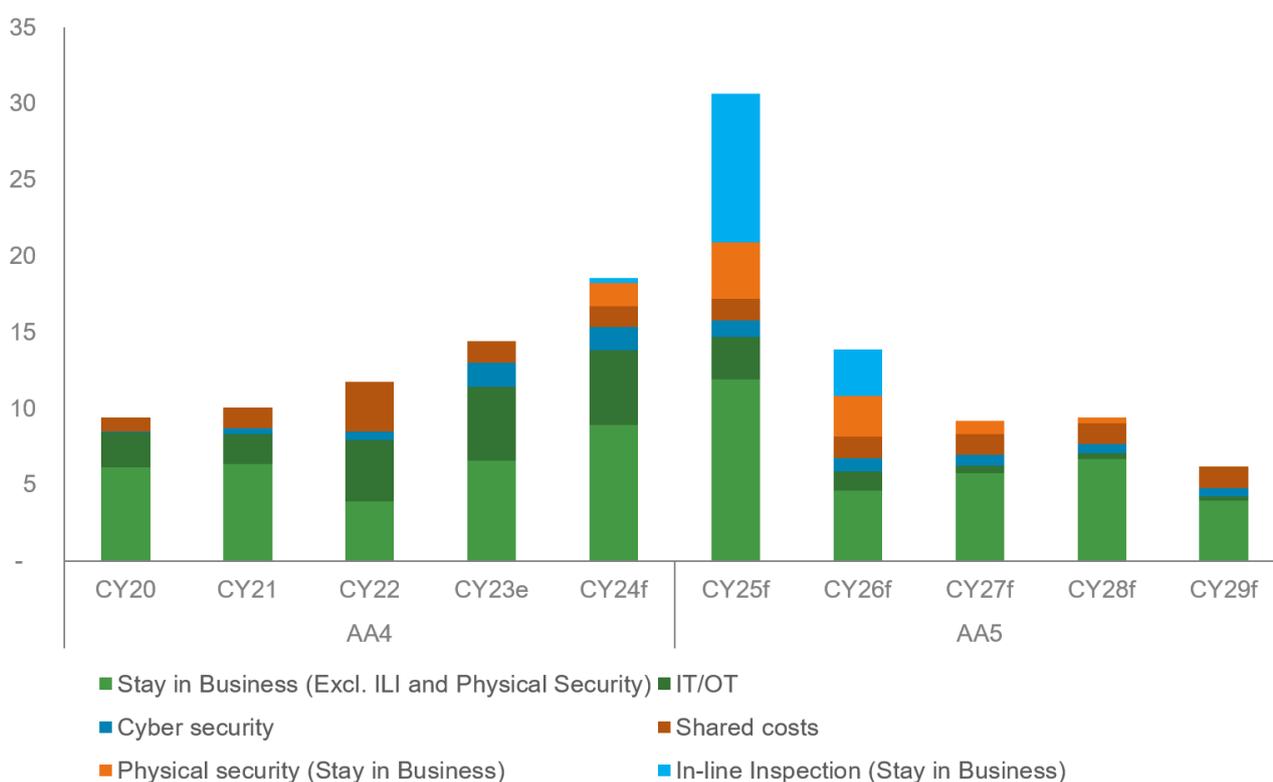


Figure 10-3 presents capex over the 2020-24 and 2025-29 periods, showing:

- The 'lumpiness' of line inspection program costs, due to the nature of a 10-year inspection program.

- Increased investment to secure the GGP against rising physical security threats. The program started in 2024.
- Largely steady stay in business costs (after accounting for line inspection program and physical security) to maintain the reliability of the GGP. Forecast investment is focussed on replacing end of life equipment at facilities. We will also install dry gas seals at Wiluna to remove operational and reliability risks as well as reducing emissions from the current wet seals.
- Continued investment to meet the requirements of the Security of Critical Infrastructure Act 2018 (the SoCI Act).
- A reduction in Information Technology and Operational Technology (ITOT) costs following from major system transformation that started in the 2020-24 period.

10.5.1 Stay in Business

Stay in business capex relates to the ongoing investment required to ensure that the GGP can continue to operate safely, reliably, and efficiently.

Stay in business for AA5 consists of the following programs of work:

- Facility equipment replacement program
- Gas Engine Alternator replacement program
- In line inspection
- Rotating equipment major maintenance program
- Removing wet seals at Wiluna
- Physical security uplift
- Other.

Table 10-2 compares expenditure on stay in business programs in 2020-24 (AA4) and forecast expenditure 2025-29 (AA5).

Table 10-2 AA5 Stay in business (\$millions Dec 2023)

Category	AA4	AA5
Integrity (In line inspection)	0.5	12.9
Rotating major maintenance	1.7	3.1
End of equipment life	9.2	17.4
Net Zero	-	4.0
Physical security	1.5	7.6
Hazardous area / compliance	1.0	0.8
Reliability	13.6	4.3
Other	4.4	1.2
Buried pipework	1.9	2.1
Total	33.7	53.4

10.5.1 In-line inspection

Pipelines are vulnerable to various forms of degradation such as corrosion, cracking, fatigue, stress-related failures, vibration, wear, and external damage. These vulnerabilities can lead to catastrophic failures ranging from pin-hole leaks to the complete 'unzipping' of the pipeline. If ignition occurs, this can result in injuries, fatalities, damage to nearby infrastructure, and a disruption to downstream gas supply.

To mitigate these risks, good industry practice is to conduct periodic inspections using In-Line Inspection (ILI) tools, commonly known as pigs. These tools are inserted into the pipeline and are propelled through the pipeline by the gas stream. The tools undertake a thorough assessment of the pipeline's condition by detecting and monitoring potential issues like corrosion, cracks, and deformations.

Regular inspections allow for the early identification of issues, which are then either rectified or closely monitored, depending on their severity and growth rate. In turn these inspections prevent catastrophic failures, reduce supply risks, and maintain safety of the pipeline. Regular inspections allow for the early identification of issues, which are then either rectified or closely monitored, depending on their severity and growth rate. In turn these inspections prevent catastrophic failures, reduce supply risks, and maintain safety of the pipeline.

Good industry practice (across Australia and internationally) is to undertake inspections at a maximum frequency of at least 10-years, unless specific risk factors require more regular intervals. As the GGP was inspected using ILI tools in 2015, the next scheduled ILI is due in 2025.

10.5.2 Rotating equipment major maintenance program

GGP rotating plant consists of:

- Reciprocating and Turbine Compressors which compress and move gas through the pipeline. Reciprocating compressors use pistons driven by a crankshaft in a cylinder. In

contrast, turbine compressors employ rotating blades. These engines require specialised maintenance due to their high-speed and precision components.

- Gas Engine Alternators (GEAs) These GEAs are vital for supplying electrical power at the pipeline's remote compressor stations. Powered by gas-fuelled, large piston engines, GEAs drive alternator packages and automatically synchronise to meet varying power demands. Each station has two or three GEAs to ensure redundancy and a reliable power supply for essential systems like controls, instrumentation, and auxiliary equipment.

This rotating plant is critical to the safe and reliable supply of gas. This equipment requires regular maintenance to counteract the wear and tear associated with continuous or intermittent operation. Components such as pistons, bearings, blades, seals, and O-rings are all subject to stress and degradation over time, posing risks of equipment failure.

To mitigate these risks and ensure operating efficiency and safety, the rotating plant undergoes regular servicing and periodic overhauls. Overhauls are capital expenditures (capex).

10.5.3 End of equipment life equipment

Commissioned in 1996, the GGP is approaching mid-life and will be 33 years old by 2029. While the pipeline itself has a long-life (with a regulatory asset life of 70 years), components such as cathodic protection units, valve actuators, solar power and battery systems and control units have much shorter assets lifespans ranging from about 10 to 30 years old.

Over time factors such as wear and tear, performance degradation and obsolescence lead to increasing safety, reliability and integrity risks and the development of a replacement program.

Over AA5 we will undertake a targeted program of works to 're-life' these facilities by addressing obsolescence risks associated with electrical control and instrumentation equipment. The program targets Remote Terminal Units (RTUs), Cathodic Protection Units, solar power systems, gas chromatographs and remotely controlled actuators.

In developing this program, we have considered the feasibility and deliverability of the program. We have identified that site-by-site deployment approach (rather than a component based replacement program) delivers the greatest efficiencies.

We have also identified that it is possible to spread the program out over two access arrangement periods by focussing on the assets at the most risk and sites with the highest criticality. Importantly, the program will make spares available for the remaining obsolete components still in service, thereby enabling the re-life of our offtake stations and main line valves to be largely deferred to AA6.

Development work on the program has commenced while site works will commence in 2023. The program will cost \$17.4 million over the 2025-29 period.

10.5.4 Net zero

GGP's role in reducing emissions

The GGP is responsible for emitting about 120,000 tonnes of carbon dioxide (tCO₂e) each year. Around 80% of emissions relate to fuel gas usage for compression and electricity generation. Most of the remaining 20% relate to methane emissions across the pipeline. Methane emissions arise due to unintentional leaks (generally at flanges, valves, and seals etc.) as well as from intentional releases like venting and blowdowns. Blowdowns occur when a compressor unit moves into standby and undertakes a controlled release of gas to relieve pressure within the unit.

Although there are less methane emissions than carbon dioxide emissions, the methane emission factor is relatively high per unit of gas lost as methane is a more potent greenhouse gas than the by-products of combustion (carbon dioxide and water vapour).

Benefits of reducing emissions

Reducing emissions is increasingly important to:

- Support the achievement of net-zero targets in Australia and Western Australia, consistent with the recently amended National Gas Objective.⁴³
- Minimise the financial impact of the Safeguard Mechanism where the GGP must procure and surrender Australian Carbon Credit Units (ACCU) or Safeguard Mechanism Credits for emissions that exceed their baseline amount.

AA5 capex program

Emission reduction benefits have been factored into the development of the GGP's forecast capex.

For instance, we expect to realise a material reduction in emissions from our project to install dry gas seals at Wiluna. The emissions reduction benefit has been taken into account and quantified, even though the project is primarily driven by the reduction in risk of oil-in pipeline events from the existing wet seals.

These works will cost \$4 million in AA5 and are expected to reduce emissions by about 2,475 t CO_{2-e} per year. Further details on this program are outlined in the Wiluna Wet Seals Business Case.

We also note that we expect to also undertake works at our Wyloo West and Turee Creek compressor stations (likely to include installing blow down recovery systems). The capex for these projects is on the uncovered pipeline so has not been included in this proposal. However,

⁴³ On 5 December 2023, the WA Government advised stakeholders that it intends to adopt the reforms to add emissions reduction to the National Gas Objective. Further information can be found here <https://www.wa.gov.au/government/announcements/national-gas-law-western-australian-adoption-of-amended-national-gas-objective-include-emission-reductions>

the expected reduction in emissions (along with the reduction in emissions from the works at Wiluna) have been included in our emission reduction (and safeguard cost) forecast.

10.5.5 Reliability

Ongoing investment is required to maintain reliability of supply. In particular, it is essential that the Gas Engine Alternators (GEA's), which power our compressor stations continue to function. GEA failure will lead to the shutdown of a compressor station and in turn a potential interruption to supply.

The current model of GEA deployed across the GGP is obsolete and reaching the end of their useful lives. Our experience at Yarraloola indicates that reliability of our GEA's reduces over time. While components can be repair and replaced, a reactive approach will lead to successive repairs over time. This affects operational reliability and can result in higher costs, given the repeated unplanned mobilisation costs that will be incurred.

We intend to progressively replace our GEA's over time. This program has been developed based onsite criticality, condition, and the new compressor operating philosophy.

Over the AA5 period, we intend on replacing the GEA at Wiluna largely as it is one of the oldest stations in our fleet. Reliability works at Ilgarari have been deferred to next period to align with the compressor overhaul and to reflect the reduced usage in our new operating philosophy.

The replacement GEA's at Wiluna together with some minor reliability improvements at Ilgarari make up the forecast of \$4.3 million in AA5.

Other stay in business programs are described in Attachment 10.1 Capital expenditure overview.

10.5.6 Shared capital expenditure

APA-wide programs and functions provide the GGP with access to specialised resources and economics of scale not available to a stand-alone operator. Shared capital expenditure includes national programs and property related costs, ITOT and cyber costs.

Broadly, we are forecasting a reduction in costs across our Cyber Security, ITOT and other categories.

Table 10-3 Shared capex over AA4 and AA5 (\$2023 millions)

Category	AA4	AA5
ITOT	18.0	5.2
Cyber security	4.0	3.8
Other	8.3	7.0
Total	30.4	15.9

Security of Critical Infrastructure

APA's enterprise-wide Protected Security program is driven by amendments to the *Security of Critical Infrastructure Act 2018* (the SoCI Act). APA engaged a third-party expert (EY) to conduct a gap analysis of APA's ability to meet the revised SoCI Act obligations, identify uplift needs and assist in the design of an appropriate suite of security controls.

To comply with the SoCI Act APA is:

- Working to achieve a defined maturity level as set out in the Australian Energy Sector Cyber Security Framework (AESCSF). (The AESCSF is the standard to be applied across the electricity and gas sectors to manage cyber security hazards.)
- Amending personnel and supply chain standards and procedures from a security perspective, including the introduction of an AusCheck screening process for new and ongoing critical workers, employees or contractors, and supplier security risk assessments.
- Identifying and remediating material risks.

The SoCI program commenced in 2022 and will continue over the AA5 period. Forecast capex over the AA5 period (\$3.8 million) is less than what is expected to be incurred over the 2020-24 period (\$4.0 million).

GGP benefits from being able to share costs.

Additional information is provided in confidential Attachment 10.7 SoCI operations business case.

ITOT

APA's enterprise-wide Information Technology (IT) portfolio enables core business information, communication, and operational technology to respond in an effective way to the energy sector shift to decarbonisation, decentralisation, and digitisation and to protect APA against cyber security threats (separate to the SoCI program).

Information, communications, and operational technology is necessary to support everyday business functions and technical operations of assets. The shift to digitisation is playing a greater role in more aspects of the day-to-day operations in energy.

Forecast ITOT (\$5.2 million) is lower than ITOT incurred over the 2020-24 period (\$18.0 million). Investment over the 2020-24 period was higher primarily due to the additional investment required to replace key systems in APA's Informational Communications and Operational Technology environment.

Additional information is provided in the Attachment 10.4 ITOT plan.

10.6 Prudent and efficient capex program

We have carefully considered the capital expenditure requirements for GGP including regulatory obligations and good industry practice in developing the access arrangement proposal.

The proposed capex program will allow GGT to operate the GGP in a safe way and ensure security and reliability of services for GGP customers and for the broader community.

GGP capital program is underpinned by looking at ways to optimise programs and minimise risk to as low as reasonably practicable in line with good industry practice. The proposed capex program is of a nature that a prudent organisation would incur.

As part of APA Group, GGP benefits from economies of scale and scope relative to incurring cost on a stand-alone basis. The benefit to GGP customer is that costs are much lower than is GGT was required to incur these costs on a stand-alone basis.

APA, as an ASX-listed company is subject to ongoing market scrutiny. This provides immense discipline to ensure that costs are efficient. Procurement of work on the GGP will be done in alignment with APA procurement policy which will deliver best value for customers. The proposal is consistent with the expenditure that a prudent organisation acting efficiently would incur.

10.7 Other supporting material

Supporting information is provided in the following attachments:

- GGP-AA5-Attachment 10.1-Capital expenditure overview-1 January 2024-Public
- GGP-AA5-Attachment 10.1-Capital expenditure attachment-1 January 2024-Confidential
- GGP-AA5-Attachment 10.2-Capital expenditure model-1 January 2024-Public
- GGP-AA5-Attachment 10.3-Capital expenditure coverage allocation model-1 January 2024-Public
- GGP-AA5-Attachment 10.4-ITOT plan-1 January 2024-Public
- GGP-AA5-Attachment 10.4-ITOT plan-1 January 2024-Confidential
- GGP-AA5-Attachment 10.5-ITOT architecture vision-1 January 2024-Confidential
- GGP-AA5-Attachment 10.6-Technology enablement program - Business showcase-1 January 2024-Confidential
- GGP-AA5-Attachment 10.7-SoCI operations business case-1 January 2024-Confidential
- GGP-AA5-Attachment 10.8-Asset management performance and lifecycle plan-1 January 2024-Public
- GGP-AA5-Attachment 10.8-Asset management performance and lifecycle plan-1 January 2024-Confidential
- GGP-AA5-Attachment 10.9-Asset management presentation-1 January 2024-Confidential
- GGP-AA5-Attachment 10.10-SIB business case - In-line inspection-1 January 2024-Public
- GGP-AA5-Attachment 10.10-SIB business case - In-line inspection-1 January 2024-Confidential
- GGP-AA5-Attachment 10.10.1-SIB business case - In-line inspection-NPV model-1 January 2024-Confidential

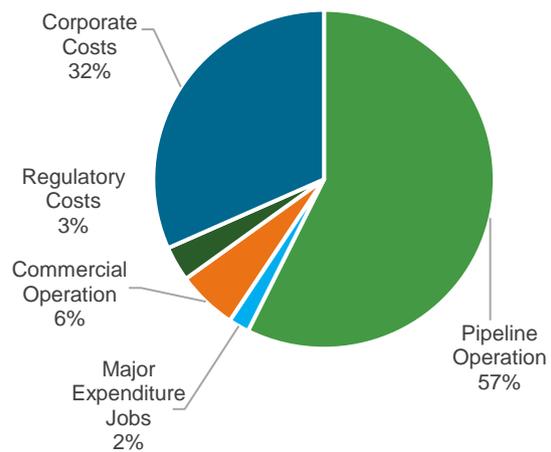
- GGP-AA5-Attachment 10.11-SIB business case - Rotating equipment major maintenance-1 January 2024-Public
- GGP-AA5-Attachment 10.11-SIB business case - Rotating equipment major maintenance-1 January 2024-Confidential
- GGP-AA5-Attachment 10.11.1-SIB business case - Rotating equipment major maintenance-NPV model-1 January 2024-Public
- GGP-AA5-Attachment 10.12-SIB business case - End of equipment life-1 January 2024-Public
- GGP-AA5-Attachment 10.12-SIB business case - End of equipment life-1 January 2024-Confidential
- GGP-AA5-Attachment 10.12.1-SIB business case - End of equipment life-NPV model-1 January 2024-Public
- GGP-AA5-Attachment 10.13-SIB business case - Wiluna wet seals-1 January 2024-Public
- GGP-AA5-Attachment 10.13-SIB business case - Wiluna wet seals-1 January 2024-Confidential
- GGP-AA5-Attachment 10.13.1-SIB business case - Wiluna wet seals-NPV model-1 January 2024-Confidential
- GGP-AA5-Attachment 10.14-SIB business case - Physical security-1 January 2024-Confidential
- GGP-AA5-Attachment 10.15-SIB business case - GEA replacement program-1 January 2024-Public
- GGP-AA5-Attachment 10.15-SIB business case - GEA replacement program-1 January 2024-Confidential
- GGP-AA5-Attachment 10.15.1-SIB business case - GEA replacement program-NPV model-1 January 2024-Public
- GGP-AA5-Attachment 10.16-SIB business case - Buried services-1 January 2024-Public
- GGP-AA5-Attachment 10.16-SIB business case - Buried services-1 January 2024-Confidential
- GGP-AA5-Attachment 10.16.1-SIB business case - Buried services-NPV model-1 January 2024-Public

II. OPERATING EXPENDITURE

II.1 Overview

Our operating expenses are distributed across five key categories. The largest portion is allocated to pipeline operations, encompassing essential daily activities like engineering, field services, administration, and management.

Corporate expenses encompass various functions and services provided by APA, including information technology, SoCI compliance, legal, finance, and other corporate activities. GGP share of these costs is determined through an allocation methodology designed to equitably distribute expenses across all of APA's assets.



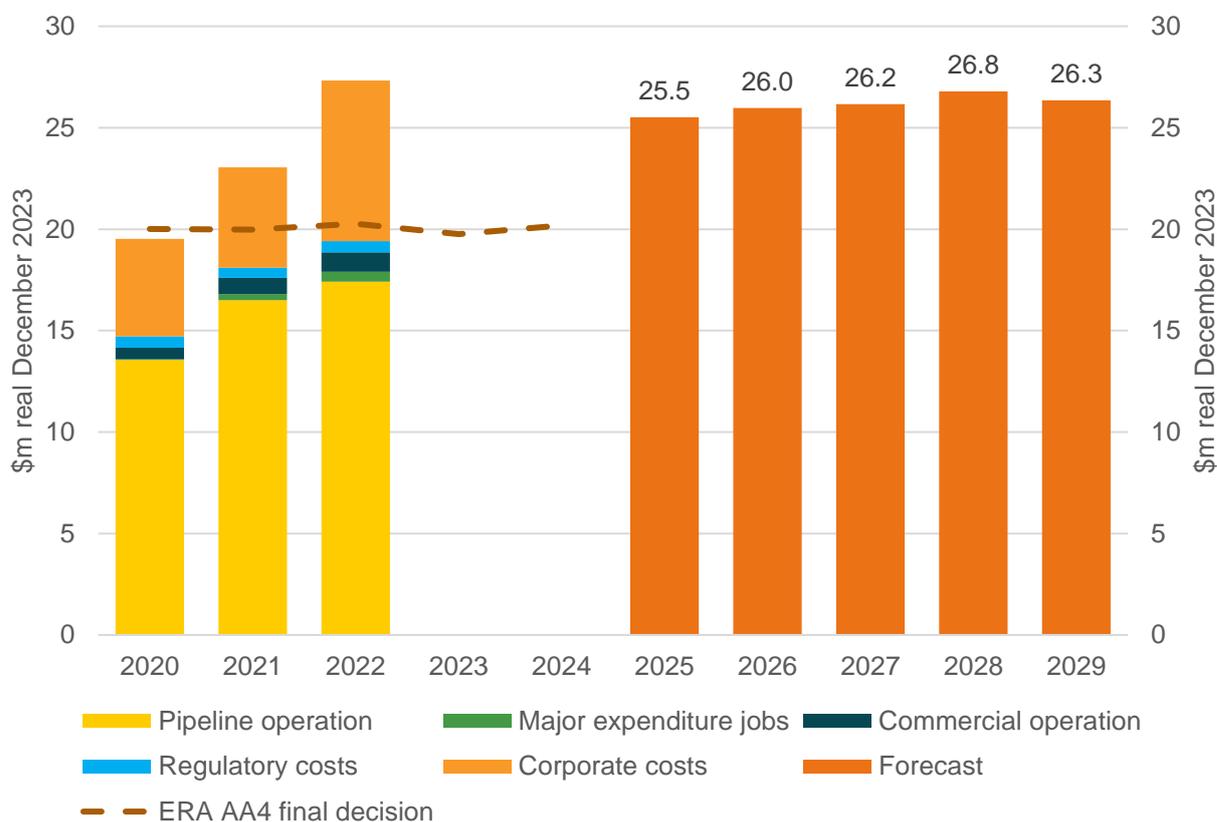
Pipeline operations and corporate costs collectively make up 87 per cent of our total forecast operating expenditure for the 2025 to 2029 period.

To ensure the ongoing provision of secure and dependable services to our customers, we propose operating expenditure of \$130.8 million for the 2025-29 period. This is \$19 million (17%) higher than actual and estimated operating expenditure in the current period. This increase can be attributed to rising labour costs related to the maintenance of ageing assets, increased corporate expenses, primarily driven by information technology, and the necessary expenditure to meet new legislative requirements, such as SoCI.



Figure 11-1 shows the ERA approved operating expenditure for 2020-24, GGT actual operating expenditure for 2020, 2021 and 2022 and our forecast of operating expenditure for the 2025-29 period.

Figure 11-1 GGT operating expenditure AA4 actual and AA5 forecast (\$million real 2023)



When preparing information for this section, we have had reference to the NGR requirements and ERA’s guidance.⁴⁴

The following sections cover:

- NGR requirements
- Description of operating costs
- Actual operating expenditure, by category, in the 2020-24 access arrangement period
- Description of base step trend approach to forecasting operating expenditure
- Forecast opex for 2025-29 period and the basis on which the forecast has been derived.

⁴⁴ ERA, *Gas Access Arrangement Guideline*, 25 July 2022

11.2 NGR requirements

The NGR outline several criteria governing operating expenditure, which we have used as the basis for our proposal.

Operating expenditure is defined in the rules for the purpose of price and revenue regulation as:

“operating, maintenance and other costs and expenditure of a non-capital nature incurred in providing pipeline services and includes expenditure incurred in increasing long-term demand for pipeline services and otherwise developing the market for pipeline services.”

The access arrangement information for an access arrangement proposal must include the following:

- operating expenditure (by category) over the earlier access arrangement period
- a forecast of operating expenditure over the access arrangement period and the basis on which the forecast has been derived

A forecast or estimate:

- must be arrived at on a reasonable basis, and
- must represent the best forecast or estimate possible in the circumstances.

Operating expenditure must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of delivering pipeline services.

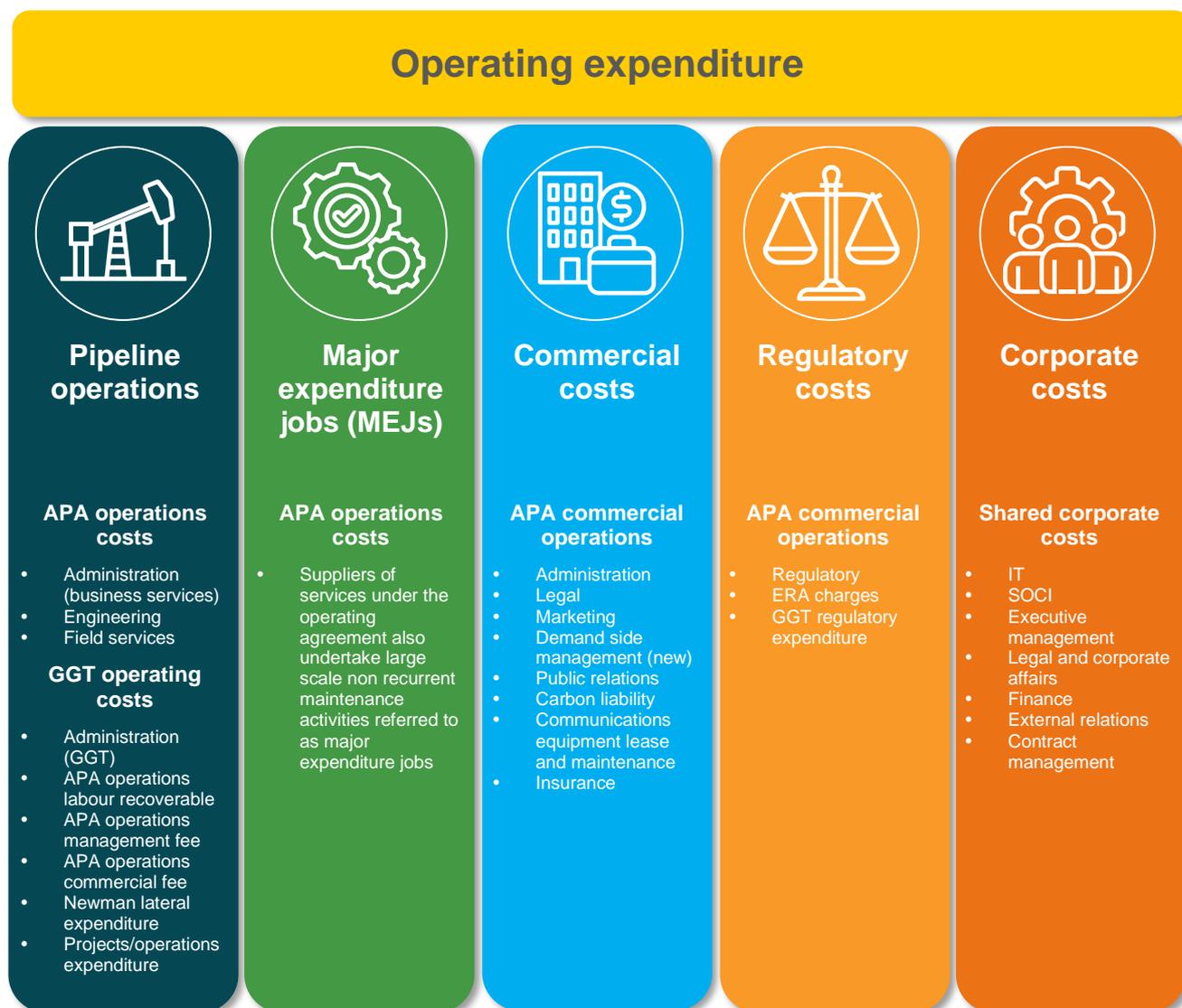
The forecast of required operating expenditure of a pipeline service provider that is included in the access arrangement must be for expenditure that is allocated between:

- reference services
- other services provided by means of the scheme pipeline, and
- other services provided by means of non-scheme parts (if any) of the pipeline, in accordance with rule 93.

11.3 Description of opex costs

GGP’s covered operating expenditure comprises of five categories. These categories have remained unchanged from 2020-24. Figure 11-2 displays each of these expenditure categories and the types of expenditure included in each category. Additional detail on each of these expenditure categories is provided in Attachment 6.1 Cost allocation method.

Figure 11-2 Operating cost categories



11.4 Operating expenditure in 2020-24 (AA4)

11.4.1 Actual opex expenditure

The 2020-24 period was characterised as a high-cost environment exacerbated by the COVID-19 pandemic. The aftermath of the pandemic has seen labour shortages and increased competition for personnel in the mining sector (particularly in WA). This has resulted in a tight labour market and higher than forecast increases in labour costs.

Table 11-1 outlines the ERA approved operating expenditure forecast from the 2020-24 GGP access arrangement final decision, converted to 2023 dollars using CPI.⁴⁵

Table 11-1 Operating expenditure by category - ERA AA4 final decision (Real \$2023, \$m)

Opex category	2020	2021	2022	2023	2024	Total
Pipeline Operation	14.61	14.66	14.72	14.77	14.83	73.59
Major Expenditure Jobs	0.67	0.57	0.80	0.24	0.60	2.88
Commercial Operation	0.73	0.74	0.74	0.74	0.75	3.70
Regulatory Costs	0.81	0.81	0.81	0.81	0.81	4.07
Corporate Costs	3.19	3.19	3.19	3.19	3.19	15.95
Total	20.01	19.98	20.27	19.75	20.18	100.19

Source: ERA 2019 Final Decision for GGP

Note: GGT converted from \$million real 2018 to \$million real 2023 using CPI

Table 11-2 outlines GGP's actual operating expenditure by category for 2020, 2021 and 2022. This information has been supplied to the ERA previously through GGP's annual RIN reporting. 2023 information is not available at the time of submitting this proposal.

Table 11-2 Operating expenditure by category – GGT AA4 actual (\$million real 2023)

Costs across all	2020	2021	2022
Pipeline operations	13.56	16.50	17.41
Major expenditure jobs	0.03	0.30	0.50
Commercial operation	0.57	0.80	0.95
Regulatory costs	0.56	0.51	0.55
Corporate costs	4.80	4.94	7.91
Total	19.52	23.04	27.32

Source: GGT

⁴⁵ ERA, *Final Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, 19 December 2019, p. 67.

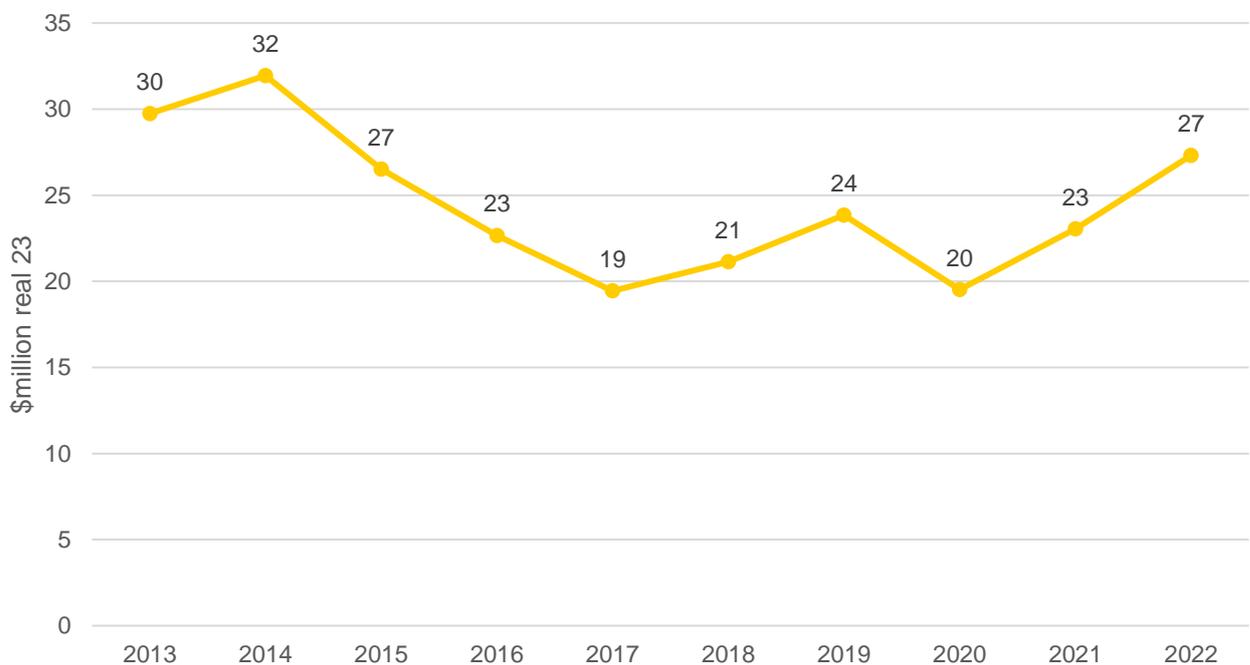
11.5 Reasons for variance

11.5.1 Pipeline operations costs

Pipeline operation costs exceeded forecasted values in 2021 and 2022. The main driver of this variance is that costs in the base year, 2017, were lower than usual.

Figure 11-3 shows the 10-year trend of GGP operating expenditure. The only year with similar expenditure to 2017 is 2020, where reduced operation activity occurred due to the COVID-19 pandemic.

Figure 11-3 GGT operating expenditure (2013-2022)



Source: GGT

While it is easy in retrospect to say that 2017 was not an ideal base year for the BST approach, there were several unexpected costs that arose in the 2020-24 period relating to contractors and materials that could not be forecast. The main drivers of these costs were:

- Increased operations & maintenance (O&M) costs as several maintenance activities occurred that were unforeseen and not planned at the time of GGT's 2019 access arrangement revision.

- A bad actor review⁴⁶ conducted in 2021 and 2022 identified trends in equipment failures on the GGP. Examples of these failures that led to unbudgeted maintenance activities include:
 - Paraburdoo - In the 12-month period there was a significant increase in reported compressor and GEA incidents and near misses. There were 12 GEA events for the past 12-month period compared to 2021 and there were 14 compressor events compared to 9 in 2021.
 - Illgarari – There were 16 compressor events compared to 10 in 2021, 8 GEA events compared to 4 in 2021 and 6 high suction pressure events compared to 2 in 2021.
 - Wiluna – Improvements were enacted in 2022 to mitigate systematic compressor failures due to varnishing and are expected to improve site performance, however, have been three events since the improvement.
- Higher contractor and contingent workers costs, outpacing WPI increases and the ERA's 2020-24 labour escalation factor. Due to the remoteness of maintenance activities along the GGP, contractors are required to stay onsite, which increases maintenance costs significantly.

In addition, costs in 2022 included a historic payroll adjustment. During 2022, APA conducted the first stage of a historical payroll review which identified that certain employees across APA were not paid in full compliance with obligations under APA's enterprise agreements. It was identified that an underpayment of \$35m occurred over a seven-year period across APA. A provision of this under-payment amount has been made against the pipeline operations expenditure.

The payroll adjustment was allocated to individual pipelines based on a combination of:

- direct costs attributable to each pipeline; and
- where the cost was not directly attributable (i.e., relating to corporate activities), allocate to assets based on a revenue allocation (consistent with our cost allocation methodology).

It was identified that approximately \$568k of the payroll adjustment of \$35m related to the covered section of the GGP, of the \$568k identified, \$321k related to periods prior to calendar year 2022. For regulatory purposes, APA Finance concluded that the amounts charged to the profit or loss in 2022 relating to prior periods had no material impact for regulatory reporting purposes. On that basis, APA has not retrospectively restated the operating expenditure for prior years previously reported under this RIN.

This payroll adjustment has not been included in our 2022 base year for our BST forecast of operating expenditure for 2025-29 in Section 11.8.1.

⁴⁶ A piece or group of equipment that has a higher than typical failure rate when compared to similar equipment within APA or when compared against itself from history.

11.5.2 Commercial operations cost

GGP commercial operations costs for 2021 and 2022 exceeded forecast due to the introduction of demand side management.

Demand side management provides a load reduction service for certain uses at an expense to GGT allowing firm service to be maintained during times of peak demand and planned and unplanned maintenance. This expenditure was necessary due to the GGP being fully contracted. Demand side management expenditure was \$281k in 2012.

Now that the NGI is complete there are alternative ways to maintain firm service during peak demand and planned and unplanned maintenance, so this expenditure will end after 2023 and has not been including in the 2025-29 operating expenditure forecast.

11.5.3 Corporate costs

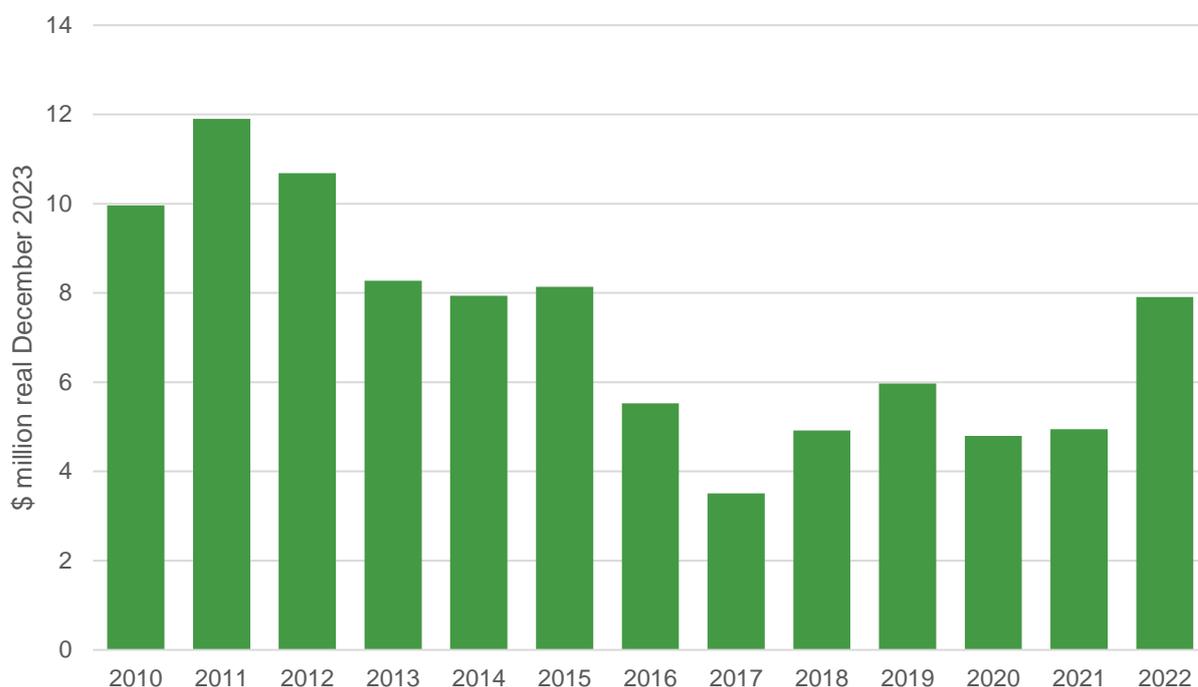
APA incurs operating expenditure for the services provided from corporate functions (corporate expenditure) that support the operations of APA's assets. For financial accounting purposes, corporate expenditure is recorded at the APA corporate level and is not allocated among its assets. However, as corporate expenditure provides a shared benefit to these assets, APA allocates each asset a portion of this expenditure. As GGP is an APA asset, it is allocated a share of APA corporate expenditure.

Corporate costs have increased significantly since 2017 and are a large driver of increased opex costs for the covered GGP. They have increased due to:

- An increase in APA corporate opex. For example:
 - additional legislative obligations, e.g., for security of critical infrastructure
 - higher IT expenditure
 - higher director and officer insurance costs
 - higher costs relating to additional headcount and restructures at APA.
- An increase to the allocation of corporate opex to GGP. The allocation of corporate opex is based on asset revenue. As GGP revenue as a proportion to APA revenue has increased over the years, the asset's share of the APA corporate cost has also correspondingly increased. Attachment 6.1 Cost allocation method discusses this allocation in more detail.

While these corporate costs have been higher than forecast in 2020-24, in particular in 2022, they are on par with long-term trends for GGT operating expenditure as shown in Figure 11-4.

Figure 11-4 GGT corporate costs (2010-2022)



Source: GGT

We have also benchmarked our corporate costs for 2025-29 against the Mid-West and South-West pipeline corporate costs for AA6 and found that they are similar as a proportion of total opex, as shown in Table 11-3.

Table 11-3 Comparison of GGP's corporate opex with Mid-West and South-West pipeline (\$million real 2023)

Comparison	Corporate costs	Total opex	% of opex
GGP AA5 forecast	41.4	130.8	31.7%
Mid-west south-west pipeline⁴⁷ AA5 forecast	123.9	464.2	26.7%

11.6 Proposed operating expenditure forecast for 2025-2029

GGT has forecast operating expenditure for the 2025-29 access arrangement period (1 January 2025 to 31 December 2029) using the base-step-trend (BST) method. This forecast is shown in 11-4. This method provides a forecast which is consistent with the requirements of NGR rule 91(1).

The BST method is an opex forecasting approach that is accepted by the ERA.

⁴⁷ ATCO, 2025-29 Plan - Table 9.28, September 2023, p. 135.

The basis for the BST method is described in the following section of this proposal. Table 11-5 provides a breakdown by operating expenditure category.

Table 11-4 GGT AA5 operating expenditure forecast – Base-step-trend method (\$million real 2023)

Forecast operating expenditure	2025	2026	2027	2028	2029	Total
Starting: Base year operating expenditure	23.514	23.514	23.514	23.514	23.514	117.568
Add: Specific forecasts						
SoCI cyber	0.687	0.748	0.758	0.758	0.758	3.711
Equals: Baseline forecast operating expenditure	24.200	24.262	24.272	24.272	24.272	121.278
Add: Step changes						
Safeguard mechanism – carbon offsets	0.552	0.703	0.725	0.730	0.771	3.481
AA6 regulatory proposal	-	0.184	0.280	0.850	0.280	1.594
Enterprise resource planning (ERP)	0.469	0.427	0.381	0.334	0.318	1.928
Add: Real labour cost escalation						
Labour cost	0.299	0.400	0.502	0.605	0.708	2.514
Total forecast opex	25.521	25.977	26.160	26.790	26.348	130.796

The basis for the BST method is described in the following section of this proposal. Table 11-5 provides a breakdown by operating expenditure category.

Table 11-5 GGT AA5 operating expenditure forecast - by category (\$million 2023)

Category	2025	2026	2027	2028	2029	Total
Pipeline operation	15.359	15.606	15.725	15.828	15.968	78.486
Major expenditure jobs	0.506	0.510	0.513	0.516	0.520	2.565
Commercial operation	0.794	0.796	0.797	0.798	0.799	3.984
Regulatory costs	0.553	0.737	0.833	1.403	0.833	4.360
Corporate costs	8.309	8.328	8.292	8.245	8.229	41.402
Total forecast opex	25.521	25.977	26.160	26.790	26.348	130.796

11.7 Opex forecasting method

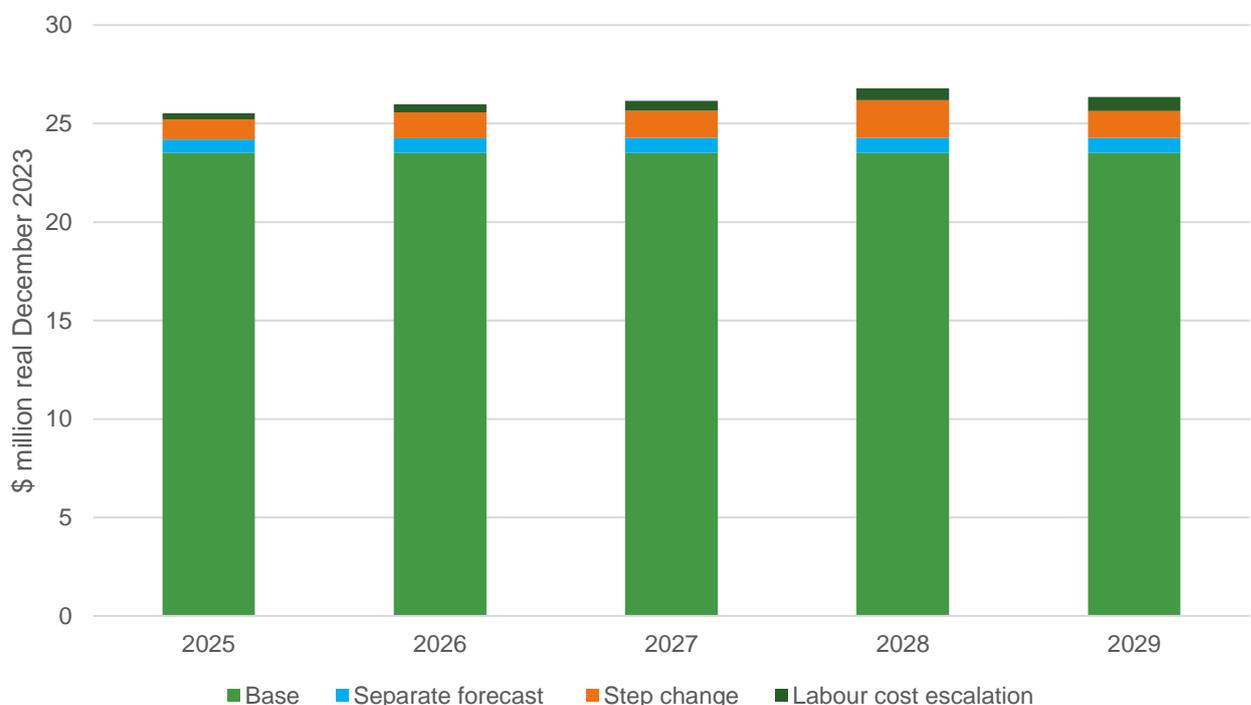
Consistent with the method used in our current access arrangement we have applied the BST approach to forecast operating expenditure in 2025-29.

We have elected to forecast one expenditure item separately using the base-up approach and are proposing three step changes:

- safeguard mechanism carbon offsets
- costs to prepare the 2030-34 (AA6) proposal, and
- costs for our Enterprise Resource Planning (ERP) project.

Finally, we have applied a labour cost escalation to account for wage growth over the access arrangement period.

Figure 11-5 – AA5 operating expenditure forecast, base-step-trend approach



11.8 Forecast operating expenditure in 2025-29 (AA5)

11.8.1 Base year

GGT has selected 2022 as the base year for the BST method. 2022 is the most recent year for which complete and audited financial information is available. When selecting 2022 we have also observed historic trends in GGP operating expenditure to ensure that it is representative of costs in the future.

We have adjusted the base year operating expenditure to account for the forecast increase in capacity from the NGI in the 2025-29 period. We have made this adjustment as shared costs

between the covered and uncovered GGP are allocated based on the ratio of respective contracted capacity and the NGI will increase the proportion of covered capacity in 2025-29.

Only operating expenditure items allocated using this method have been updated in the 2022 base year. Additional detail on the cost allocation method and the NGI demand forecasts can be found in Chapters 6 and 5 respectively. Table 11-6 provides the breakdown of the 2022 base year before and after this adjustment.

Table 11-6 NGI demand adjustment to operating expenditure base year (\$million real 2023)

Category	Unit	2022	2022 - NGI
Pipeline operation	\$m real	17.411	17.505
Major expenditure jobs	\$m real	0.496	0.496
Commercial operation	\$m real	0.951	1.073
Regulatory costs	\$m real	0.553	0.553
Corporate costs	\$m real	7.908	7.908
Total forecast opex	\$m real	27.320	27.535

We have elected to remove several costs from our base year as they are either non-recurring or will not exist in the 2025-29 period, these are:

- Payroll adjustment (non-recurring – discussed in Section 11.5.1)
- Demand side management costs (available capacity from NGI provides an alternative to these costs – discussed in Section 11.5.2)
- APA operations management fee and APA commercial management fee. These fees paid to APA to the GGT JV on the respective operations and commercial services agreements are no longer required as APA acquired Alinta's portion in 2023.

We have also removed SoCI cyber costs from our base year as these have been specifically forecast over the access arrangement period.

We have calculated our base year for the 2025-29 forecast to be \$23.5 million. Table 11-7 provides a breakdown of our calculation.

Table 11-7 GGT operating expenditure – base year (\$million real 2023)

Base year	\$
Start: 2022 operating expenditure	27.535
Remove: non-recurring costs	
Payroll adjustment	0.593
Demand side management	0.281
APA operations management fee	1.056
APA commercial management fee	1.335
Remove: specific forecast costs	
SoCI cyber	0.756
Equals: base year	23.514

11.8.2 Specific forecasts

APA's enterprise-wide Protected Security program is driven by amendments to the *Security of Critical Infrastructure Act 2018* (the SoCI Act). APA engaged a third-party expert (EY) to conduct a gap analysis of APA's ability to meet the revised SoCI Act obligations, identify uplift needs and assist in the design of an appropriate suite of security controls.

To comply with the SoCI Act APA is:

- Working to achieve a defined maturity level as set out in the Australian Energy Sector Cyber Security Framework (AESCSF). (The AESCSF is the standard to be applied across the electricity and gas sectors to manage cyber security hazards.)
- Amending personnel and supply chain standards and procedures from a security perspective, including the introduction of an AusCheck screening process for new and ongoing critical workers, employees or contractors, and supplier security risk assessments.
- Identifying and remediating material risks.

The SoCI program commenced in 2022-23 and will continue over the 2025-29 period. Forecast opex over the 2025-29 period is \$3.71 million. Additional information on the SoCI program is provided in Attachment 10.7 GGP SoCI operations business case.

11.8.3 Step changes

We are forecasting three step changes to operating expenditure for the 2025-29 period as outlined in Table 11-8.

Table 11-8 AA5 operating expenditure step changes (\$million real 2023)

Step changes	2025	2026	2027	2028	2029	Total
Safeguard mechanism initiatives	0.552	0.703	0.725	0.730	0.771	3.481
AA6 regulatory proposal	0.000	0.184	0.280	0.850	0.280	1.594
Enterprise resource planning (ERP)	0.469	0.427	0.381	0.334	0.318	1.928
Total	1.022	1.315	1.386	1.913	1.369	7.004

Safeguard mechanism initiatives – carbon offsets

The Safeguard Mechanism legislates limits—known as baselines—on the greenhouse gas emissions of facilities subject to the Safeguard Mechanism. The intention is these baselines will decline, predictably and gradually, on a trajectory consistent with achieving Australia’s emission reduction targets of 43% below 2005 levels by 2030 and net zero by 2050.

Baselines will decline from 1 July 2023. The decline rate will be set at 4.9 per cent each year to 2030.

The Safeguard Mechanism applies to industrial facilities emitting more than 100,000 tonnes of carbon dioxide equivalent (CO₂-e) per year. There are around 215 Safeguard facilities, of which GGP is one, across the mining, manufacturing, transport, oil, gas, and waste sectors. These facilities produce around 28% of Australia’s greenhouse gas emissions.

GGT is undertaking changes in business as usual operation of compressors, and capital expenditure program to reduce fugitive (leak and venting emissions) and compressor emissions along the GGP. Additional detail on this program is discussed in Section 13.

However, this program alone is not likely to be sufficient to meet the emissions reduction target set for GGP and as such operating expenditure is required for the purchasing of Australian Carbon Credits Units (ACCU)/ or equivalents. GGT has forecast \$3.5 million in operating expenditure for the Safeguard Mechanism over the 2025-29 period.

This forecast is derived from the baseline (current) carbon emissions of the GGP, the required decline rate of emissions per year, the required carbon offsets required to meet this decline rate and the cost impact of purchasing these offsets.

GGT has modelled four scenarios based on capital improvements to the GGP to reduce emissions. This modelling was undertaken to identify the most prudent and efficient expenditure between capital improvement costs and the costs of purchasing ACCUs. Table 11-9 displays each of these scenarios. Case 3 is the base case and represents the cost of undertaking no capital works to reduce emissions and rely solely on the purchasing of ACCUs to meet emission reduction targets.

Table 11-9 Safeguard mechanism options

	Fugitive emission reduction projects	Compressor efficiency improvement projects
Case 1	No	Yes
Case 2	Yes	Yes
Case 3 (base case)	No	No
Case 4	Yes	No

This modelling identified Case 2 as the optimal option and was used to derive the forecast operating expenditure costs for the ACCUs. The cost of ACCU’s was forecast using APA’s subscription to RepuTex, Australia’s leading provider of research, pricing and advisory services for the local energy and environmental markets. Additional detail on GGP emission reductions and the Safeguard Mechanism can be found in Section 13 and Attachment 13.1 Safeguard mechanism forecast.

GGP covered was apportioned part (\$3.5 million) of the cost of purchasing ACCU's based on the ratio of TJ/day of covered contracted capacity, as outlined in the cost allocation methodology in Section 6.

AA6 regulatory proposal

This access arrangement revision is for the 2025-29 period covering 1 January 2025 to 31 December 2029. GGT will be required to submit the next access arrangement revision for the period 1 January 2030 to 31 December 2034, AA6, in the late 2020s. As the 2025-29 proposal process was in its infancy in 2022, the costs of preparing an access arrangement revision are not adequately covered in the base year, requiring a step change. This step change also represents an increase in costs for GGT to prepare for an access arrangement revision due to additional legislative requirements, and ERA expectations, particularly around stakeholder engagement.

Expenditure has been derived based on forecast costs for the current 2025-29 preparation, including internal headcount changes, consultancy fees, project management fees and stakeholder management resources.

A detailed breakdown of expenditure for the AA6 regulatory proposal can be found in Attachment 11.2 AA6 regulatory proposal expenditure forecast (Confidential).

Enterprise resource planning (ERP)

APA is undertaking a transformation of the Enterprise Resource Planning (ERP) landscape to replace the ageing legacy system. The legacy system lacks process and data maturity and is incapable of scaling to meet needs and address operational risks.

APA is implementing a new enterprise-wide ERP systems with a set of new cloud-based applications, provided by Workday, and will support APA's Finance, Procurement and People Safety and Culture functions to implement and adopt new operating models and better ways of working.

The ERP Program seeks to deliver new systems, data, processes and operating models for APA's Finance, Procurement and functions. This includes integration with key existing systems such as asset management (Maximo), and customer billing. The program will also aim to deliver access to key ERP business data via APA's data warehouse solutions for advanced analytics and reporting purposes.

A modern ERP platform supports will enable APA to:

- Scale our corporate systems, data, and processes to respond to the changing needs of our customers and communities whilst achieving higher levels of efficiency and effectiveness in operations and the back office.
- Enable APA to drive business insight and automation to support customer service.

Additional detail on this program can be found in Attachment 10.4 ITOT plan.

GGT has forecast \$1.9 million in operating expenditure for the ERP program over the 2025-29 period.

Benchmarking the costs for this program against the Mid-west South-west pipeline show the benefits provided to GGP by sharing these corporate costs over a larger portfolio of assets. The

program is forecast to cost 1.5% of the total 2025-29 operating expenditure forecast compared to 5.2% (\$24 million of \$464.2 million) as proposed by ATCO in their 2025-29 (AA6) forecast.⁴⁸

11.8.4 Trends in cost escalation

Labour costs typically vary in ways different from the change in the general level of prices (inflation) as prices for labour services vary reflecting conditions of supply and demand in the labour market. In the past, there have been significant differences between rates of change in Western Australian prices for labour services and inflation.

GGT has, therefore, adjusted its operating expenditure for forecast changes in labour prices relative to expected inflation.

GGT has adopted the ERA's preferred methodology to determine labour cost escalation, as outlined in the GGP 2020-24 final decision.⁴⁹ We have removed the 2022/23 forecasts for WPI and CPI from our calculation as we do not think it is representative of forecast growth in these variables over the 2025-29 period. ATCO has also elected to remove 2022/23 from their labour escalation calculation for the Mid-West and South-West Gas Distribution System.⁵⁰

Table 11-10 Labour escalation factor methodology

Labour escalation factor methodology	2023/24 budget	2024/25 outyear	2025/26 outyear	2026/27 outyear	Average
WA WPI growth	4.00%	3.75%	3.25%	3.00%	3.50%
Perth CPI growth	3.50%	2.75%	2.50%	2.50%	2.81%
Labour escalation factor					0.67%

Source: Government of Western Australia - Major Economic Aggregates

At this time, we have not elected to add an industry premium to the labour escalation factor but have noted that ATCO did include this premium in their AA6 proposal.⁵¹

To calculate the labour cost for the 2025-29 access arrangement period, we have identified the proportion of 2022 base expenditure which was labour-related and adjusted this proportion of expenditure by the labour price escalation factor. This is shown in Table 11-11.

Table 11-11 GGT labour cost calculation

Labour escalation	2022	2023	2024	2025	2026	2027	2028	2029	Total
Labour cost escalator	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	N/A
Index	1.000	1.007	1.013	1.020	1.027	1.034	1.041	1.048	N/A
Labour cost	N/A	N/A	N/A	0.299	0.400	0.502	0.605	0.708	2.514

⁴⁸ ATCO, *2025-29 Plan - Table 9.28*, September 2023, p. 128.

⁴⁹ ERA, *Final Decision on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024*, 19 December 2019, p. 133.

⁵⁰ Synergies, *ATCO Gas Australia cost escalation forecasts for the AA6 regulatory period*, August 2023, p. 5.

⁵¹ Synergies, *ATCO Gas Australia cost escalation forecasts for the AA6 regulatory period*, August 2023, p. 5.

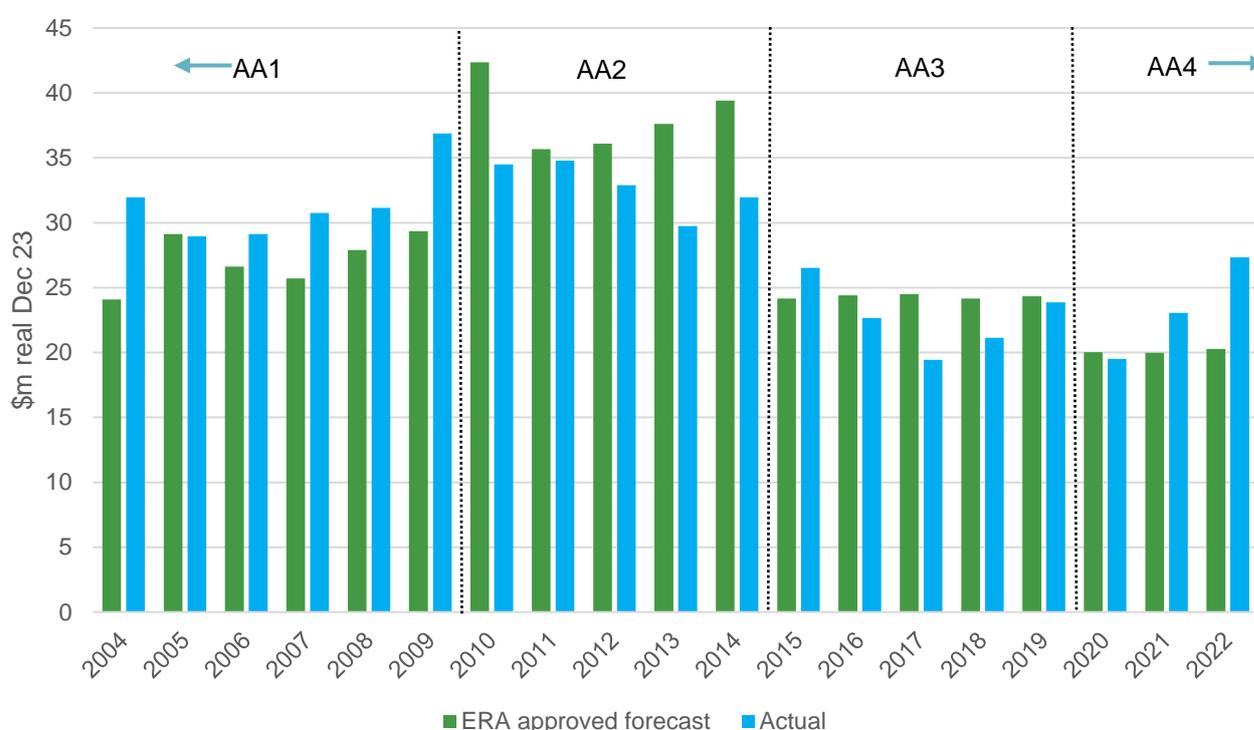
We have elected not to add a material escalation factor.

11.9 Trend analysis

To assist our forecast of operating expenditure for the 2025-29 period, we have analysed long-term trends in covered GGP operating expenditure.

Figure 11-6 shows the ERA approved and actual covered operating expenditure from 2004-2022, adjusted to December 2023 dollars using CPI. The lines in blue show each access arrangement period.

Figure 11-6 Long-term GGP operating expenditure trend (2004-2022)



Operating expenditure forecasts for GGP have roughly tracked ERA approved forecasts. There have been periods where actual expenditure was higher than the ERA approved forecast in 2005-09 (AA1) and 2020-24, and periods where actual expenditure was lower than forecast in 2010-14 (AA2) and 2015-19 (AA3).

Actual operating expenditure began to drop in AA2 and continued throughout AA3. This trend can largely be attributed to the introduction of uncovered capacity on the GGP. The nameplate capacity of the covered pipeline is 109 TJ/day.

In total there have been three expansions to the GGP which have increased capacity. Each of these expansions were uncovered (not regulated), meaning that covered capacity has remained at 109 TJ/day.

- The first two expansions occurred in AA1 when GGT could elect for expansions to be uncovered without a requirement for ERA approval. In 2006 a second compressor was added at Parburdoo and in 2009 compressors were installed at Wyloo West and Ned's Creek. These two expansions added 49 TJ/day of uncovered capacity to the GGP.

- The third expansion occurred in AA2 and required GGT to apply to the ERA to add uncovered capacity. In 2014 additional compressors and two new delivery points were installed between Yarraloola and the existing delivery point at Newman to increase capacity at Boonamichi Well and Yarnima. This expansion was approved by the ERA on 30 May 2014 and added 42 TJ/day of uncovered capacity to the GGP.⁵²

Once uncovered capacity was added to the GGP a cost allocation methodology was required to apportion costs between covered and uncovered. In AA3, GGT initially proposed to apportion these costs on a standalone basis with the only costs not included for the covered pipeline being the incremental costs associated with the uncovered pipeline. This approach was modified by the ERA in its final decision for several cost categories as they noted that costs incurred by a prudent and efficient service provider in delivering the covered services of the GGP should be based on the relative capacity of the covered GGP to deliver those services.⁵³ This decision formed the basis of the cost allocation approach in Section 6.

As uncovered capacity has increased on the GGP, the uncovered pipeline has absorbed an allocation of certain costs that would previously been 100% allocated to the covered pipeline. This has lowered the operating expenditure for the covered pipeline.

In 2020-24, costs began to trend upwards again and exceeded forecasts in 2021 and 2022. These costs have increased due to higher operations and maintenance activities on the pipeline and higher corporate costs than forecast. This period has been discussed in greater detail in Section 11.5.

11.10 Prudent and efficient opex program

The forecast operating expenditure requirements for GGP forecast have applied the base step trend which itself acts as an incentive to contain costs. The opex program is prudent and seeks to meet regulatory obligations including Safeguard Mechanism and cyber security in a thoughtful and efficient way. The proposed opex program is of a nature that a prudent organisation would incur.

As part of APA Group, GGP benefits from economies of scale and scope relative to incurring costs on a stand-alone basis. The benefit to GGP customers is that costs are much lower than if GGT was required to incur these costs on a stand-alone basis.

APA is an ASX-listed company and is subject to ongoing market scrutiny which provides immense discipline to ensure that costs are efficient. The proposal is consistent with the expenditure that a prudent organisation acting efficiently would incur.

The proposed opex program will allow GGT to operate the GGP in a safe way and ensure security and reliability of services for GGP customers and for the broader community.

⁵² ERA, *Application for expansion of the Goldfields Gas Pipeline to be not regulated*, 30 May 2014, pp. 1-2.

⁵³ ERA, *Final Decision on Proposed Revisions to the Access Arrangement for the Goldfields Gas Pipeline*, 30 June 2016, pp. 84-92.

11.11 Other supporting material

Supporting material for the opex program can be found in:

- GGP-AA5-Attachment 11.1-Opex model-1 January 2024-Public
- GGP-AA5-Attachment 11.2-AA6 regulatory proposal expenditure-1 January 2024-Confidential
- GGP-AA5-Attachment 10.4-ITOT plan-1 January 2024-Public
- GGP-AA5-Attachment 10.4-ITOT plan-1 January 2024-Confidential
- GGP-AA5-Attachment 10.7-SoCI operations business case -1 January 2024-Confidential
- GGP-AA5- Attachment 13.1-Safeguard Mechanism Forecast-1 January 2024-Confidential

12. DEPRECIATION AND ASSET LIVES

12.1 Overview

GGT is proposing to change the approach to calculating the asset lives by capping asset lives to the weighted average remaining life of the pipeline and laterals class. This is a modest change in recognition of the energy transition and the potential gradual shift away from fossil fuels to more renewable sources amongst GGP customers.

The rules themselves focus on encouraging efficient growth in the market for reference service. What this means in the energy transition needs to be carefully considered.

12.2 NGR requirements

The regulatory provisions governing depreciation are set out in NGR rules 88, 89 and 90.

Rule 88 requires a depreciation schedule for the purpose of determining a reference tariff. The depreciation schedule is to set out the basis on which the pipeline assets constituting the capital base are to be depreciated for the purpose of determining the reference tariff, and may comprise a number of separate schedules, each relating to a particular asset or class of assets.

Rule 89(1) sets criteria for the design of the depreciation schedule. The depreciation schedule should be designed:

- a) so that reference tariffs will vary, over time, in a way that promotes efficient growth in the market for reference services; and
- b) so that each asset or group of assets is depreciated over the economic life of that asset or group of assets; and
- c) so as to allow, as far as reasonably practicable, for adjustment reflecting changes in the expected economic life of a particular asset, or a particular group of assets; and
- d) so that (subject to the rules about capital redundancy), an asset is depreciated only once (i.e., that the amount by which the asset is depreciated over its economic life does not exceed the value of the asset at the time of its inclusion in the capital base (adjusted, if the accounting method approved by the AER permits, for inflation)); and
- e) so as to allow for the service provider's reasonable needs for cash flow to meet financing, non-capital and other costs.

Rule 89(2) provides for the deferral of depreciation where:

- a) the present market for pipeline services is relatively immature;
- b) the reference tariff has been calculated on the assumption of significant market growth; and
- c) the pipeline has been designed and constructed so as to accommodate future growth in demand.

Rule 90 requires the calculation of depreciation for rolling forward capital base from one access arrangement period to the next as follows:

1. A full access arrangement must contain provisions governing the calculation of depreciation for establishing the opening capital base for the next access arrangement period after the one to which the access arrangement currently relates.
2. The provisions must resolve whether depreciation of the capital base is to be based on forecast or actual capital expenditure.

12.3 Context

Depreciation is the 'return of capital' to investors for the capital investment made in pipeline assets. Effectively, depreciation allocates the cost of an asset over the 'life' of the asset. Depreciation is a cost for the provision of service and is a component of the revenue building block revenue.

Generally, depreciation is calculated as straight line depreciation, where the opening value of the asset is depreciated in equal amounts over the remaining number of years in the asset's technical or economic life.

The total depreciation is subtracted from the opening value of the regulatory asset base of the pipeline. The regulatory asset base is then used to calculate the return on capital (rate of return) to investors. Removal of depreciation from the asset base prevents double-counting of the capital investment.

The current regulatory framework establishes standard asset lives for new conforming capital expenditure. New conforming capital expenditure is added to the regulatory base and the straight-line depreciation approach is applied to the new assets to reduce the asset lives and return capital to investors.

APA is proposing to change the approach to calculating the asset lives by capping asset lives to the weighted average remaining life (WARL) of the pipeline and laterals class. This change is proposed in response to our customers telling us about plans to decarbonise their operations (discussed in section 3).

The proposed approach is intended to accelerate the depreciation of assets. Capping the asset lives, effectively shortens the timeframe over which assets are depreciated. This allows the 'return of asset' cost recovery to occur earlier than under the current technical life approach. The earlier cost recovery is intended to address the risk of uncertainty about what will happen in the future.

We consider the proposal to cap asset lives and accelerate the depreciation to be a prudent in an uncertain environment where the role of gas may change.

We have also proposed two new asset classes to account for information technology and operational technology (ITOT) and cyber security programs of as discussed below.

The proposed approaches, justification, and implications is discussed in this section.

12.4 Depreciation 2020-24 period

In the ERA's 2019 Final Decision for the 2020-24 access arrangement period,⁵⁴ the ERA determined to apply straight-line depreciation with a current cost accounting approach to the covered GGP regulatory asset base from 1 January 2015.⁵⁵

The reasons for the change in depreciation approach was due to the ERA's assessment against the National Gas Law and Rules. The ERA stated that current cost accounting approach was consistent with the criteria under rule 89(1) of the NGR and complies with the NGL. The approach:

- Promotes efficient growth in the market for reference services by allowing for efficient use of the GGP.
- Encourages efficient production and investment decisions by the service provider, thereby contributing to efficient growth in the market for reference services.
- Avoids price shocks for consumers when major assets reach the end of their effective life and are replaced.
- Ensures outcomes that are in the long-term interest of consumers with respect to price by avoiding subsidies between current and future consumers. The ERA decision meant that the depreciation schedule for establishing the opening capital base on 1 January 2020 would be based on forecast capital expenditure.

In forming our proposal, we have considered the ERA's assessment of depreciation in the 2016 and 2019 Final Decisions.

12.4.1 ERA current cost approach

In the 2016 Final Decision, the ERA explained that, for the calculation of the nominal (in dollar terms) opening capital base for covered GGP for the 2020-2024 access arrangement period was to be calculated in accordance with the current cost accounting depreciation method. The method was consistent with the Australian Energy Regulator's post-tax revenue method.

The ERA explained the steps to calculate the value of depreciation using the current cost accounting approach:

1. the real (in dollar terms) opening capital base in any year is divided by the remaining asset life to calculate the real depreciation
2. real depreciation value is converted to nominal dollars

⁵⁴ Economic Regulation Authority (WA), Final Decisions on Proposed Revisions to the Goldfields Gas Pipeline Access Arrangement for 2020 to 2024, Submitted by Goldfields Gas Transmission Pty Ltd, December 2019)

⁵⁵ This was a change from the historical cost accounting approach in previous decisions by the ERA.

3. The nominal depreciation is adjusted for the resulting double count of inflation (in the nominal regulatory asset base) by subtracting the value ascribed to inflation from the opening regulatory asset base for that regulatory year.

The forecast depreciation for each year is calculated as the sum of:

- Depreciation on the opening capital base over the current period (Initial capital base depreciation), and
- Depreciation of the forecast capital expenditure for the current access arrangement period ('regulatory depreciation')

The asset lives used to calculate the depreciation schedule were based on standard asset lives. Each year the value of the initial capital base (ICB) for each asset class is divided by ICB asset life.

Indexing and adjustment for inflation should be calculated consistent with the rate of inflation as measured by the CPI All Groups, weighted average of capital cities as at 31 December of each year of the regulatory period.

This value is used to calculate the opening capital base and for the building block component (cost to serve in the ERA tariff model). The calculation of the asset base is discussed in Section 7.

12.5 Regulatory considerations on uncertainty and asset lives

It has been recognised by regulators in Australia that the energy transition means greater uncertainty for gas use in the future. The uncertainty is due to government policy targeting the reduction of greenhouse gas emissions, businesses having decarbonisation policies, advances in renewable technology, and more cost competitiveness of renewable technology relative to traditional energy sources.

GGP is facing these uncertainties now with a high number of GGP customers indicating to us that they have plans to decarbonise the energy sources for their sites. To date, two GGP customers have shown sustained levels of renewables penetration. The renewable penetration, so far, has not borne out in reductions in maximum daily quantity (MDQ) throughput. This is because the renewable sources are undersized and solar operations only operate during daylight. The mining operations are 24 hours/ seven days a week operation.

Another area of competition faced by the GGP is the cost-competitiveness of trucked LNG and diesel as an alternative to using gas from GGP.

12.5.1 ERA decision Dampier to Bunbury Natural Gas Pipeline

In 2021, the ERA approved Dampier to Bunbury Natural Gas Pipeline (WA) (DBNPG) Transmission Pty Ltd proposal to cap the economic life of Dampier to Bunbury Natural Gas Pipeline (DBP) to 2063. DBNPG presented the view that natural gas transported over long distances would be competing with alternative sources of energy in the longer term.

As such, DBP would be facing greater competition from energy substitutes in the future. To enable DBP to compete against energy substitutes, it was necessary to shorten the asset lives

and accelerate depreciation. DNBPG proposal was based on the premise that shortening the economic life of the pipeline would allow DBP to compete in the future with other energy sources and at lowest cost to its customers.

The ERA assessed DNBPG proposal against the NGR rule 89(1) and the Revenue and Pricing Principles in the National Gas Law.

In making its assessment, the ERA noted that Rule 89(1) allowed for depreciation to be adjusted where there is a change in the expected economic life of an asset.

The ERA accepted the proposal by the DNBPG on basis that there has been an increased level of change and uncertainty in the energy market. The change and uncertainty being due to technological and policy changes that were most likely to continue. The ERA commented that these changes could affect the future role of the DBP in the longer term. Overall, the ERA considered that it is now less likely that natural gas will continue to flow through the DBP to the end of its technical life.⁵⁶

ERA surmised that DNBPG faced a greater likelihood that the DBP's economic life will be shorter than its technical life due to the combination of technological change and environmental policies curtailing natural gas use.⁵⁷

The ERA recognised that determining the economic life of an asset is a matter for judgement as to what is a reasonable and best forecast in the circumstances. Despite the difficulty of forecasting the economic life so far into the future, the ERA accepted that there is a plausible argument that the economic life of the DBP is likely to be shorter than the currently assumed technical life of the pipeline asset category of the DBP capital base. ERA accepted that DNBPG's nominated end of life of 2063 is a credible projection of economic life within a wide range of possibilities.⁵⁸

Overall, the ERA found that the adjustment of depreciation schedules to reflect economic lives capped at 2063 was consistent with the requirements of the regulatory framework in an environment of increasing policy and technological change.

12.5.2 AER approved capping the life of the Victorian Transmission System

In 2022, the Australian Energy Regulator (AER) accepted APA VTS's proposal to cap the lives of the pipeline's asset classes. The cap on the VTS asset lives was a modest change but represented an important step to securing the principle of accelerated depreciation in the gas regulatory regime on the east coast. Rather than focus APA VTS's approach was focused on longer term tariff stability.

⁵⁶ Economic Regulation Authority (WA) Final decision on proposed revisions to the Dampier to Bunbury Natural Gas Pipeline, 2021, paragraphs, 1510, 1514.

⁵⁷ Economic Regulation Authority (WA) Final decision on proposed revisions to the Dampier to Bunbury Natural Gas Pipeline, 2021, paragraph 1518.

⁵⁸ Economic Regulation Authority (WA) Final decision on proposed revisions to the Dampier to Bunbury Natural Gas Pipeline, 2021, paragraph 1519.

In assessing the proposal, the AER recognised that the publication of the Victorian Gas Substitution Roadmap (the roadmap) indicated that the Victorian Government was committed to the net zero emissions target by 2050. The AER noted that this will likely mean a limited role for gas beyond this date.⁵⁹

The AER did comment that while changes are likely, the pace of change remains uncertain. The AER clarified that it has not sought to resolve the issue of how much stranding risk customers and APA should share during the consideration of this review for the 2023–27 period. However, accepted the proposed cap was guarding against risk of an earlier wind down of the network and the price spike that may result if demand falls faster than expected.⁶⁰

The AER expected that emission reduction policies would have a larger effect on gas demand in the medium to long run, and that there will be a lag period before significant reductions are achieved.

12.5.3 Regulating under uncertainty

In November 2021, the Australian Energy Regulator (AER) published Regulating gas pipelines under uncertainty.⁶¹ In the paper the AER recognised that Australia’s energy system is transitioning to a decentralised, renewables-based system. The transition is part of a movement towards carbon emissions reduction and is necessary to realise Australia’s target to reach net zero emissions by 2050. The AER acknowledged that energy networks needed to adapt to facilitate this transition but that it will be challenging.

The AER acknowledged that the transformation in the energy system and the explicit policy goals of reaching net zero emissions by 2050 create considerable uncertainties in future gas demand expectations. Gas pipeline businesses invest in long-lived assets and the energy transition may affect the ability to recover the efficient costs of investments because of the uncertainty in future demand for pipeline services.

The AER stated that it must be prepared to adjust regulatory approaches given the new circumstances. And that this will require AER to exercise regulatory judgement on a reset-by-reset basis, considering the demand for gas pipeline services on networks and balancing the risks and price impacts faced by consumers.

The AER explained one of the available options to manage the pricing risks and stranded asset risks was to adjust depreciation schedules.

⁵⁹ AER, Final Decision, APA VTS access arrangement 2023 to 2027 (1 January 2023 to 31 December 2027), Overview, December 2022, p.17.

⁶⁰ AER, Final Decision, APA VTS access arrangement 2023 to 2027 (1 January 2023 to 31 December 2027), Overview, December 2022, p.18.

⁶¹ AER paper can be found here [AER Information Paper - Regulating gas pipelines under uncertainty - 15 November 2021.pdf](#)

AER said it considered adjusting regulatory depreciation (return of capital), would be appropriate to manage stranded asset risk under the regulatory regime.⁶² And that, recovery of the efficient investments that regulated businesses have already made would increase the certainty that incurred costs would be recovered, thereby reducing stranded asset risk and the potential need for material upwards price adjustments in the future.

12.6 Proposed forecast depreciation 2025-29

12.6.1 Approach to capping asset lives

GGT has adopted the straight-line current cost accounting method for the 2024-29 regulatory period but with a change to the way asset lives are calculated starting in 2025.

Currently the asset lives applied to calculate straight-line depreciation are based on annual adjustments to the standard asset lives.

We are proposing to forecast depreciation using the following approach to calculate asset lives:

- Calculate the weighted average life of the pipeline and laterals asset class
- Cap lives of asset classes in the initial capital base calculation to no more than the weighted average life of pipeline and laterals
- Cap the asset life for forecast capital expenditure (regulatory depreciation) from 2025 onwards to the weighted remaining asset life (WARL) of the pipeline and lateral asset class
- Ongoing, no asset class will have an WARL greater than the pipeline and laterals asset class
- Asset classes that have current lives below the WARL of the pipeline and lateral asset class are not affected.

The asset lives can be reassessed at each access arrangement review to consider any changes such as the viability of renewable gases.

12.6.2 Weighted average remaining life of asset classes

GGT is proposing to cap the remaining life of all GGP asset classes at the weighted average remaining life (WARL) of the pipeline and laterals asset class. This asset class represents the physical pipeline of the GGP and any covered laterals (offshoots of the GGP to various delivery points).

We are using the WARL of the pipelines and laterals asset class to cap all classes because if the physical pipeline ceased to operate, then the remaining assets would cease to have value

⁶² AER, Regulating gas pipelines under uncertainty, 2021, p.28.

regardless of their individual remaining lives. For example, a compressor station on the GGP would have no remaining useful life if there is no pipeline to compress gas.

We have calculated the weighted average remaining life (WARL) of each GGP asset class at the end of the current access arrangement period (2024). WARL is calculated using the AER's methodology where the remaining life is weighted by the amount of net capex at that remaining life (equation below). ICB in the equation represents the initial capital base of the GGP.

Equation 1 Weighted average remaining life formula

$$WARL = \frac{Net\ capex_{ICB} \times Remaining\ life_{ICB} + Net\ capex_1 \times Remaining\ life_1 + \dots + Net\ capex_n \times Remaining\ life_n}{Net\ capex_{ICB} + Net\ capex_1 + \dots + Net\ capex_n}$$

The WARL for each of the GGP's asset classes is shown in Table 12-1. While we have shown the WARL for each asset class, we are only proposing to use the WARL of the pipeline and laterals asset class. Any asset classes that have a current standard life below the WARL of the pipeline and laterals asset class will continue to use their existing life. For example, in 2025 new main line valve and scraper station capital will end the asset base at 41 years instead of 50 while new compressor station capital will remain at 30. As the WARL of the pipeline and laterals will reduce by 1 each year after 2025, each asset class will gradually be capped.

The WARL of 41 years from 2025 leads to an economic end of life of 2066, AGIG recently capped the economic life of DBP to 2063.

Table 12-1 Weighted average remaining life of GGP asset classes (as of 31 December 2024)

Asset class	WARL	Current standard life of new capital	Difference
Pipeline and laterals	41	70	29
Main line valve and scraper stations	21	50	29
Compressor stations	14	30	16
Receipt and delivery point facilities	22	30	8
SCADA and communications	7	10	3
Cathodic protection	11	15	4
Maintenance bases and depots	32	50	18
Other assets	5	10	5

The WARL for the pipeline and laterals asset class is very close to the remaining life of the initial capital base (40.5 years). This is because the value of the pipeline and laterals asset class in the initial capital base is very large, and the small amounts of capital added to this class over the last 20 years has had a minor impact. This makes sense as the only expansions to the GGP since it was built were not covered and do not form part of the regulatory asset base.

12.6.3 Impact of proposed

GGT has prepared forecasts of the depreciation schedule:

1. Base case – no change to asset lives method
2. Option 1 – cap asset lives.

Preliminary assessment of the impact of this proposal is less than \$100,000 total revenue over the 2025-29 period. We consider this to be a modest change in revenue outcome, but a significant step to enable longer term price stability and reduce stranding risk.

The approach also helps gas pipeline to compete with other energy sources including trucked LNG and diesel.

12.6.4 Asset classes

GGT is proposing to add two new asset classes to the current list of asset classes. These have been added to the current asset classes in the GGP Tariff model and consist of:

- Shared support assets – Information technology & operational technology and cyber (ITOT/cyber). Short lived (5 years)
- Shared support assets – net of net of ITOT/cyber. Longer lives – 20 years

The new asset classes reflect the increasing benefit of shared corporate costs enjoyed by GGP. The APA Group invests in assets at a corporate level which support the operations of the APA assets, such as ITOT and property.

The covered section of the GGP has been benefiting from the use of the APA Group's corporate assets since being acquired by APA Group on 18 August 2004. Despite this, the covered portion of the GGP has not been allocated a share of APA Group's corporate asset expenditures for regulatory purpose until the current access arrangement period (2020 to 2024).

For the current access arrangement period, the APA Group's corporate asset expenditures have been allocated to the covered GGP in accordance with the manner described in Section 6.

12.7 Justification for proposal

12.7.1 Capping lives of assets

There are limited measures available in the current regulatory framework to deal with the uncertainty for gas pipelines arising from the energy transition. One of the available measures is provided in the depreciation rules which do contemplate changes in economic lives and allow for depreciation schedules to be adjusted.

The rules provide for economic depreciation schedules to be adjusted where there is a change in the expected economic life of a relevant asset. It is accepted by the ERA and the AER, that while not certain, there is a likelihood that that the role of natural gas and gas transportation along pipelines in the future will decline.

GGT's proposal is influenced by the decision made by ERA for DBP in accepting to cap the life of the pipeline to 2063 years. The GGP and DBP serve different types of customers, but their futures are aligned and share the same fate of uncertainty about the future roles.

Promote efficient growth in the market for reference services

The criteria in Rule 89(1)(a) requires promoting economic growth in the market for reference services.

We consider that this criterion provides reason for accelerated depreciation to enable gas pipelines to compete with alternative sources of energy, in particular, trucked LNG and diesel. The economic efficient outcome is to maximise the use of the GGP relative to other fossil-based fuels.

If renewable gas does become viable in the future, then the asset lives question can be revisited for those circumstances.

12.7.2 Economic lives

Economic life is not defined within the NGR or NGL but we note the ERA's discussion in the DBP decision that:⁶³

Consistency with the national gas objective implies that an appropriate interpretation of economic life, for the purpose of depreciation under the NGR, includes the actual or expected retirement of the asset from productive use at the end of its economic life. An asset may be retired due to technical, economic or other obsolescence.

The energy transition represents a fundamental shift in the energy paradigm creating uncertainty for the natural gas sector. The future role of natural gas and consequently the pipelines that transport natural gas is uncertain. That is not to say that GGP will not continue to be used, but the level of use may change.

Uncertainty about the role of gas in WA can be evidenced by the WA Government Climate Policy, published in November 2022, which policy presents the WA Government's commitment to achieve net zero greenhouse gas emissions by 2050.⁶⁴ The Climate Policy refers to net zero emissions mining and initiating projects which target reducing the carbon footprint from mining and mineral processing through adoption of alternative energy sources and energy-efficient processes.⁶⁵

⁶³ Economic Regulation Authority (WA) Final decision on proposed revisions to the Dampier to Bunbury Natural Gas Pipeline, 2021, paragraph 1382.

⁶⁴ Western Australian Government, Western Australian Climate Policy: A Plan to Position Western Australia for a prosperous and resilient low-carbon future, November 2021.

⁶⁵ Western Australian Government, Western Australian Climate Policy: A Plan to Position Western Australia for a prosperous and resilient low-carbon future, November 2021, page 15.

In surveys conducted by GGT of GGP customers, at least 65% responded that they were considering plans to decarbonise. Currently, two GGP customers have on-site renewable resources, and we expect this to increase in the medium to longer term.

We consider that it is accepted that there is uncertainty about the future role of gas and, GGT as a prudent operator, this warrants GGT taking steps to mitigate against the risk of stranded or underutilised assets.

We are seeking to avoid the situation where any new conforming capital expenditure, such as looping, is assigned a standard depreciable life of 70 years when the related pipeline to which it is attached has a significantly shorter remaining life. We wish to avoid stranded assets, but also to have more stable prices going into the future.

12.7.3 Financing

The revenue and pricing principles in section 24 of the National Gas Law provides that a service provider should be provided with a reasonable opportunity to recover at least the efficient costs the service provider incurs in providing reference services. Capping the asset lives to less than standard lives will return capital to investors quicker than retaining the standard lives.

GGP does have a healthy outlook for the near future, but the outlook may change in the medium to longer term. However, our approach reflects a precautionary approach to manage a potential risk of underutilisation or stranding of the pipeline that may have significant financial consequences for investors in the service provider.

The proposed change is a modest response to deal with a complex question about the future role of gas, and the uncertainty that it creates. The economic and useful life of the GGP may not end, but we consider that it is more prudent to do something like cap asset lives now rather than do nothing.

Uncertainty does not prohibit the possibility of a change in economic life, nor does uncertainty remove the need to update forecasts to reflect the best available information.

The framework in the natural gas law and rules does not contemplate a fundamental change in the future role of gas pipeline infrastructure. We note ERA's comments in the 2021 Final Decision for DBP about raising the issue of asset stranding risk in a changing environment with the Australian Energy Market Commission.⁶⁶

As a prudent operator, APA wishes to take measures to reduce address uncertainty about the future role of the GGP. Capping asset lives and accelerating depreciation is a pragmatic and least regrets approach to managing that potential risk.

⁶⁶ ERA, Final decision on proposed revisions to the Dampier to Bunbury Natural Gas Pipeline access arrangement 2021 to 2025 – Submitted by DBNGP (WA) Transmission Pty Ltd, para. 1527. ERA stated that in “intends to raise with the Australian Energy Market Commission how the regulatory framework addresses asset stranding risk in an environment of increasing technological and policy change”.

12.8 Proposed forecast depreciation

Proposed depreciation is about \$101.2 million for the 2025-29 period. Table 12-2 shows the proposed depreciation by asset class.

Table 12-2 Proposed forecast depreciation 2025-29

Real \$2023 \$m	2025	2026	2027	2028	2029	Total
Asset class						
Pipeline and laterals	8.786	8.786	8.786	8.787	8.789	43.933
Main line valve and scraper stations	0.299	0.346	0.381	0.413	0.444	1.882
Compressor stations	1.976	2.379	2.519	2.663	2.843	12.380
Receipt and delivery point facilities	0.325	0.381	0.417	0.431	0.432	1.986
SCADA and communications	0.731	0.574	0.407	0.400	0.386	2.499
Cathodic protection	-0.006	0.036	0.048	0.053	0.053	0.184
Maintenance bases and depots	0.223	0.295	0.299	0.309	0.316	1.442
Other assets	0.378	1.386	1.670	1.667	1.666	6.766
Equity Raising Cost	0.001	0.009	0.009	0.009	0.009	0.038
Non-depreciable assets	0.000	0.000	0.000	0.000	0.000	0.000
Shared support assets - IOT & cyber security	7.909	6.362	5.620	4.322	2.904	27.117
Shared support assets (net IOT & cyber security)	0.462	0.532	0.602	0.671	0.741	3.008
Miscellaneous assets	0.000	0.000	0.000	0.000	0.000	0.000
Total	21.083	21.085	20.758	19.726	18.583	101.235

13. EMISSIONS REDUCTION

13.1 Overview

On 1 July 2023, the Federal Government's Safeguard Mechanism reforms came into effect. The Safeguard Mechanism is the Federal Government's policy to achieve Australia's 2030 and 2050 emissions reduction targets. GGP is one of the 215 facilities captured by the Safeguard Mechanism.

The Safeguard Mechanism is a regulatory obligation with the production variable for national gas transmission pipelines settled as recently as October 2023. Meeting the emission reduction obligations will require both capital and operating expenditure. GGT is proposing to undertake capital programs as part of the stay in business program. The capital expenditure program alone is not likely to be sufficient to meet the emissions reduction target set for GGP.

These are our best estimates at the time this proposal was prepared.

13.2 Rule requirements

The Safeguard Mechanism reforms were applied from 1 July 2023. The assessment requirements pertaining to regulatory obligations are set out in NGR, Rule 79. Rule 79 requires that conforming capital expenditure is capital expenditure that must be such as would be incurred by a prudent service provider acting efficiently, in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services; and the capital expenditure is necessary to comply with a regulatory obligation or requirement.

For assessment criteria for operating expenditure are similar to the capital expenditure requirements. We are anticipating the need to purchase carbon offsets, and this will be a step change in operating expenditure.

Rule 74(2) further requires that a forecast, including a forecast of operating expenditure be arrived at on a reasonable basis; and represents the best forecast possible in the circumstances.

13.3 Safeguard Mechanism

The Safeguard Mechanism legislates limits—known as baselines—on the greenhouse gas emissions of facilities subject to the Safeguard Mechanism. The intention is these baselines will decline, predictably and gradually, on a trajectory consistent with achieving Australia's emission reduction targets of 43% below 2005 levels by 2030 and net zero by 2050.

Baselines will decline from 1 July 2023. The decline rate will be set at 4.9 per cent each year to 2030.

The Safeguard Mechanism applies to industrial facilities emitting more than 100,000 tonnes of carbon dioxide equivalent (CO₂-e) per year. There are around 215 Safeguard facilities, across the mining, manufacturing, transport, oil, gas, and waste sectors. These facilities produce around 28% of Australia's greenhouse gas emissions.

In October 2023, following a public consultation process, the Department of Climate Change, Energy, the Environment and Water (DCCEEW) advised GGT that the National Greenhouse and Energy Reporting (Safeguard Mechanism) Amendment (Production Variables Update) Rules 2023 has been registered and commenced on 7 October 2023 (the day after registration).

DCCEEW advised that the amendment adds new production variable definitions, updates existing definitions, sets industry average emissions intensities, and makes other technical amendments.

For transmission pipelines, the production variable is:

*“Gigajoules of natural gas that are received by the facility as part of carrying on the natural gas transmission activity at the facility”.*⁶⁷

This decision changed the production variable for natural gas transmission from *work of compression* to *natural gas throughput*. The new production variable will be simpler to measure and better incentivise emissions reduction.



⁶⁷ DCCEEW, Safeguard Mechanism: Prescribed production variables and default emissions intensities, Schedule 1 Production Variables. Document can be found here [safeguard-mechanism-document-production-variable-definitions-2023.docx \(live.com\)](#)

13.3.1 Compliance measures

The objective of the Safeguard Mechanism is to achieve onsite reductions as opposed to purchasing carbon offsets. This objective is reflected in the Safeguard Mechanism compliance measures.

 <p>Crediting and trading</p>	 <p>Domestic offsets (ACCUs)</p>
<ul style="list-style-type: none"> • Safeguard facilities automatically generate tradeable Safeguard Mechanism Credits (SMCs) when their emissions are below their baseline (with some exceptions) • Facilities can surrender SMCs to meet their own Safeguard compliance obligations, sell these to other Safeguard facilities to meet their Safeguard compliance obligations or hold them for their future use. 	<ul style="list-style-type: none"> • Facilities can also purchase and surrender domestic offsets — in the form of Australian Carbon Credit Units (ACCUs)—to meet their compliance obligations • An ACCU represents one tonne of emissions avoided or sequestered. Each ACCU surrendered by a Safeguard facility reduces its net emissions by one tonne • If a facility surrenders ACCUs equal to more than 30% of its baseline, it must submit a statement to the Clean Energy Regulator setting out why onsite abatement has not been undertaken. • As part of the review of Safeguard Mechanism scheme settings in 2026-27, the CCA will advise the Government on the extent to which onsite abatement is being driven by the reforms, and whether any additional incentives are required.
 <p>Banking and borrowing</p>	 <p>Cost containment measures</p>
<ul style="list-style-type: none"> • Unlimited banking of SMCs will be allowed to 2030 to give business flexibility around the timing of their abatement activities • SMCs can be used for Safeguard compliance in any year to 2030, irrespective of when they are issued • SMCs are personal property and do not expire, their eligibility for use in the Safeguard after 2030 will be considered in the 2026-27 review • Borrowing of up to 10 per cent of a facility's baseline each year will be allowed to 2030, with a 10 per cent interest rate applied in the year after borrowing occurs. 	<ul style="list-style-type: none"> • Facilities that have exceeded (that is, not achieved target reduction) their baseline would be able to purchase ACCUs from the Government at a fixed price of \$75 in 2023-24, increasing with CPI plus 2 per cent each year • While the Government expects there to be sufficient ACCUs and SMCs available in the market below this price, this measure is intended to prevent excessive prices and to provide certainty to facilities on the maximum compliance costs they would face • This measure will only be available for Safeguard facilities, and only where they have exceeded their baseline • The ACCUs available for use in this measure will be sourced from ACCUs that are delivered to Government from 12 January 2023 onwards under Carbon Abatement Contracts.

13.4 Proposed program

GGT's program to meet the emissions reduction targets has been shaped by the requirements of the Safeguard Mechanism. GGT's priority is to reduce on-site emissions through operational changes and stay-in-business projects. The purchase of ACCUs or SMCs will be the last resort option.

GGT's objective is achieve sufficient onsite emissions reduction to not have to surrender ACCUs equal to more than 30% of GGP's baseline. The intent is to avoid having to submit a statement to the Clean Energy Regulator on why onsite abatement has not been achieved.

GGT's strategy to meet Safeguard Mechanism targets has three main programs:

- Reduce emissions through changes to the operation of compressors
- Integrate emissions reduction into the development of stay-in-business projects
- Purchase ACCUs or SMCs only when there is a gap between onsite emissions onsite and the target.

13.4.1 Compressor efficiency

As part of APA's Climate Transition Plan,⁶⁸ APA is embarking on a fuel gas efficiency initiative to reduce fuel gas consumption for transporting the same amount of throughput (measured by Fuel Gas Intensity GJ/TJ).

To deliver this, APA's process engineering and integrated operations teams are working to determine which configurations minimise the fuel gas intensity of the GGP for differing bands of Yarraloola throughput.

This will be a new business as usual for APA and we expect significant changes to the frequency at which compressors are run. The reduction in emissions from this initiative can be difficult to predict into the future due to uncertainty in future pipeline throughput.

However, the challenge of forecasting gas pipeline throughput and fuel gas consumption is the consequence of the volatility of daily gas demand itself. This is a result of the uncertainty of market driving forces (e.g. weather). Such uncertainty is compounded in major gas infrastructure growth projects, where changes to pipeline design and commercial demand creates new and unprecedented modes of operation, making emissions difficult to predict.

For now, APA has assumed a 1:1 offset of NGI throughput to Yarraloola enabling ~1 Turbine to be off per day (usually Wiluna). Over time as our knowledge increases, we may find that 1TJ through NGI offers >1TJ of relief to the Yarraloola throughput we use to determine what configurations to operate.

⁶⁸ APA Group, 2022 Climate transition Plan can be found here. [apa-group-climate-transition-plan](#)

GGP will benefit from this APA corporate-wide fuel gas efficiency initiative. This initiative has been incorporated into the strategy to meet the GGP's Safeguard Mechanism obligations.

Currently, the extent by which we reduce emissions from operational changes is very difficult to forecast. We have prepared our best estimates in the current circumstances.

13.4.2 Capital programs – stay-in-business

The current strategy to meet Safeguard Mechanism emissions reduction targets has been developed as part of the stay-in-business capital expenditure program stay in business program to reduce fugitive (leak and venting emissions) and compressor emissions along the GGP is discussed in more detail in discussed in section 10.5.4.

The GGP Asset Management team has developed a new operating philosophy in response to the need to reduce emissions and to take advantage of the benefits offered by the recently commissioned NGI. The new operating philosophy includes a new compressor run order to leverage the NGI to maintain security of supply while reducing emissions and fuel gas use.

This new strategy has been factored into our end-of-life maintenance and replacement programs. In many cases we have been able to defer investment into the 2025-29 period or even avoid investments altogether while constraining reliability risks, a risk which is ultimately borne by our customers.

As part of the stay in business program, we have sought to minimise Safeguard Mechanism costs and support the achievement of emission reduction targets by installing dry gas seals at Wiluna compressor station.

13.4.3 Purchase of carbon offsets

We have incorporated the forecast emissions reductions from changing the operation of compressors and the new operating philosophy to calculate the potential quantity of carbon offsets that may need to be purchased to meet the target reductions.

GGT has modelled four options to reduce GGP emissions. This modelling was undertaken to identify the most prudent and efficient expenditure between compressor efficiency, stay in business emissions reduction projects, and costs of purchasing carbon offsets.

The four options including base case (Option 3) are described in the table below.

Table 13-1 Summary of options analysis for carbon offsets

GGP Safeguard Baseline	Description	Assessment
Base case (Option 3)	No change to fugitive emission calculation No compressor efficiency projects included	
Option 1	No change to fugitive emission calculation Compressor efficiency projects included	
Option 2	Fugitive reduction projects included from FY26 stay in business projects Compressor efficiency projects included	Preferred option
Option 4	Fugitive reduction projects included from FY26 stay in business projects No compressor efficiency projects included	

The base case represents the cost of purchasing offsets with no initiatives undertaken to reduce emissions. The base case represents the counterfactual to undertaking initiatives in options 1, 2, and 4.

The base case is derived by forecasting the baseline carbon emissions of the GGP using the natural gas throughput production variable, the required target rate of emissions per year, the required carbon offsets required to meet this decline rate, and the cost impact of purchasing these offsets. The forecast cost of carbon offsets has been based on information sourced from RepuTex.⁶⁹

The preferred option incorporates forecast emissions reduction from the compressor efficiency initiative, and the stay in business Wiluna emissions reduction project as well as projects at our Wyloo West and Turee Creek compressor stations. Even with these important initiatives, we forecast that to meet the GGP emissions reduction target we will be required to purchase carbon offsets.

GGT has forecast \$3.5 million in operating expenditure for the Safeguard Mechanism over the 2025-29 period. This estimate constitutes about 60 per cent of the total expenditure allocated to covered GGP portion in accordance with the regulatory cost allocation method.

At this stage, the costs of carbon offsets are uncertain. If the prices change significantly (up or down) we would be seeking to use the cost-pass provisions for carbon cost events proposed in section 14.5.5 to pass through actual costs of carbon offsets.

⁶⁹ RepuTex is a leading provider of price information, analysis and advisory services for the Australian carbon and electricity commodity markets. Over 150 companies, including high emitting companies, large energy users, project developers, investment funds, physical traders and state and federal policymakers, use the RepuTex platform.

13.5 Justification

The Safeguard Mechanism is a regulatory obligation with the primary objective of on-site reductions in emissions.

As a prudent operator GGT has sought to meet the objectives of the Safeguard Mechanism by focussing on achieving on-site reductions.

To achieve on-site emissions reductions in an efficient way GGT/APA has:

- Introduced a fuel gas efficiency initiative to reduce fuel gas consumption for transporting the same amount of throughput. This is an APA program developed as part of APA's Climate Transition Plan. This initiative does not require capital or operating expenditure
- Incorporated emissions reduction in the stay in business program. Achieving emission reduction by installing dry gas seals at the Wiluna compressor station is an effective and efficient way to meet safeguard targets
- Sought to minimise the purchase of carbon offsets, by maximising emissions reductions from the fuel gas efficiency initiative, and stay in business work at Wiluna compressor station.

The Safeguard Mechanism is a new obligation, and GGT and APA have conducted wide ranging investigations to best meet the target reductions.

Our proposal represents a reasonable approach given the newness of the obligation. We anticipate that over the next few months there are likely to be changes to the program. At this stage, the program has been prepared using the best available information at this time.

As a prudent and efficient operator, GGT has sought to balance meeting Safeguard Mechanism obligations and at the same time minimise costs of meeting those obligations.

In addition to the Safeguard Mechanism obligations, APA has a 30% operational methane reduction target by 2030 (FY21 baseline year), which is consistent with Australia's Global Methane Pledge.

To support the delivery of this target, we are currently testing enhanced methane measurement and reporting methodologies and exploring additional methane abatement opportunities for GGT and other APA assets. We anticipate by FY25 that we will identify further changes to the program to support enhanced methane measurement, disclosure, and reduction of methane emission sources across GGT which will also support the Safeguard Mechanism primary objective of on-site emissions reduction.

13.6 Other supporting material

Further information has been provided to the ERA in:

- GGP-AA5- Attachment 13.1-Safeguard Mechanism Forecast-1 January 2024-Confidential

14. TARIFF VARIATION MECHANISM

14.1 Overview

Our operating environment can be unpredictable and events beyond our control can materially change our expenditure within a regulatory period. In recent years, we have observed unexpected events more frequently including natural disaster events, cyber security events, and volatility due to global events.

As a result, the insurance market is also becoming more volatile and unpredictable for assets like the GGP and other infrastructure assets in APA's portfolio.

To mitigate these risks, we propose a wider range of cost pass through events for high cost events that could not have reasonably been forecast ahead of time.

14.2 NGR requirements

Under the NGR (Rules 92 and 97), a full access arrangement must include a mechanism (a reference tariff variation mechanism) for variation of a reference tariff over the course of an access arrangement period.

A reference tariff variation mechanism may provide for variation of a reference tariff including for a cost pass through for a defined event (such as a cost pass through for a particular tax).

According to previous ERA decisions, cost pass-through events are events that:

- incur costs that cannot be, and have not been, reasonably forecast
- are beyond the control of GGT, and
- relate to the provision of reference services.

14.3 Current access arrangement

Subject to the ERA's approval, reference service tariffs may be adjusted after one or more cost pass-through event/s occurs in which each individual event materially changes, or is reasonably expected to materially change, the cost of providing the reference service.

The current GGP AA (as approved by the ERA on 19 December 2019), provides for the following cost pass-through reference tariff variations:

- **Change in law event (section 4.5.2(c)):**

a) A legislative or administrative act or decision that:

(i) has the effect of:

(A) varying, during the course of the Access Arrangement Period, the manner in which Service Provider is required to provide the Firm Service; or

(B) imposing, removing or varying, during the course of an Access Arrangement Period, minimum service standards applicable to the Firm Service; or

(C) altering, during the course of an Access Arrangement Period, the nature or scope of the Firm Service, provided by Service Provider; and

(ii) materially increases or materially decreases the costs to Service Provider of providing the Firm Service.

- **Tax change event (section 4.5.2(c)):**

b) A tax change event occurs if any of the following occurs during the course of the Access Arrangement Period:

(i) a change in a relevant Tax, in the application or official interpretation of a relevant Tax, in the rate of a relevant Tax, or in the way a relevant Tax is calculated;

(ii) the removal of a relevant Tax;

(iii) the imposition of a relevant Tax; and

in consequence, the costs to Service Provider of providing the Firm Service are materially increased or decreased.

Under the current GPP access arrangement, in relation to a legislative or administrative act or decision a cost pass-through event is considered material where the cumulative costs of the event exceed 1.0% of the total revenue for the covered pipeline in the years in which costs are incurred. (Section 4.5.2(d)) of Access Arrangement). Total Revenue is the forecast revenue derived from the building block approach calculated in accordance with rule 76 of the NGR and approved by the regulator in the 2024 Final Decision

Based on the proposed (unsmoothed total revenue for the reference service, the materiality threshold for GGP would be about \$0.7 million.

14.4 Proposed amendments

As seen above, Rule 97 in the NGR provides for the variation of a reference tariff as a result of a cost pass through for a defined event. Our proposal for cost pass-through events is informed by the ERA and AER's recent access arrangement decisions for gas transmission businesses, discussed in further detail below.

For the 2025-29 regulatory period, we will propose to retain the current cost pass through events and add several others to capture a broader range of events. The following cost pass through events:



Regulatory change event



Law & service standard event



Tax change event



Insurance coverage event



Insurer credit risk event



Natural disaster event



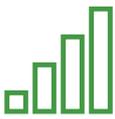
Terrorism event



Carbon costs event.

The table below shows the proposed definitions for the above cost pass through events.

Pass through event	Proposed definition
Regulatory change 	Regulatory change event means a change in regulatory obligation or requirement that: <ol style="list-style-type: none"> falls within no other category of pass through event; and occurs during the course of an access arrangement period; substantially affects the manner in which the Service Provider provides the Firm Transportation Service; and materially increases or materially decreases the costs of providing these services.

Pass through event	Proposed definition
<p>Law change</p> 	<p>Law change event means a legislative or administrative act or decision that:</p> <ol style="list-style-type: none"> a) has the effect of: <ol style="list-style-type: none"> i. varying, during the course of the access arrangement period, the manner in which Service Provider is required to provide the Firm Transportation Service; or ii. imposing, removing or varying, during the course of an access arrangement period, minimum service standards applicable to the Firm Service; or iii. altering, during the course of an access arrangement period, the nature or scope of the Firm Service, provided by Service Provider; and b) changes the costs to Service Provider of providing the Firm Service.
<p>Tax change</p> 	<p>A tax change event occurs if any of the following occurs during the course of the access arrangement period for the Service Provider:</p> <ol style="list-style-type: none"> a) a change in a relevant Tax, in the application or official interpretation of a relevant Tax, in the rate of a relevant Tax, or in the way a relevant Tax is calculated; b) the removal of a relevant Tax; c) the imposition of a relevant Tax; and <p>in consequence, the costs to Service Provider of providing the Firm Service have changed.</p>
<p>Insurance coverage</p> 	<p>An insurance in coverage event occurs if:</p> <ol style="list-style-type: none"> 1. The Service Provider: <ol style="list-style-type: none"> a. makes a claim or claims and receives the benefit of a payment or payments under a relevant insurance policy or set of insurance policies; or b. would have been able to make a claim or claims under a relevant insurance policy or set of insurance policies but for changed circumstances; and 2. The Service Provider incurs costs: <ol style="list-style-type: none"> a. beyond a relevant policy limit for that policy or set of insurance policies; or b. that are unrecoverable under that policy or set of insurance policies due to changed circumstances; and 3. The costs referred to in paragraph 2 above materially increases the costs to the Service provider in providing Reference Service.

Pass through event	Proposed definition
<p>Insurer credit risk</p> 	<p>An insurer credit risk event occurs if an insurer of the Service Provider becomes insolvent, and as a result, in respect of an existing or potential claim for a risk that was insured by the insolvent insurer, the Service Provider:</p> <ul style="list-style-type: none"> a) is subject to a higher or lower claim limit or a higher or lower deductible than would have otherwise applied under the insolvent insurer’s policy: or b) incurs additional costs associated with funding an insurance claim, which would otherwise have been covered by the insolvent insurer. <p>Note: In making a determination on an insurer credit risk pursuant to [TBA] of this Access Arrangement, the ERA will have regard to, among other things:</p> <ul style="list-style-type: none"> i. the Service Provider’s attempts to mitigate and prevent the event from occurring by reviewing and considering the insurers track record, size, credit rating and reputation, and ii. in the event that a claim would have been covered by the insolvent insurer’s policy, whether the Service Provider had reasonable opportunity to insure the risk with a different insurer.
<p>Natural disaster</p> 	<p>Natural disaster event means any natural disaster including but not limited to cyclone, fire, flood or earthquake that occurs during the access arrangement period that changes the costs to the Service Provider in providing the Reference Service, provided the cyclone, fire, flood or earthquake or other event was:</p> <ul style="list-style-type: none"> a) a consequence of an act or omission that was necessary for the Service Provider to comply with a regulatory obligation or requirement or with an applicable regulatory instrument; or b) not a consequence of any other act or omission of the Service Provider. <p>Note: In making a determination on a natural disaster event pursuant to [TBA] of this Access Arrangement, the ERA will have regard to, amongst other things:</p> <ul style="list-style-type: none"> i. whether the Service Provider has insurance against the event; and ii. the level of insurance that an efficient and prudent service provider would obtain in respect of the event.

Pass through event	Proposed definition
<p>Terrorism</p> 	<p>Terrorism event means an act (including, but not limited to, the use of force or violence, or the threat of force or violence, or a malicious act to access and/or disrupt computer systems or other information communication technologies including operational technology systems) of any person or group of persons (whether acting alone or on behalf of or in connection with any organisation or government), which:</p> <ul style="list-style-type: none"> a) from its nature or context is done for, or in connection with, political, religious, ideological, ethnic or similar purposes or reasons (including the intention to influence or intimidate any government and/or put the public, or any section of the public, in fear); and b) changes the costs to the Service Provider in providing the Reference Service <p>Note: In making a determination on a natural disaster event pursuant to [TBA] of this Access Arrangement, the ERA will have regard to, amongst other things:</p> <ul style="list-style-type: none"> i. whether the Service Provider has insurance against the event; ii. the level of insurance that an efficient and prudent Service Provider would obtain in respect of the event; and iii. whether a declaration has been made by a relevant government authority that a terrorism event has occurred.
<p>Carbon costs</p> 	<p>A carbon cost event occurs if the Service Provider incurs unexpected costs (including any carbon costs attributable to the operation of the GGT whether incurred by the Operator directly, by payment to any third party or by reimbursement to any of its Related Bodies Corporate where any of those persons are liable for the payment of such Carbon Costs).</p> <p>Carbon costs means any costs arising in relation to the management of and complying with any obligations or liabilities that may arise under any Law in relation to greenhouse gas emissions.</p> <p>Note: when determining a carbon cost event, such costs may include the costs reasonably incurred by GGT or its Related Bodies Corporate of actions taken by any of them to reduce greenhouse gas emissions or mitigate their effect, and the costs incurred by the Operator or its Related Bodies Corporate in acquiring and disposing of or otherwise trading emissions permits and any penalties reasonably incurred by any of the Operator or its Related Bodies Corporate in managing or complying with such obligations, provided that such penalties are not incurred as a result of the Operator or its Related Bodies Corporate failing to act as a Reasonable and Prudent Person.</p>

14.5 Justification

GGT remains committed to minimising and mitigating risks associated with delivering our services. Our strategies must work in conjunction with the cost pass through framework to protect the GGP and our customers from high impact, low probability events outside of our control. We consider that the above proposed pass through events are consistent with the recent determination and access arrangement decisions for transmission and distribution businesses and the broader objectives of the NGR.

Transmission and distribution businesses are increasingly relying on the cost pass-through mechanism to account for material costs that cannot be reasonably forecast before an access arrangement period. Other assets owned by APA on the east coast have also proposed, and subsequently been approved, a range of cost pass-through events by the AER. Cost pass-through events below have been informed by the following:

- Other WA business access arrangement proposals, approved by the ERA
- East coast business access arrangement proposals, approved by the AER.

The following table compares the type of cost pass-through events for Western Australian and APA businesses.

Table 14-1 Comparison of cost-pass through events across gas businesses

	Regulator	Change event						
		Regulatory	Service standard	Tax	Insurance coverage	Insurer credit risk	Terrorism	Natural disaster
Transmission asset								
Dampier to Bunbury Pipeline 2021-25 (AGIG)	ERA		✓	✓				✓
Mid-West and South-West Gas Distribution Systems 2020-24 (ATCO)	ERA		✓	✓				✓
Amadeus Gas Pipeline 2016-21 (APA)	AER	✓	✓	✓	✓	✓	✓	
Roma to Brisbane Pipeline 2022-27 (APA)	AER	✓	✓	✓	✓	✓	✓	
Victorian Transmission System 2023-27 (APA)	AER	✓	✓	✓	✓	✓	✓	

14.5.1 Insurance coverage event

An insurance coverage event mitigates the risk of liability losses that exceed our insurance coverage. This event protects GGP in the event an insurer is not liable to pay all, or part, of a large or catastrophic event that could have a financially significant impact.

Considering the volatility of the liability insurance, this event proposes to cover potential insurance gaps and the possibility of withdrawn capacity or uneconomic increases in premiums in the future.

An insurance coverage event is a prudent and efficient way to mitigate the risk of GGP incurring losses exceeding our insurance coverage or for gaps in the insurance coverage caused by withdrawn capacity or where the cost of coverage cannot be economically justified.

GGT operates within the business' risk framework to reasonably withstand unpredictable events outside of our control. Our insurance limits are commensurate with risks associated with our operations and customers, as well as industry standards. In some instances, the cost of insurance to mitigate the risk is only available at a prohibitively high cost given the probability of the event occurring.

Without a pass through provision, GGP will need to set aside additional annual insurance allowance to address these risks. In turn, this means our customers would bear additional costs irrespective of whether such an event occurs.

14.5.2 Insurer credit risk event

An insurance credit risk event mitigates the risk of an insurer becoming insolvent, and as a result forcing APA/GGT to insure with another provider and incurring substantial additional costs beyond our control. Additional costs may include higher premiums, a lower claim payment or higher deductible.

An insurer credit risk pass through event is a prudent and efficient way to mitigate the risk with our customers, while providing us with a reasonable opportunity to recover the efficient costs incurred as a result of unpredicted insurance market conditions. This type of event cannot be reasonably insured against (in part, or at all) on reasonable or commercial or economic terms.

APA/GGT cannot reasonably prevent our insurer becoming insolvent or substantially mitigate the cost impact of such an unpredictable event. If, for reasons beyond our control, an insurer is unable to pay all, or a part of, a claim, this would significantly impact our ability to deliver services to our customers. The occurrence of increased insurance premiums from alternative insurers (where the original insurer becomes insolvent) is also beyond our control.

14.5.3 Natural disaster event

A natural disaster event is a prudent and efficient way to mitigate the risk of unpredictable and extreme weather events that are undoubtedly beyond our control.

A natural disaster event mitigates the risk of not being able to obtain insurance coverage for natural disaster events and materially increasing our efficient costs that are unable to be recovered by GGT. GGT cannot prevent this type of event from occurring and cannot

substantially mitigate the cost impacts of this type of event (both prior to and after the occurrence of the event).

The occurrence of a natural disaster event (as defined above) has a low probability of occurrence but a high consequence or magnitude. Accordingly, self-insurance would not be appropriate to obtain given the need to balance the long-term interests of customers against rising insurance premiums and likelihood of a natural disaster event occurring.

14.5.4 Terrorism event

A terrorism event mitigates the risk of liability arising from devastating and deliberate damage caused to our network which risks our ability to deliver prescribed transmission services to customers.

The occurrence of a particular terrorism event (including a cyber-terrorism attack) has a low probability of occurrence but may have significant financial consequence or magnitude. In recent determination decisions, the AER has approved a terrorism cost pass through event for TNSPs in their preferred drafting.

GGP is subject to new obligations in relation to cyber security and critical infrastructure resilience over the 2025 to 2029 access arrangement period. We have set out expenditure required to meet our new regulatory obligations that aim to prevent and mitigate the risk of a cyber-terrorism event occurring.⁷⁰

As much as practicably possible, GGP is committed to maintaining robust and resilient network systems to mitigate the risk and cost impact of this type of event. Notwithstanding the new cyber security and protection measures taken to meet the above obligations and beyond, an act of cyber terrorism could still significantly impact GGP's ability to deliver prescribed services. It is not possible to eliminate the entirety of the risks we face when it comes to a cyber terrorism attack. It would be neither prudent nor efficient to incur material costs to insure against this type of event, which inevitably mean additional costs to our customers.

Additionally, our insurance broker has advised that the global insurance market landscape for cyber risk is rapidly evolving, where obtaining insurance for a cyber-terrorism attack is increasingly challenging for critical infrastructure assets like GGP.

14.5.5 Carbon costs event

In Western Australia, two businesses have been approved to pass through costs incurred as a result of actions taken to comply with obligations to reduce greenhouse gas emissions:

⁷⁰ GGP AA5--SoCI cyber plan -01 January 2024-Confidential and GGT-GGP- AA5-Secure Energy Plan-01 January 2024-Confidential

- **Dampier to Bunbury Pipeline 2021-25.** The ERA approved AGIG’s (through DGNGP) definition of ‘carbon cost’ events, which allows AGIG to recover costs pursuant to the cost pass through mechanism:

“Carbon Costs (including any Carbon Costs attributable to the operation of the DBNGP whether incurred by the Operator directly, by payment to any third party or by reimbursement to any of its Related Bodies Corporate where any of those persons are liable for the payment of such Carbon Costs)...

Carbon Cost means any costs arising in relation to the management of and complying with any obligations or liabilities that may arise under any Law in relation to greenhouse gas emissions. For the avoidance of doubt, such costs may include the costs reasonably incurred by the Operator or its Related Bodies Corporate of actions taken by any of them to reduce greenhouse gas emissions or mitigate their effect, and the costs incurred by the Operator or its Related Bodies Corporate in acquiring and disposing of or otherwise trading emissions permits and any penalties reasonably incurred by any of the Operator or its Related Bodies Corporate in managing or complying with such obligations, provided that such penalties are not incurred as a result of the Operator or its Related Bodies Corporate failing to act as a Reasonable and Prudent Person.”

- **Mid-West and South-West Gas Distribution Systems 2020-24.** The ERA also approved ATCO’s definition for costs associated with greenhouse gas emissions fees/taxes, which allows ATCO to recover costs pursuant to the cost pass through mechanism:

“ATCO Gas Australia incurs Conforming Capital Expenditure or Conforming Operating Expenditure as a direct result of any Law that imposes a fee or Tax on greenhouse gas emissions or concentrations; and for avoidance of doubt, this expenditure includes only direct capital or direct operating expenditure associated with preparation for, compliance with the Laws which implement, and the participation in, the Emissions Trading Scheme; and liability only for direct capital or direct operating expenditure transferred to ATCO Gas Australia from another entity as a direct result of acting in accordance with the Emissions Trading Scheme.”

We are proposing similar provisions for the GGP access arrangement. We consider that a carbon cost mechanism offers flexibility in the dynamic and complex energy sector. For example, if the prices of carbon offsets change significantly (up or down) we would be seeking to use the cost-pass provisions for carbon cost events discussed in section 13.4.3.

14.5.6 Regulatory event

In recognition of the changing regulatory and policy we are proposing a regulatory event as a catch all for changes that do not fall within any of the other categories. This proposal will enable GGT to recover the efficient costs of providing service for unforeseen and unanticipated events. This is a reasonable proposal given the amount of change and uncertainty in the current energy policy environment.

15. ACCESS AND QUEUING

15.1 Overview

GGT is proposing to amend the queuing provisions in the GGP access arrangement. The key objective of the proposed amendments is to simplify the provisions and ensure that they are commercially fit for purpose. We are also proposing to introduce prudential requirements during the offer and acceptance stages of the queuing process.

Our proposal is to align the queuing provisions in the GGP access arrangement with the access and queuing provisions in the NGR.

15.2 NGR Requirements

Rule 103 provides that:

- A transmission access arrangement must have queuing requirements.
- Queuing requirements must establish a process or mechanism (or both) for establishing an order of priority between prospective users of spare or developable capacity (or both) in which all prospective users (whether associates of, or unrelated to, the service provider) are treated on a fair and equal basis.
- Queuing requirements must be sufficiently detailed to enable prospective users to understand the basis on which an order of priority between them has been, or will be, determined; and if an order of priority has been determined – to determine the prospective user's position in the queue.

15.3 Current provisions

The 2020-24 GGP access arrangement requires prospective users to follow the process set out in Section 5 (Queuing) of the access arrangement to obtain access to a service. When spare capacity becomes available, the current queuing provisions include the formation of a 'queue', a public notice for spare capacity and if necessary, a further expression of interest, and auction for the spare capacity.

The current queuing section includes:

- Provisions to for a prospective user to request access to a service
- Provisions for prospective user to lodge with the service provider a registration of interest for a service to be provided by spare or developable capacity⁷¹
 - A process for the service provider to respond to registrations of interest
- Requirements on the service provider if spare capacity becomes available
 - If spare capacity is less than 2TJ/day, the service provider may elect not to run an open season and auction for the Spare Capacity. Instead, a first come, first serve approach will apply
 - If spare capacity is 2TJ/day and over, then
 - an open season (Spare Capacity Notice is provided to those on the Register and published in newspapers). The Spare Capacity Notice seeks Expressions of Interest for the spare capacity.
 - If Expressions of Interest can be met with available spare capacity, then each response is treated as an access request.
 - If the Expressions of Interest cannot be met with available spare capacity, then the service provide may undertake an Auction for the Spare Capacity.
 - Those parties who responded to the Expression of Interest would be notified that the service provider would accept bids for spare capacity (Notice of Auction for Spare Capacity)
 - If complying bids do not exceed available spare capacity, then each is treated as an access request
 - If complying bids exceed available spare capacity the service provider will rank the applications based on the Net Present Value of the respective bids from highest to lowest.

15.4 Issues with the current arrangement

Our intention is to ensure that there is a clear and straightforward process for prospective users seeking access to the GGP pipeline services. There are several reasons for seeking amendments to the queuing section of the access arrangement.

⁷¹ The National Gas Law (section 2) defines “spare capacity” to mean “[the] unutilised capacity of a pipeline” and “developable capacity” to mean “the difference between the current capacity of a covered pipeline and the capacity of a covered pipeline which would be available if a new facility was constructed but does not include any new capacity of a covered pipeline resulting from an extension to the geographic range of a covered pipeline”.

15.4.1 Alignment with Rules

The queuing requirements in Rule 103 discussed above ensure that there are procedures in an access arrangement for establishing an order of priority between prospective users of spare or developable capacity and that the requirements in the access arrangement are sufficiently detailed so that prospective users can understand the basis on which an order of priority between users has been or will be determined.

The Rules do not specify an approach to establishing the order of priority, only that prospective users are treated on a fair and equal basis.

The current GGP access arrangement conflates the steps in Rule 112, which sets out the procedure for a prospective user who wishes to get access to a service provided by a covered pipeline, and the Rule 103 queuing requirements. For example, Clause 5.1 is called “Access request” but it refers to the spare and developable capacity in the queuing rules.

The access provisions are firstly to establish whether the service provider can provide the requested service. The access Rule does not refer to spare or developable capacity. Our intention is to simply and make more transparent the requirements for customers seeking access to services.

15.4.2 Alignment to commercial environment

The commercial environment for pipeline services is complex and dependent on a myriad of factors. The current access arrangement offers a process for access to a service which does not always reflect the complex commercial reality.

GGP customers already have an existing relationship with commercial managers and are more likely to discuss their options informally before going through a formal process as outlined in the NGR.

We note that other WA businesses have an overarching statement in access arrangement encouraging informal engagement before making a formal request. We are proposing to add an overarching clause in the access and queuing section of the access arrangement to encourage existing and prospective users to informally discuss their service requirements with our Commercial team prior to lodging a formal request.

15.4.3 Interconnection of NGI to GGP

The interconnection of the NGI to the GGP requires reconsideration of the queuing arrangements.

When gas is flowing from the NGI into GGP, additional capacity may become available in the GGP. This is because the pressure of the gas which is to flow from the NGI at the point of interconnection will be higher than the pressure of the gas currently flowing from Yarraloola to the southern part of the GGP. This higher pressure at which gas will be delivered from the NGI may create additional capacity in the GGP. Any capacity ‘created’ will be contingent on gas flowing from the NGI.

The interconnection itself does not create the additional capacity. Gas needs to flow from the NGI into the GGP to create that additional capacity. At a point of time, the size of the additional

capacity created in a section of the GGP depends on, among other things, the amount of gas flowing from the NGI into the GGP.

GGT considers the open season provision under section 5.5 of the GGP 2020-2024 Access Arrangement is not fit-for-purpose for this circumstance. Under the current provisions there is ambiguity about how the open season process would apply in the case of the NGI. As discussed above, there is uncertainty about the timing and volume of any spare capacity created by the flow of gas from NGI into the GGP.

One interpretation of the queuing provisions is that GGT needs to publish a notice for spare capacity every time spare capacity becomes available. In practice, this would be costly and administratively burdensome. And given that currently there is no queue for GGP pipeline services, not necessary.

The other interpretation is that since there is no queue for capacity, then GGT does not need to publish a spare capacity notice. Currently, the NGI is under-contracted and there is little benefit to continually be required to publish a spare capacity notice.

We therefore propose to amend the current GGP queuing provisions to provide clarity that if there is no queue at either the Yarraloola or NGI receipt points, then there is no requirement to publish a notice of spare capacity in respect of that receipt point. Therefore, it is at the discretion of the service provider about whether a notice of spare capacity is published, or how to market pipeline services.

15.5 Proposed amendments

GGT is proposing to amend the access and queuing provisions in the GGP access arrangement to address the issues discussed above.

The guiding principles applied to consider the access and queuing provisions are:

- Align with National Gas Rules
- Better alignment with commercial practice
- Fair and equal opportunity to access service
- Tightening of prudential requirements
- Administratively simple.

It is proposed to simplify the queuing provisions in the access arrangement by:

- Including an overarching principle for prospective users to discuss their options with GGT prior to lodging formal access request
- Amending the access provisions in section 5 so that they more closely align with NGR Rule 112 and Rule 103 by distinguishing between the access and queuing provisions, respectively. Adopting the approach in Rule 112, will make the access request process simpler and more transparent by streamlining the access process for any service regardless of whether it is provided by spare or developable capacity. This will simplify the access request process for prospective users.

- Retain the registration of interest provision but remove reference to type of capacity (spare or developable) customers are required to nominate.
- Prospective users who submit a registration of interest are placed on the register
- If capacity becomes available and there are no registrations of interest, then there is no requirement on the service provider to issue a public notice of spare capacity
- If capacity becomes available and there are registrations of interest then the GGT will be required to provide those on the register with a **notice of spare capacity**. The notice seeks **expressions of interest** for the spare capacity. We are proposing that the GGT has discretion about whether to publish the notice
- Provide greater ability for GGT to set criteria in the notice of spare capacity
- Retain the auction for spare capacity for situations where expressions of interest in capacity exceed the available spare capacity (**Notice of auction for spare capacity**)
- Add requirement on GGT to provide the ERA with outcomes of the notice of spare capacity and notice of auction of spare capacity
- Tighten prudential requirements. Where a prospective user has accepted the service providers access proposal, the prospective user will be required to provide the service provider with a capacity deposit
- Where there is acceptance of an offer, service provider and a prospective user must negotiate in good faith to reach agreement on the Terms and Conditions of the Transportation Agreement.

15.5.1 Overarching statement

We are proposing to add an overarching statement at the start of the revised access and queuing chapter to encourage prospective users to discuss their service requirements prior to lodging a formal request.

The proposed clause states:

Prospective Users are encouraged to contact the Service Provider about their service requirements prior to submitting a formal access request pursuant to this section.

Encouraging existing and prospective users to informally discuss their service requirements with our Commercial team prior to lodging a formal request is more aligned with the commercial reality.

We are also proposing a provision that allows the service provider to request information from existing users within 24 months of the expiry date of an existing Gas Transportation Agreement. We are proposing that the Service Provider may request information on whether the existing user will be extending the period of the Gas Transportation Agreement This information will inform the service provider of potential spare capacity.

The proposed continuation of service information request will improve transparency of the potential spare capacity and allow the service provider to better plan and implement procedures

for notification of spare capacity to prospective users. This will help to improve ability of GGT to provide fair and equitable access to service for prospective users.

15.5.2 Registration of interest

The current GGP access arrangement includes a provision for the registration of interest. The registration of interest provision requires customers to nominate their interest for a service to be provided by spare capacity or developable capacity. The register becomes the 'queue' for the application of the queuing provisions (Rule 103). We are retaining the register / queue with some enhancements.

We are seeking to clarify that if the Service Provider is not able to provide access to an initial request for service, then the Service Provider may invite the Prospective User to lodge a registration of interest for services.

A registration of interest must be made in the form set out in the current Schedule B form which sets out details about the service being sought by the Prospective User. We are proposing that the registration of interest must be signed by the CEO / CEO delegate of the Prospective User, and meet any prudential requirements specified by the Service Provider in the invitation to lodge a registration of interest. We consider this necessary to ensure that registrations of interest for service are genuine.

To simplify the registration of interest process it is proposed to remove reference to whether a service is to be provided by spare capacity or developable capacity. Some customers may be indifferent to whether a service is provided from spare or developable capacity. This provides greater discretion for the service provider and the prospective users to develop a solution that best meets the needs of the customer. GGT will then be able to better assess whether there may be sufficient interest for developable capacity.

A registration of interest is valid for 12 months from receipt of the registration of interest by service provider.

15.5.3 Procedure when spare capacity becomes available

We are proposing to simplify the process when spare capacity becomes available. If spare capacity becomes available, the service provider will:

- notify all prospective users on the queue of the spare capacity including the amount, and timing of its availability. The 'Spare Capacity Notice' will invite expressions of interest from Prospective Users.
- The Spare Capacity Notice may provide information about the amount of aggregated capacity on the register and set out the circumstances in which the Service Provider may call for an auction of the Spare Capacity.
- The Spare Capacity Notice may include criteria to enable Service Provider to establish an order of priority for the Spare Capacity.
- The service provider may publish a notice of spare capacity on its website, and/ or any newspaper and/ or social media

If the service provider does decide to publish a spare capacity notice, we propose that the platform for publication should allow for different platforms for the publication of the notice – including on service provider’s website, social media, and newspaper. This reflects the importance of social media and websites as a platform for information sharing.

If the available spare capacity can meet the services requested by all prospective users on the register, the service provider will make an access proposal to each of the prospective users on the register in a manner that is reasonable. This is consistent with the current access arrangement.

If the available spare capacity is not sufficient to meet the services requested by all prospective users on the register, then the service provider will notify all prospective users that lodged expressions of interest for spare capacity in response to the Spare Capacity Notice that it will accept bids for Spare Capacity (Notice of Auction for Spare Capacity).

This is largely consistent with current arrangements, but we are proposing to allow the prospective user to engage with the service provider to discuss potential terms and conditions prior to lodging a bid in the auction for spare capacity.

In order to submit a complying bid, we are also seeking to tighten the ability for the service provider to reject a proposed bid for service on terms that are not acceptable to the Service Provider. For example, terms that will limit the ability of service provider to satisfy service obligations to other shippers; or do not reflect the actual capacity usage profile expected to be used by the customer; or that would change the allocation of risk compared to standard Terms & Conditions.

Overall, we are seeking to ensure that there is greater transparency for prospective users about the level of demand for capacity and any requirements that the service provider may have. And to enable greater engagement between the service provider and prospective users bidding for spare capacity. This is more reflective of commercial reality and will be a benefit to prospective users by helping to better meet their service requirements.

15.5.4 Service Provider reporting to Regulator

We proposing to place a requirement on the service provider to inform the Regulator, in writing, about the outcomes of the Notice of Spare Capacity and, if relevant, the Notice of Auction for Spare Capacity.

This proposal will increase transparency of the queuing process and place a greater discipline on GGT to undertake a fair and equitable process.

15.5.5 Prudential requirements

We are proposing to tighten prudential requirements for prospective users who accept the service providers access proposals. Prudential requirements are necessary to prevent nuisance access requests that are intended to block other prospective users from gaining access to services, or to create uncertainty about timing for access to service.

The prudential requirements are for the lodgement of a capacity deposit. Where a Prospective user notifies the service provider that it accepts the access proposal, the service provider will notify the prospective user that it must pay the relevant capacity deposit (Capacity Deposit).

If the prospective user does not pay the relevant capacity deposit within 20 Business Days (or such longer period as service provider may allow) of being notified by service provider pursuant to paragraph (a) to pay the capacity deposit, then service provider may withdraw the offer. The service provider may remove the prospective user registration of interest from queue.

The capacity deposit is refunded when the prospective user enters into a transportation agreement with the service provider, or earlier at the discretion of the service provider.

This amendment aimed at reducing potential gaming and nuisance blocking enables a more fair and equitable queuing process.

15.5.6 Prospective user accept access proposal

Where a prospective user accepts the service provider access proposal (either original or amended), the service provider and a prospective user must negotiate in good faith to reach agreement on the terms and conditions of the transportation agreement.

15.5.7 Developable capacity

We are proposing a minor amendment to the developable capacity obligations to remove duplication in the access arrangement. We are proposing that the current provision relating to requirements to undertake expansions be streamlined to refer to the provisions specified in section 7 of the access arrangement which specifically relate to extensions and expansions.

15.6 Justification for proposed amendments

The proposed amendments to the access and queuing provisions provide a more transparent, flexible, and streamlined process for applying for service.

The proposed amendments are more in line with the straight-forward and simple process in the NGR and will be beneficial customers seeking access to a service. The intent is to simplify the provisions and ensure that they are fit for purpose for customers and better reflect commercial reality.

15.7 Revisions to access arrangement

Further details of the proposed revisions to the access and queuing provisions can be found in:

- GGP-AA5-Proposed revised access arrangement (tracked)-1 January 2024-Public
- GGP-AA5-Proposed revised access arrangement-1 January 2024-Public

16. OTHER MATTERS

16.1 Incentive mechanisms

Rule 98 of the NGR provides for a full access arrangement to include one or more incentive mechanisms to encourage efficiency in the provision of services by the service provider.

The regulatory framework for covered pipelines set out in the NGR is an incentive regime designed to facilitate efficient outcomes in the provision of pipeline services. The regulatory framework creates a limit on the price at which regulated reference services can be offered to users of covered pipelines.

The GGP Access Arrangement places a cap on the tariff for the reference service – the firm transportation service - at which APA can offer to users of covered GGP.

The price cap is regulated by the ERA and reflects efficient costs of providing the service. In turn, the efficient price encourages efficient use by users and efficient investment by APA.

The price cap limits the revenue that GGT can earn from providing the service. The price cap provides an incentive for APA to ensure that costs of providing the service are not excessive.

The current GGP Access Arrangement does not include a more specific incentive mechanism. As such, there are no increments for efficiency gains from the operation of such a mechanism in the previous access arrangement period, and no decrements for efficiency losses, which are to be carried over into the total revenue for the period 1 January 2025 to 31 December 2029.

APA is not proposing to include an incentive mechanism in the 2025-29 access arrangement. A large proportion of GGP costs are not directly attributable to covered GGP. Most costs are allocated to covered GGP either from shared corporate costs or shared with the uncovered portion of GGP. As such, the cost allocation method makes it difficult to ascertain efficiency improvements.

17. GLOSSARY

Term	Definition
AA	access arrangement
access arrangement period	means the period during which the proposed revisions are to apply; this period is expected to be 1 January 2025 to 31 December 2029
ACCU	Australian Carbon Credit Unit
AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
APA	APA Group
CAM	cost allocation methodology
capex	capital expenditure
covered pipeline	refers to the parts of the GGP which are covered under the NGL
CPI	consumer price index
DBP	Dampier to Bunbury Natural Gas Pipeline
DCCEEW	Department of Climate Change, Energy, the Environment and Water
earlier access arrangement period	means the period during which the current access arrangement is expected to apply; this period is expected to end on 31 December 2024
ERA	Economic Regulation Authority Western Australia
G&T	Gilbert and Tobin Lawyers
GEA	gas engine alternator
GGP	Goldfields Gas Pipeline
GGT	Goldfields Gas Transmission Pty Ltd
GGT JV	Goldfields Gas Transmission Joint Venture
IOC	APA's integrated operations centre
ITOT	information technology and operational technology
MRP	market risk premium
NGI	Northern Goldfields Interconnect
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
opex	operating expenditure
SL CAPM	Sharp-Lintner Capital Asset Pricing Model
SoCI	Security of Critical Infrastructure or <i>Security of Critical Infrastructure Act 2018</i>
SMC	Safeguard Mechanism Credit
WACC	weighted average cost of capital
WPI	wage price index

APPENDIX A – SUMMARY OF REVISIONS TO ACCESS ARRANGEMENT

Section of revised AA	Description of change
Throughout AA	Change name of reference service from “Firm Service” to “Firm Transportation Service”
s.1.2	Add information about Northern Goldfields Interconnect
s.1.3	Add information about APA’s acquisition of Alinta Energy GGT Pty Limited
s.1.4	Minor edit
s.1.7	Amend ‘Review Submission Date’ and ‘Revisions Commencement Date’
cl.2.1.2	Change name of section 5 from ‘Queuing’ to ‘Access and Queuing’
cl.2.2.1	Minor edit
cl.2.2.1(d)	Amend to clarify reference to Yarraloola receipt point
cl.2.2.1(e)	New clause referring to new receipt point at Northern Goldfields Interconnect
s.3.5	Amend date for establishing opening capital base
s.3.6	Update to speculative expenditure account balance
cl.4.1.4	Minor edits
cl.4.5.2(c)(i) to (viii)	Add cost pass-through events - insurance cap event, insurer credit risk event, natural disaster event, a terrorism event, carbon cost event; and regulatory change event.
cl.4.5.2(c)(i)(a) to (b)	Amend to separate reference to ‘a change in law event’ and ‘A change in tax event’
cl.4.5.2(c)(i)(c)	Add definition of ‘insurance cap event’
cl.4.5.2(c)(i)(d)	Add definition of ‘insurance credit risk event’
cl.4.5.2(c)(i)(e)	Add definition of ‘terrorism event’
cl.4.5.2(c)(i)(f)	Add definition of ‘carbon cost event’
cl.4.5.2(c)(i)(g)	Add definition of ‘regulatory event’
cl.4.5.2(d)	Add sentence to clarify definition of ‘Total Revenue’
s.4.6	Amend dates
s.5	Change name of section from ‘Queuing’ to ‘Access and Queuing’ Add overarching clause
s.5.1	Amend access request provisions to align with NGR Rule 112
s.5.2	5.2 Information from existing Users New section allowing Service Provider to seek ‘continuation of service information’ from Prospective User in relation to understanding potential spare capacity

Section of revised AA	Description of change
s.5.3	Service Provider obligations after receiving access request from Prospective User Remove reference to 'spare capacity' and 'developable capacity'. Align with NGR Rule 112
s.5.4	Prospective User response to access proposal Minor amendments to align with
s.5.5	Registration of interest Add provision allowing Service Provider to invite Prospective Users to lodge registration of interest for a service Add provisions that the lodged registration of interest must be signed by CEO or CEO delegate
s.5.5.2	Remove clauses (iii) to (v) which duplicate the process set out in s.5.3
s.5.5.3	Service Provider to keep registrations of interest for Services under review Refer to procedure for developable capacity in section 5.7.
s.5.6	Service Provider can provide service with spare capacity <ul style="list-style-type: none"> Remove 2TJ/day spare capacity threshold (old clause 5.4) Expand requirement for Service Provider to provide Spare Capacity Notice to registered Prospective Users Amend obligations about publication of Spare Capacity Notice Clarify that Spare Capacity Notice will invite expressions of interest Add that Service Provider can specify criteria
s.5.7	Expressions of Interest met with available spare capacity <ul style="list-style-type: none"> Minor amendments Remove duplication of Service Provider and Prospective User obligations relating an access proposal that are set out in clauses 5.3 to 5.4.
s.5.8	Expressions of interest not met by Spare Capacity <ul style="list-style-type: none"> Minor edit to title of clause
cl.5.8.1(c)(iii)	Add provisions to allow Prospective User to engage with Service Provide to discuss potential terms and conditions
cl.5.8.1(d)	Add examples of terms that may not be acceptable to the Service Provider
cl.5.8.2	If complying bids do not exceed Spare Capacity <ul style="list-style-type: none"> Add provision that Service Provider may engage with Prospective Users who have lodged a bid in response to a Notice of Auction for Spare Capacity
cl.5.8.3	Minor edits to refer to new clauses New provision allowing Service Provider to request a Prospective User to provide a Capacity Deposit.

Section of revised AA	Description of change
cl.5.8.3(e)	New provision requiring Service Provider will inform the Regulator, in writing, about the outcomes of the Notice of Spare Capacity and, if relevant, the Notice of Auction for Spare Capacity.
cl.5.8.4	Amend to allow Service Provider to set a floor price in addition to a reserve price.
cl.5.11(b)(ii)	Minor amendments to requirements to publish a notice of developable capacity
cl.5.11.3	New clause allowing extensions to the periods specified in the provisions relating to developable capacity
cl.5.11.4	Amend provision to refer to section 7.1 to remove duplication of provisions.
Title	Add title page for Schedules
Schedule A Details	Amend Reference Tariff Rates
	Contact details - updated
	Scheduled Reference Tariff Variation Mechanism <ul style="list-style-type: none"> • Add information about the 2022 Rate of Return Instrument
	Limits on varied Reference Tariff Components <ul style="list-style-type: none"> • Update dates • Update placeholder inflation
Schedule B	Amend to title of Registration of Interest to remove reference to spare or developable capacity Include requirement for signature by CEO / CEO delegate and date
Definitions	Spare capacity - amend references to clauses in the access arrangement Receipt Point – add Northern Goldfields Interconnect Relevant date – amend Spare Capacity Notice - amend references to clauses in the access arrangement Spare Capacity Register - delete
Definitions	Relevant date – amend
T C1 Definitions and Interpretation	Spare Capacity Notice - amend references to clauses in the access arrangement
	Spare Capacity Register - delete

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