

Attachment 9.3

# Asset Management Plan

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PUBLIC

## Document Reviewed By

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## Executive Summary

As part of the Australian Gas Infrastructure Group (AGIG), Australian Gas Networks (AGN) distributes gas to over 2.0 million residential, commercial, and industrial customers across South Australia, Victoria and Queensland (mostly Brisbane), as well as smaller towns in New South Wales (Albury, Wagga Wagga) and the Northern Territory (Alice Springs). The combined networks include over 1,300 km of transmission pipelines and 24,000 km of distribution mains.

In South Australia, the AGN network supplies gas to approximately 485,000 end users through a network of approximately 8,500 km of distribution mains, and 209 km of transmission pressure pipelines. Our South Australian operations team also manages our smaller network across the border in Mildura, Victoria.

This Asset Management Plan (AMP) provides a consolidated view of the strategies adopted by us (and our network operator – APA Group) to manage the assets contained in our South Australian network in a safe and sustainable manner. The AMP is derived from a number of key operational and technical plans and is a key input into the development of business plans and capital expenditure forecasts.

Our approach to Asset Management is consistent with our Vision as outlined in Section 3 of this document. A summary of our network performances is contained in Section 4 and finally, Section 5 (regulated networks) provides an overview of our capital requirements for the next Access Arrangement (AA) period (1 July 2026 to 30 June 2031).

In total, we are forecasting \$453 million of direct expenditure (excluding overheads), in un-escalated January 2025 dollars, to be incurred for our regulated SA network during the next AA period. This is summarised by capex driver category in Table 1 below.

Table 1 Summary of Network Expenditure (\$'000, Jan 2025)

Expenditure Category	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Growth Assets	\$28,564	\$33,131	\$29,085	\$28,235	\$26,482	\$145,498
Mains Replacement	\$15,668	\$15,668	\$15,868	\$15,868	\$15,668	\$78,742
Meter Replacement	\$7,867	\$6,579	\$6,306	\$7,431	\$8,220	\$36,403
Augmentation	\$-	\$3,716	\$-	\$2,197	\$-	\$5,913
Telemetry	\$1,150	\$650	\$605	\$573	\$573	\$3,553
Other Assets	\$19,394	\$18,627	\$18,329	\$19,290	\$16,951	\$92,593
Information Technology	\$11,052	\$35,546	\$11,187	\$19,819	\$8,125	\$85,730
<b>Total Direct CAPEX</b>	<b>\$83,696</b>	<b>\$113,919</b>	<b>\$81,381</b>	<b>\$93,414</b>	<b>\$76,021</b>	<b>\$448,431</b>
Redundant Service Removal (Opex)	\$875	\$875	\$875	\$875	\$875	\$4,375
<b>Total Expenditure</b>	<b>\$84,571</b>	<b>\$114,794</b>	<b>\$82,256</b>	<b>\$94,289</b>	<b>\$76,896</b>	<b>\$452,806</b>



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# 1 Document Overview

## 1.1 Purpose

This AMP provides a consolidated view of strategies for and asset lifecycle issues of Australian Gas Networks (AGN) assets in South Australia that are managed by the South Australian networks business of APT O&M Services Pty Ltd (APA). The AMP is derived from a number of key operational and technical plans and is a key input into the development of business cases and capital expenditure requirements.

It has the following key objectives:

- It provides a high-level summary of projects and programs defined within AGN's suite of asset & network strategies / plans;
- It outlines AGN's planned network Capex profile for the forecast period (FY27 – FY31);
- It summarises AGN's planned network operating expenditure step change for Redundant Service Removal;
- It provides an overview of network performance; and
- It defines the linkage between the overarching Asset Management Strategy (AMS) and the underpinning asset specific plans and/or business cases.

The document is intended for use by:

- AGN Network staff (and its contractors); and
- Regulators – Technical, Safety and Economic.

## 1.2 Scope

The AMP covers the regulated Australian Gas Networks' (AGN) assets in South Australia managed by the South Australian networks business of APT O&M Services Pty Ltd (APA Group or APA). Specifically, the assets covered are the South Australian metropolitan and regional networks. An overview of the regulated networks covered in South Australia are in Table 2.

Table 2 – Regulatory Coverage of Networks

Regulatory Coverage	Network Entity
Regulated Assets	South Australian Metropolitan Network (Transmission and Distribution), Regional Networks including Port Pirie, Whyalla, Mount Gambier, Berri, Murray Bridge

It includes:

- Transmission pipelines, distribution mains, distribution services and associated easements and access tracks;
- Consumer regulators and supply regulating stations, valves, heaters, filters, vents, syphons and auxiliary assets used in the operation of the distribution and transmission networks;
- Corrosion protection, control, metering, enclosures and communications equipment; and
- Asset management processes and systems such as Supervisory Control and Data Acquisition (SCADA).

The AMP should be read in conjunction with all the supporting business cases, asset management strategies and plans, and AGN's IT Investment Strategy (which provides capital expenditure forecasts for IT related program) to gain a network-wide appreciation of capital expenditure at AGN.

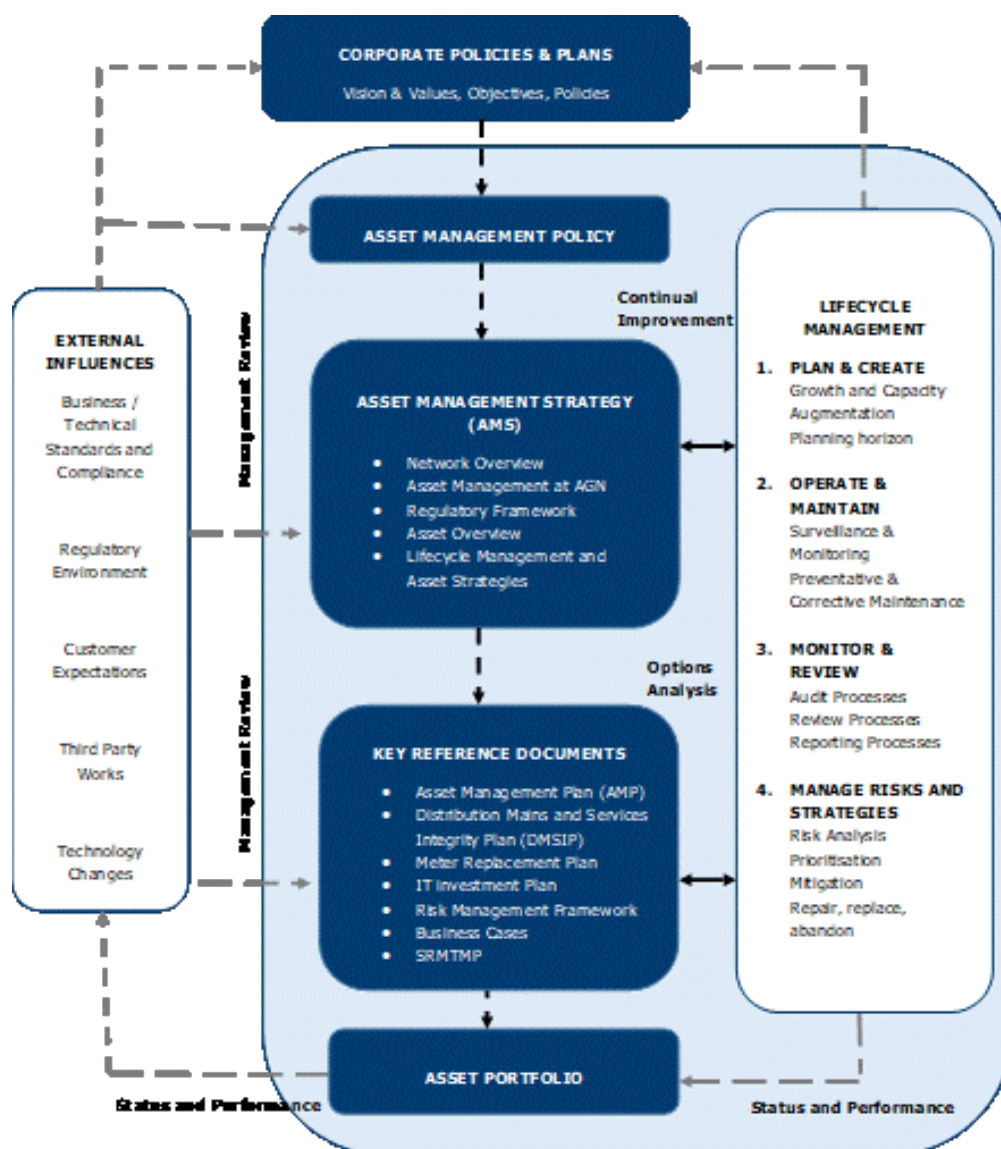
The AMP is written to align with the reporting categories for the FY27 – FY31 Access Arrangement (AA) capital expenditure categories.

Note: This document excludes network distribution assets operated and maintained in Mildura and Alice Springs, as it specifically pertains to assets governed under the SA Access Arrangement.

## 1.3 Relationship with other Key Asset Management Documents

The AMP is one of a number of key asset management documents developed and published by AGN in relation to its gas network. As indicated in Figure 1, detailed asset strategies inform both the AMS and AMP of the required capital and operational programs needed to achieve the long-term objectives of the Gas Distribution network.

Figure 1: Asset Management Framework



## 1.4 Phasing and Financial Disclosure

All financial figures quoted within this document - unless otherwise specifically stated - have the following characteristics:

- Real Expenditure / Cost (reference year = 2024/25);
- Direct Expenditure only (i.e. excludes overheads and finance costs);
- Program totals are in units of \$1,000 (i.e. '000);
- All years are denoted in Financial Year format (July to June); and
- Total values shown in tables and referred to in the text of this document may not reconcile due to rounding.

Conversion factors used in the escalation of historic expenditure to real \$2024/25 (January 2025) equivalent expenditure are provided in Table 3: CPI .

Table 3: CPI Index – nominal to Jan 2025

	2022	2023	2024	2025	2026
CPI Index – nominal to Jan 2025	1.149	1.066	1.024	1.000	0.971



## 1.5 Data Sources

The AMP draws on the capital forecasts outlined in AGN's detailed business cases and asset plans. Table 4 provides a summarised alignment of the AMP against business cases and asset plans.

Table 4: Alignment between AMP and Business Cases/Asset Strategies

Document #	Strategy/ Business Case	Mains Replacement	Meter Replacement	Augmentation	Telemetry	Information Technology	Growth Assets	Other Assets
Attachment 9.9: SA201	Corrosion Management of Steel Pipework	-	-	-	-	-	-	Y
Attachment 9.9: SA202	Non-compliant Domestic Meter Sets	-	-	-	-	-	-	Y
Attachment 9.9: SA203	Isolation Valves	-	-	-	-	-	-	Y
Attachment 9.9: SA204	M42 Bridge and Pipeline Structure	-	-	-	-	-	-	Y
Attachment 9.9: SA205	ILI Pipeline modification	-	-	-	-	-	-	Y
Attachment 9.9: SA206	TP and CBD DRS Overpressure Risk Reduction	-	-	-	-	-	-	Y
Attachment 9.9: SA209	Asset Protection	-	-	-	-	-	-	Y
Attachment 9.9: SA210	OT RTU Replacement	-	-	-	Y	-	-	-
Attachment 9.9: SA211	OT Network Pressure Monitoring	-	-	-	Y	-	-	-
Attachment 9.9: SA213	Vehicles, Plant and Equipment	-	-	-	-	-	-	Y
Attachment 9.12	Network Augmentation Plan	-	-	Y	-	-	-	-
Attachment 9.9: SA219	Concordia Reticulation	-	-	-	-	-	Y	-
Attachment 9.9: SA229	End of life I&C Meter Sets	-	-	-	-	-	-	Y

Document #	Strategy/ Business Case	Mains Replacement	Meter Replacement	Augmentation	Telemetry	Information Technology	Growth Assets	Other Assets
Attachment 9.9: SA242	Renewable Gas Adaptation Project							Y
Attachment 9.9: SA238	IT Corporate Applications	-	-	-	-	Y	-	
Attachment 9.9: SA239	AGN Sustaining Infrastructure	-	-	-	-	Y	-	
Attachment 9.9: SA240	AGN Cyber Security	-	-	-		Y	-	
Attachment 9.9: SA217	IT Operational Applications	-	-	-	-	Y	-	
Attachment 9.9: SA241	AGN Transition	-	-	-	-	Y	-	
Attachment 9.8	Capex Forecast Model	Y	Y	Y	Y	Y	Y	Y
Attachment 9.4	DMSIP	Y	-	-	-	-	-	-
Attachment 9.5	Meter Replacement Plan	-	Y	-	-	-	-	-
Attachment 9.10	Unit Rates Report	Y	Y	-	-	-	Y	-
Attachment 9.7	IT Investment Plan	-	-	-	-	Y	-	-
Attachment 13.1	Demand Forecasting Report	-	-	-	-		Y	-

Refer to the individual business cases and plans highlighted in Table 4 for data sources drawn on in the development of each business case / plan and ultimately this Asset Management Plan.

## 1.6 Document Review

The AMP is reviewed and approved at a minimum every five years, with interim reviews undertaken as needed to reflect significant changes or emerging requirements.

An approved copy of the current version of this Asset Management Plan document is retained in the National Networks Document Library. Communication with relevant internal and external stakeholders, service providers and other relevant parties who require knowledge of this document is via the Intranet publication and standard company briefing processes.

## 1.7 References

- Gas Act 1997 (South Australia)
- National Gas (South Australia) Act 2008
- Gas Regulations 2012
- Distribution License
- National Gas Rules (NGR)
- National Gas Law (NGL)
- Gas Distribution Code (GDC/07)
- Asset / Network Business Cases (Various)
- AS/NZS 4944:2006 In-service Compliance testing of Diaphragm Meters
- Gas Metering Code (GMC/05)



## 2 Network Overview

### 2.1 Australian Gas Infrastructure Group

Australian Gas Infrastructure Group (AGIG) is one of Australia's largest gas infrastructure businesses which includes assets in each mainland state in Australia, in addition to the Northern Territory.

Collectively, AGIG delivers for customers across the gas supply chain – with over 36,000km of distribution networks, more than 4,000km of transmission pipelines and 60 petajoules of storage capacity.

AGIG is made up of three separate companies.



Multinet Gas Networks (MGN) distributes natural gas to over 700,000 customers throughout Melbourne's inner and outer east, the Yarra ranges and South Gippsland. The network transports gas to residential, commercial and industrial customers



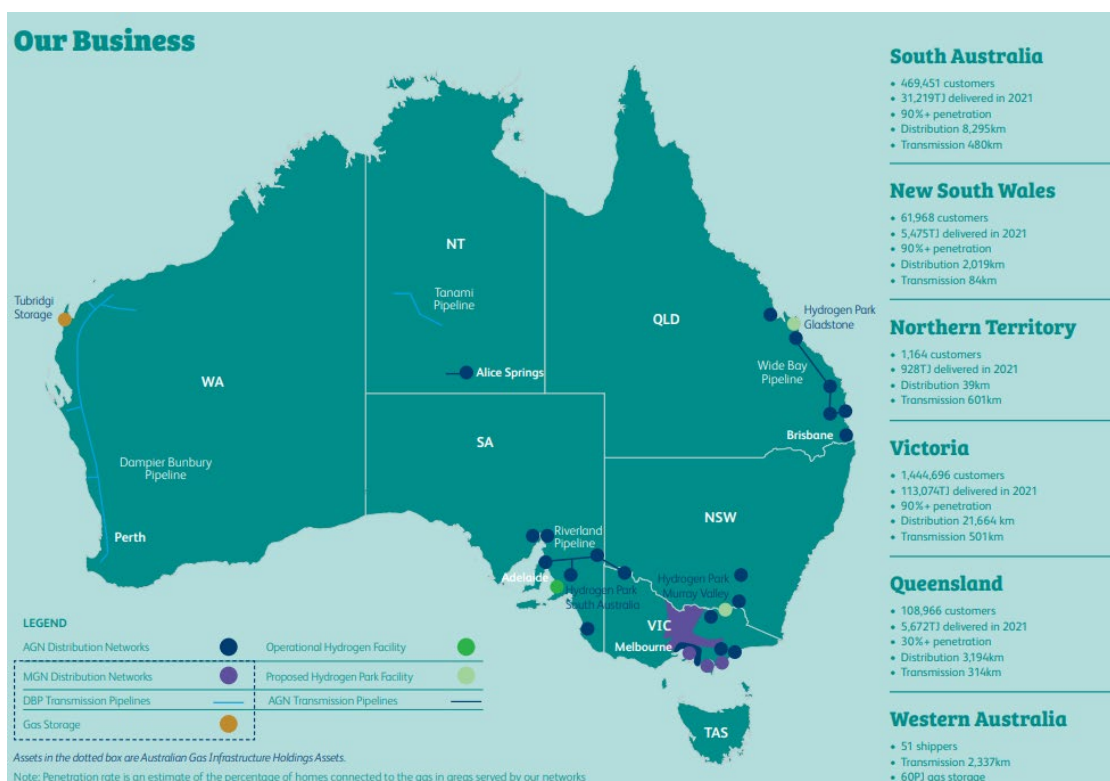
Australian Gas Networks (AGN) distribute natural gas to 1.3 million residential, commercial and industrial customers across Victoria, South Australia, Queensland, New South Wales and the Northern Territory



The Dampier Bunbury Pipeline (DBP) is WA's key gas transmission pipeline. Stretching almost 1600kms, it transports gas to mining, industrial, commercial and residential customers across Western Australia

Australian Gas Infrastructure Group is owned by various consortia of private sector entities listed on the Hong Kong Stock Exchange. This includes CK Asset Holdings Ltd (CKA), CK Infrastructure Holdings Ltd (CKI), Power Assets Holdings Ltd (PAH) and CK Hutchison Holdings Ltd (CKH), all part of the CK Group.

Figure 2: Overview of AGIG Operations



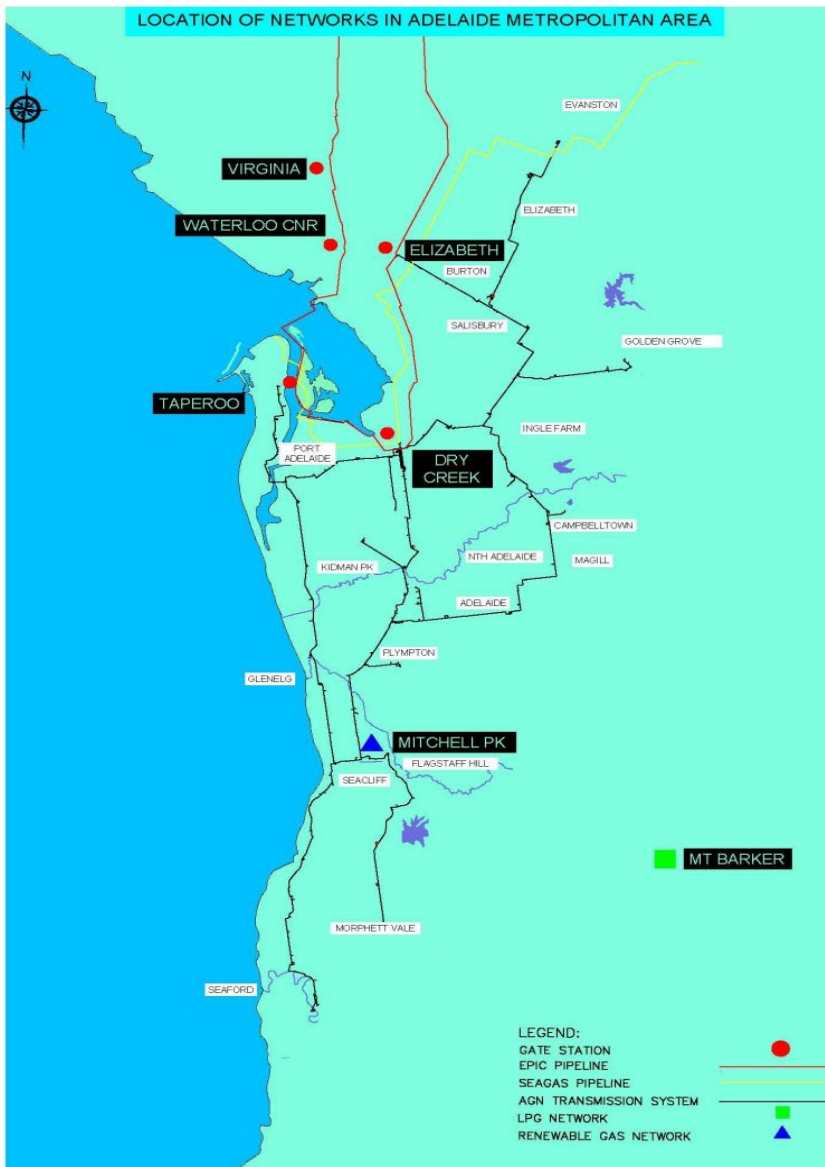
## 2.2 About AGN

AGN is a gas distributor who supplies gas to over 1.3 million residential, commercial, and industrial customers across South Australia, Victoria, Queensland (mostly Brisbane) as well as smaller towns in New South Wales (including Albury Gas Company and Southern NSW Networks) and the Northern Territory (Alice Springs). The network includes over 1,300 km of transmission pipelines and 25,000 km of distribution mains.

AGN is the holder of the gas transmission and distribution licenses for the natural gas assets. APT Operation & Maintenance Services (referred to in this document as "APA") has been contracted by AGN to install, operate and maintain our gas infrastructure assets. In doing so APA must comply with all applicable laws and authorisations. APA is responsible for all aspects of the operation and management of AGN's networks in accordance with prudent and accepted industry standards.

In South Australia, the regulated AGN network supplies gas to approximately 485,000 end users through a network of more than 8,500 km of distribution mains, and 209 km of transmission pipelines, with its footprint shown below in Figure 3:

Figure 3: Networks in Adelaide Metropolitan Area

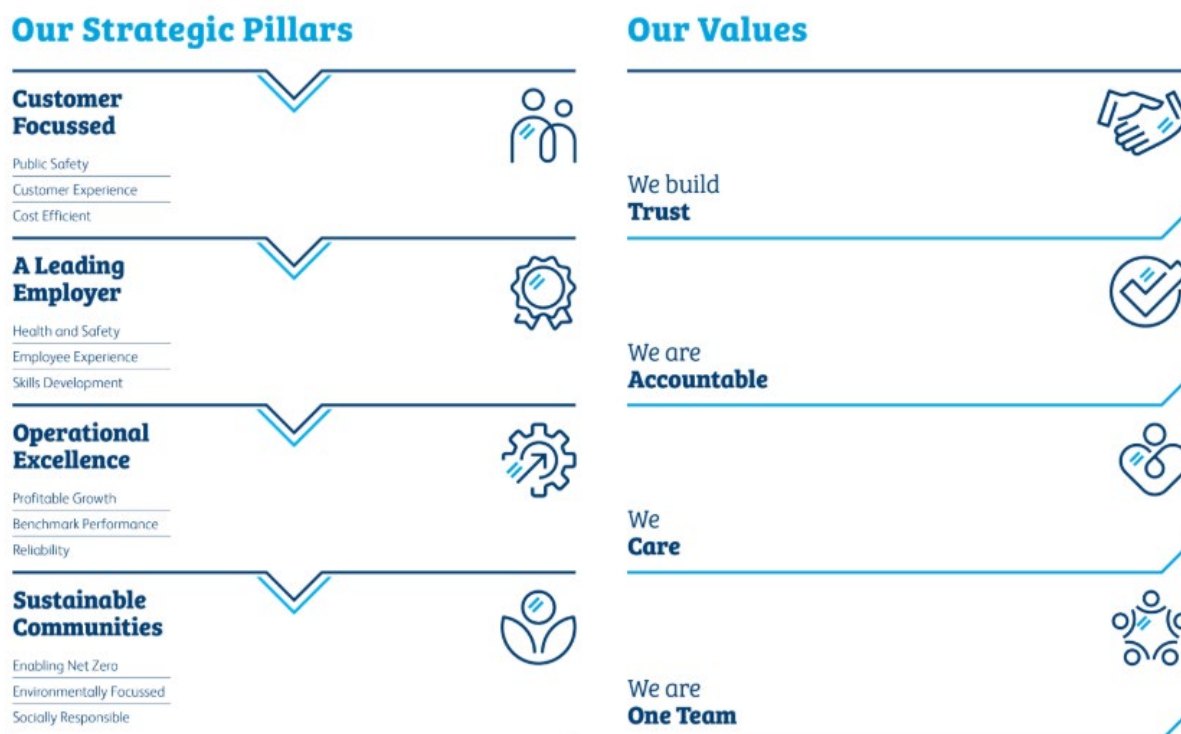


## 3 Asset Management Drivers

### 3.1 Network Vision

From AGIG's vision **'to deliver infrastructure essential to a sustainable energy future'** flows its strategic pillars and core values – together, they define our direction, shape decision-making, and drive meaningful impact.

Figure 4: AGIG Strategic Pillars and Values



### 3.1.1 Strategic Pillars & Values

#### 3.1.1.1 Customer Focussed

As AGN's network is situated in both densely populated and regional areas, AGN strives to maintain public safety through both construction activities and day-to-day operation of the network.

AGN aims to continuously reduce the duration and frequency of interruptions to customers and minimise inconveniences from any new connections, meter replacements and any construction activities. This is in line with AGN's objectives of improving reliability and enhancing customer experience.

We know costs are a priority for our customers, which is why cost-efficiency is embedded in how we operate, innovate and deliver value.

The value "we build trust" is essential to delivering on our strategic goal of being customer focussed. Trust ensures transparency and accountability, with clear and reliable communication at the core of helping the public feel safe and well-informed.



### **3.1.1.2 A Leading Employer**

AGN strives to be a leader in health and safety (H&S) by ensuring employees and contractors are mindful of the factors affecting their physical and mental health. This is done through strict H&S procedures, incentive programs and regular workshops and health screenings.

AGN is committed to cultivating an exceptional employee experience – reflected in strong engagement, retention, and a culture of continuous growth.

Skills development is also a priority for AGN ensuring that both contractors and employees have the relevant up to date skills and requirements for fulfilling their roles.

The value “we are accountable” ensures AGN takes ownership of HSE, creating a workplace where people feel protected and valued. The same accountability drives a strong customer experience and ongoing skills development, as AGN commits to delivering on what was promised and investing in its people.

### **3.1.1.3 Operational Excellence**

AGN strives for operational excellence by upholding high standards of performance across all areas, from field crews to office staff. AGN’s focus on efficiency, quality and continuous improvement ensures seamless coordination and long-term success throughout the business.

AGN aims to encourage growth of the network via in-fill development and through the introduction of gas into regional areas – where it is economic to do so.

AGN is committed to ensuring gas reliability through proactive maintenance, efficient processes, and a commitment to consistent, high-quality service delivery.

“We care” is shown through how well AGN run its operations – by growing sustainably, meeting high standards, and being reliable. When we care, we focus on doing things right for our customers, our teams and the future.

### **3.1.1.4 Sustainable Communities**

AGN is committed to creating lasting positive impacts on both the environment and society, with its approach to growth and operations rooted in sustainability and responsibility. This includes a carbon net-zero target by 2050 or sooner and championing community engagement through initiatives such as local fundraising events, employee volunteer programs, and partnerships with organisations that address community needs in order to contribute meaningfully to the well-being and resilience of the communities it serves.

“We are one team” means we work together to build stronger, more sustainable communities. Together, we take action to reduce our impact on the environment and support the people who live in those communities.

## 4 Network Performance

AGN measures network performance through a range of Key Performance Indicators (KPI's) and strategic reports. This section provides an overview of measures included under the following categories:

- Customer Expenditure Sharing Scheme (Section 4.1)
- Other Performance Measures (Section 4.2)

### 4.1 Capital Expenditure Sharing Scheme

The Capital Expenditure Share Scheme (CESS) is an incentive mechanism introduced for the 2021-26 AA period to encourage efficient capital expenditure over the period, and penalises efficiency losses, each measured by reference to the difference between forecast and actual capex. In summary, AGN and customers share the benefit (30/70) of any efficient reduction of capex (below benchmark) for the period.

The rules that govern the CESS are that it:

- Calculates the Net Present Value (NPV) of the under/over spend incurred over the period
- Allows AGN to keep 30% of gains/losses (the other 70% goes to customers)
- Takes account of financing benefits or costs already incurred during the regulatory period
- Is contingent on maintaining network health
- Is asymmetric – reduced rewards if performance drops, no increase if performance increases (incentive to maintain performance).

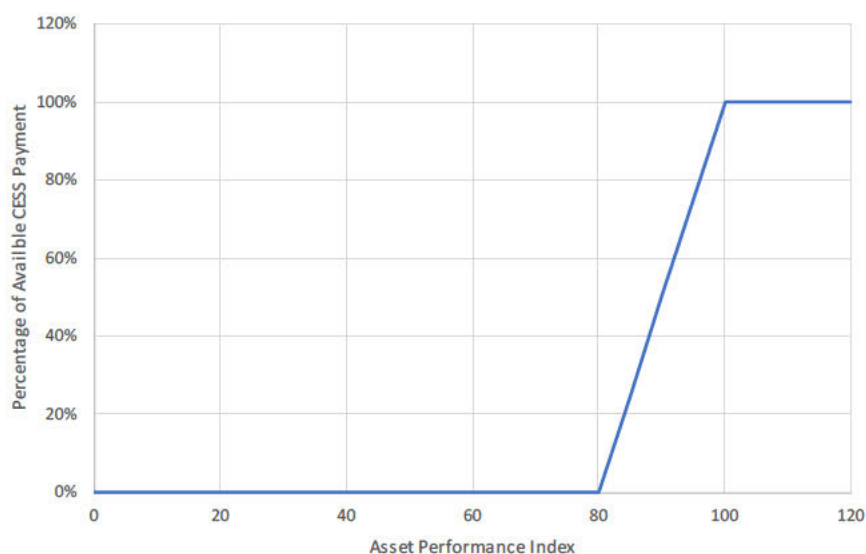
As highlighted, the CESS is contingent on AGN maintaining the "health" of the networks. This is determined through the application of an Asset Performance Index (API), measured out of 100, for the period. The measures included in the API are summarised in Table 5.

Table 5: API Measures

API Measure	Weight	Target
Unplanned SAIDI (Per 1000 customers)	25.0%	307.04
Unplanned SAIFI (Per 1000 customers)	25.0%	0.59
Mains Leaks (Per km)	42.4%	0.11
Service Leaks (Per 1000 customers)	4.9%	3.76
Meter Leaks (Per 1000 customers)	2.7%	12.35
<b>Total weighting</b>	<b>100%</b>	

A one (1) point reduction in API results in a 5% reduction in potential CESS payment to AGN. This relationship is shown in Figure 5. Note: There is no additional CESS benefit for API scores >100.

Figure 5: Relationship between API and potential CESS incentive



AGN's regulatory period to-date performance against the API metrics is shown in Table 6 below. AGN is currently tracking at an API of 121.51 (capped at 100) which would result in the full CESS benefit if capex allowances were to be outperformed.

Table 6: AGN Asset Performance Index

Measures	Network Performance					API Calculation		
	FY22	FY23	FY24	Average	Target	Index	Contribution	
Unplanned SAIFI	0.53	0.56	0.66	0.58	0.59	101.69	25%	25.42
Unplanned SAIDI	688.30	319.26	256.54	421.37	307.04	62.76	25%	15.69
Mains leaks	0.06	0.04	0.03	0.04	0.11	163.63	42.4%	69.37
Services leaks	2.19	1.77	1.58	1.84	3.76	151.06	4.9%	7.40
Meter leaks	8.96	7.17	8.21	8.11	12.35	134.33	2.7%	3.63
						<b>Asset Performance Index</b>		<b>121.51</b>

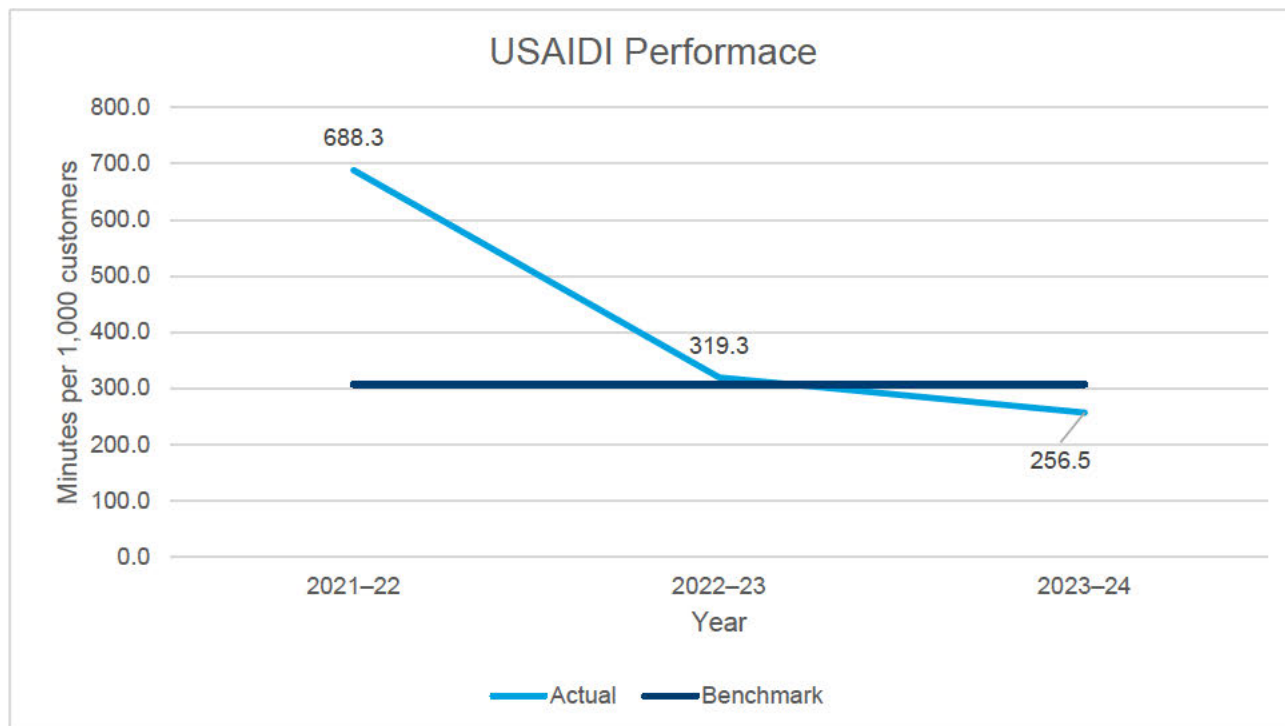
AGN's performance against each API measure is provided below.



#### 4.1.1 Unplanned System Average Interruption Duration Index

The Unplanned System Average Interruption Duration Index (USAIDI) is defined as the average unplanned outage duration for every customer served per 1000 customers. This is a reliability measure where AGN has seen a decreasing USAIDI over the last few years to below benchmark in the 2023-24 period. This can be seen in Figure 6 below.

Figure 6: CESS - USAIDI Performance

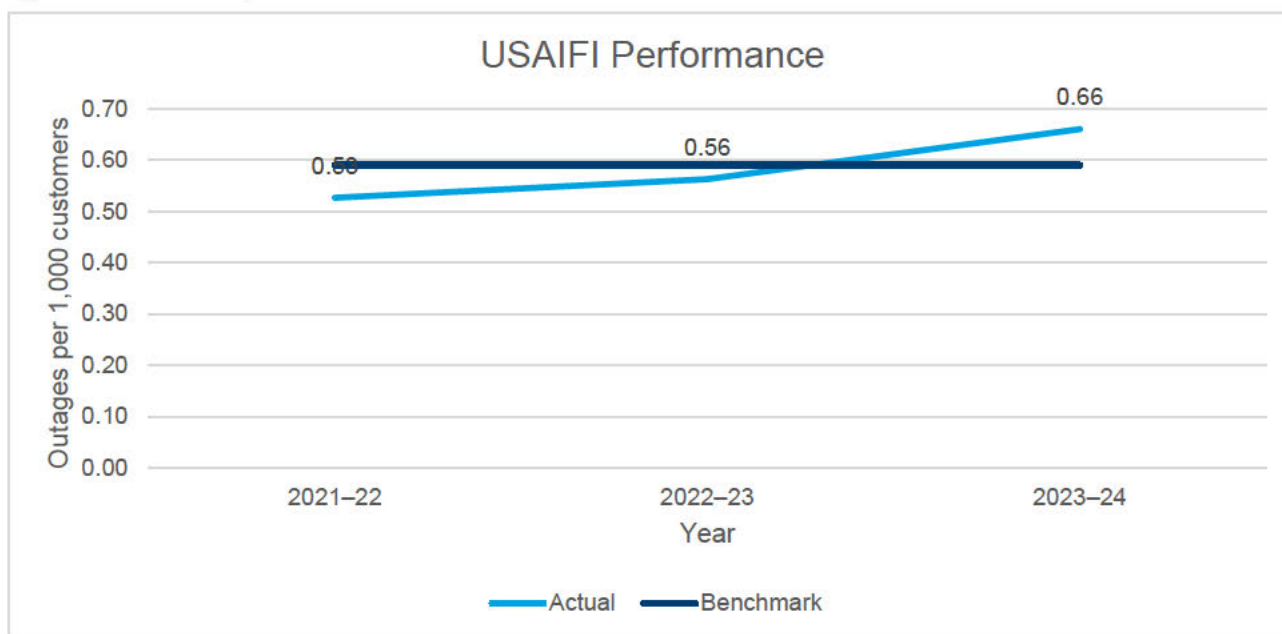


#### 4.1.2 Unplanned System Average Interruption Frequency Index

The Unplanned System Average Interruption Frequency Index (USAFI) is defined as the average number of interruptions that a customer would experience on the network per 1000 customers.

AGN is consistently within the range of the 0.59 benchmark for this current AA period, reflecting strong network reliability and effective operational performance. This is demonstrated in Figure 7 below.

Figure 7: CESS - USAIFI performance

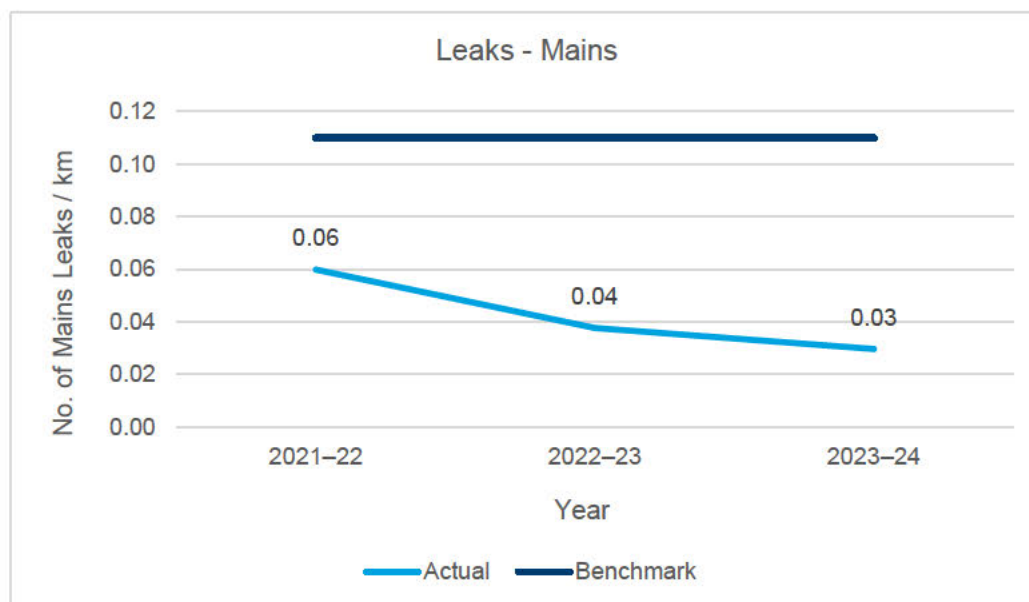


#### 4.1.3 Leaks – Mains

Defined as the number of leaks on mains per km of distribution network. Mains leaks have been below CESS benchmarks for each year of the current AA period to date. AGN has achieved an average mains leak rate of 0.04 leaks/km against a CESS target of 0.11 leaks/km.

Current performance for this measure is contained in Figure 8.

Figure 8: CESS - Mains leaks performance

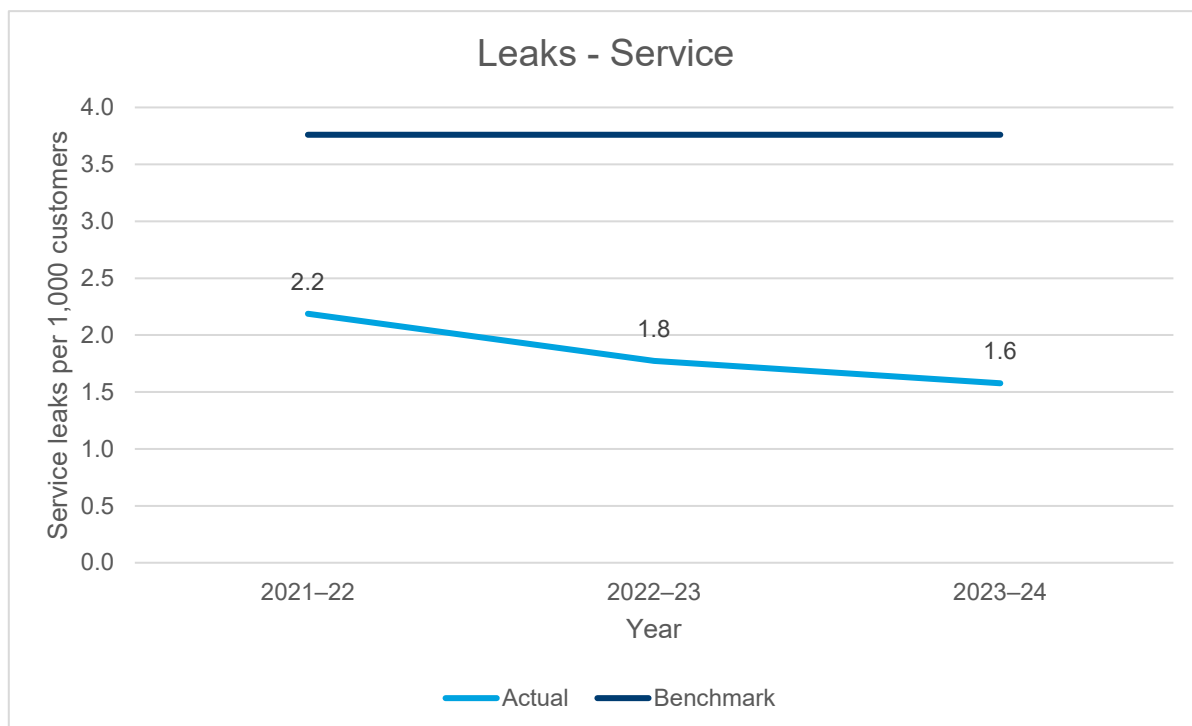


#### 4.1.4 Leaks – Services

Defined as the number of leaks on services per 1000 customers. Service leaks have been below CESS benchmarks for each year of the AA period. AGN has achieved an average service leak rate of 1.84 leaks/1000 customers against a CESS target of 3.76 leaks per 1000 customers.

Current performance for this measure is contained in Figure 9.

Figure 9: CESS - Services leaks historical performance

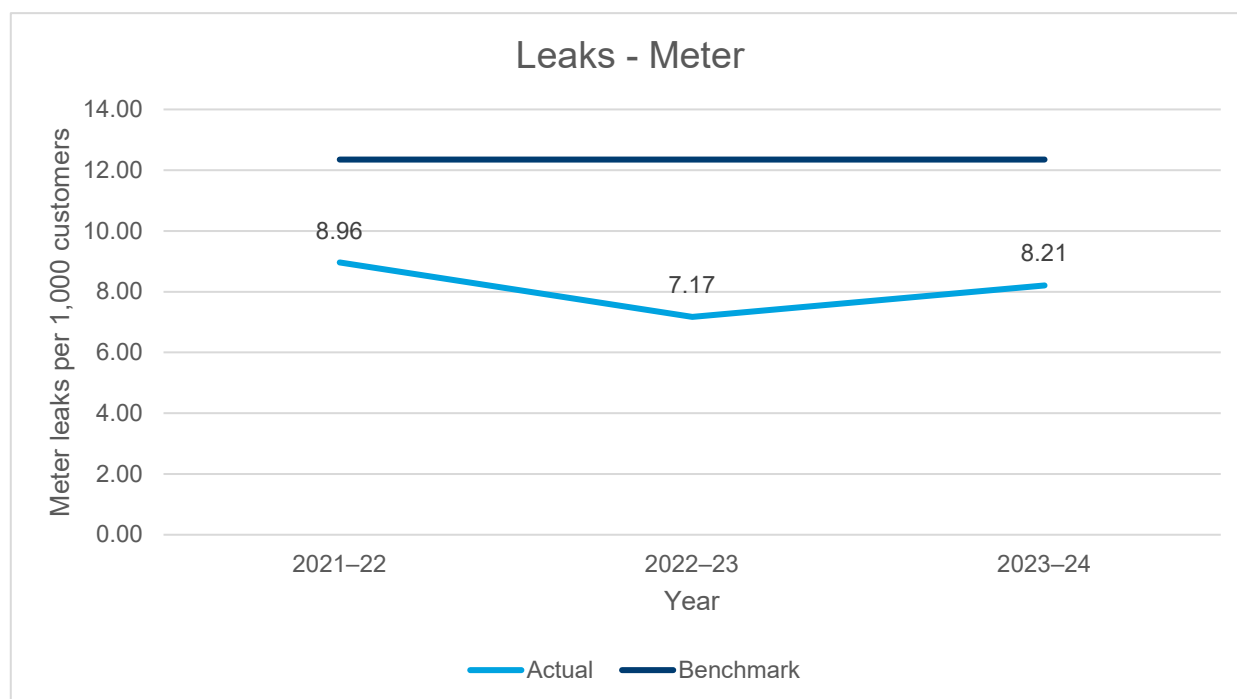


#### 4.1.5 Leaks – Meters

Defined as the number of leaks on meters per 1000 customers. AGN's meter leak performance is consistently below the CESS benchmark of 12.35, at an average rate of 8.11 meter leaks per 1,000 customers.

Current performance for this measure is contained in Figure 10.

Figure 10: CESS - Meters leaks historical performance



## 4.2 Other Key Asset Management Performance Measures

### 4.2.1 Emergency Response Times

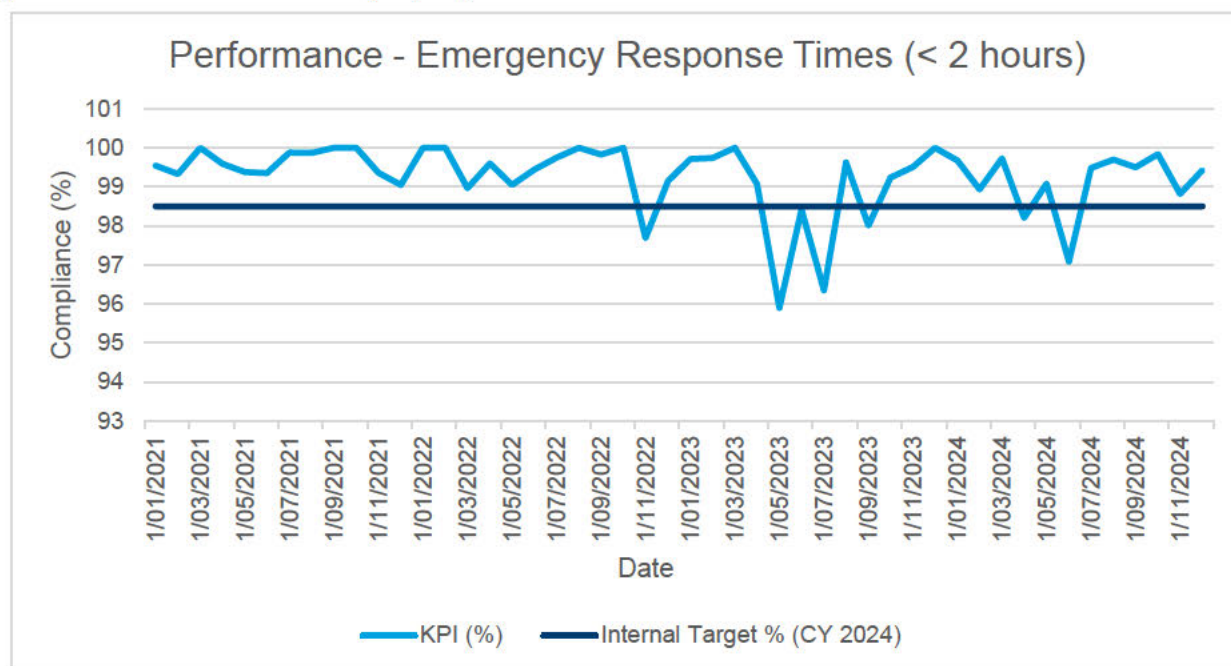
AGN continues to respond efficiently and effectively to public reported leaks, consistently meeting or exceeding internal targets outlined in AGN's Leakage Management Plan, which specify:

- Field responses within 2 hours for Class 1 & 2 publicly reported leaks
- 90% of emergency calls answered under 10 seconds (national)

AGN's emergency response time performance is shown in Figure 11 below. Ongoing strong performance against internal benchmarks is seen over the current 2021-2026 AA period. This demonstrates AGN's ongoing commitment to public safety and maintaining trust in the reliability of the gas network.



Figure 11: Network Performance – Emergency Response Times Met Within 2 hours

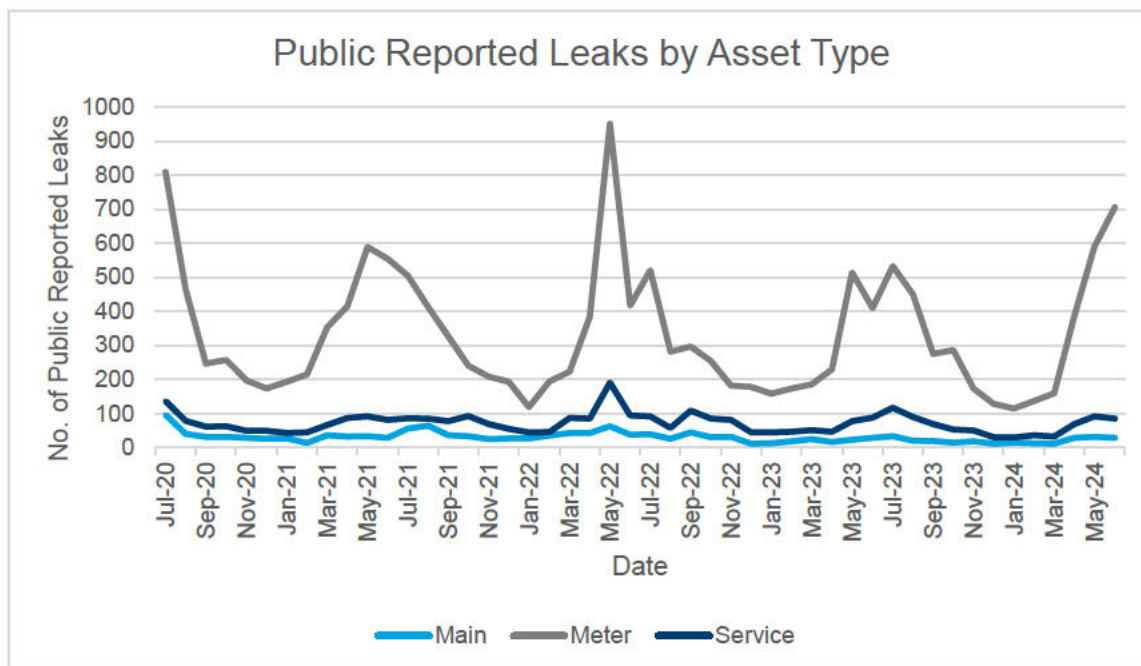


#### 4.2.2 Publicly Reported leaks

Each leak on the gas distribution network has the potential (under the right circumstances) to cause harm to the public and damage to property. Gas is odourised so it can be easily detected by the public and then report to AGN for repair.

Figure 12 summarises the volume of publicly report leaks per month reported to AGN over the last 4 years. In total, meter leaks contribute to the majority of all publicly reported leaks, followed by service leaks (10%) and then mains leaks (2%). This is because meter leaks tend to follow a cyclical pattern, influenced by fluctuations in network demand and gas throughput – higher usage periods can place great stress on equipment, increasing the likelihood of leaks. Note that mains and service leaks do not exhibit the same seasonal behaviour.

Figure 12: Network Performance- Public Reported Leaks by asset type

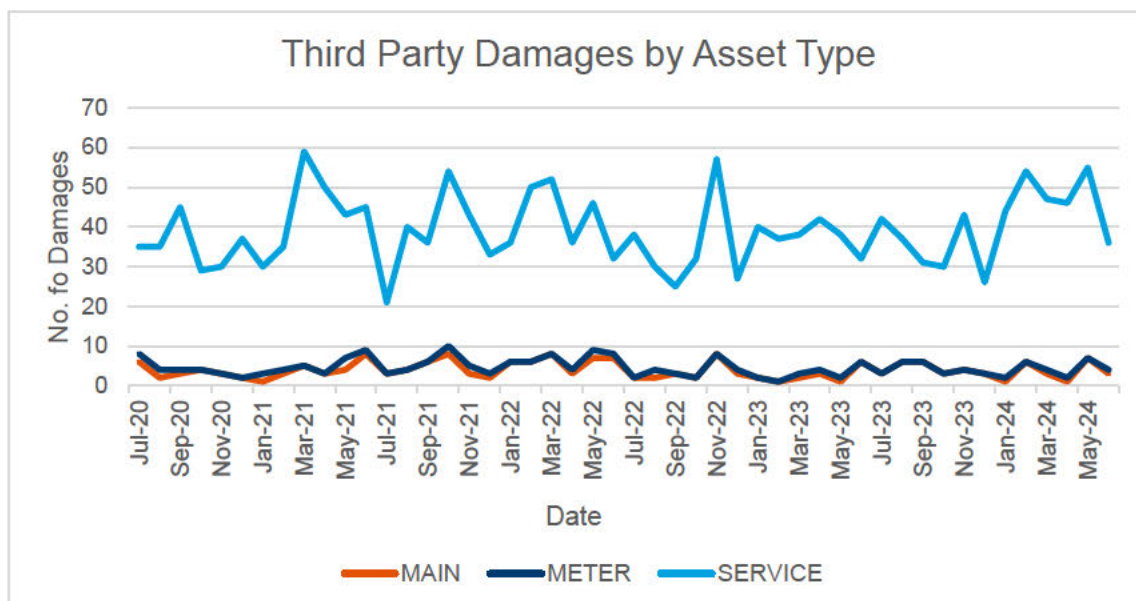


#### 4.2.3 Third Party Damages

The majority of 3rd party damages to AGN's network occur on services located in private property. Services are not shown on BYDA plans, however the obligation is on the property owner (as described in the BYDA response) to contact the asset owner to have the service located.

Figure 13 below outlines the monthly volumes for third party damages on mains, services and meters on the AGN network from July 2020.

Figure 13: Network Performance - Third Party Damage



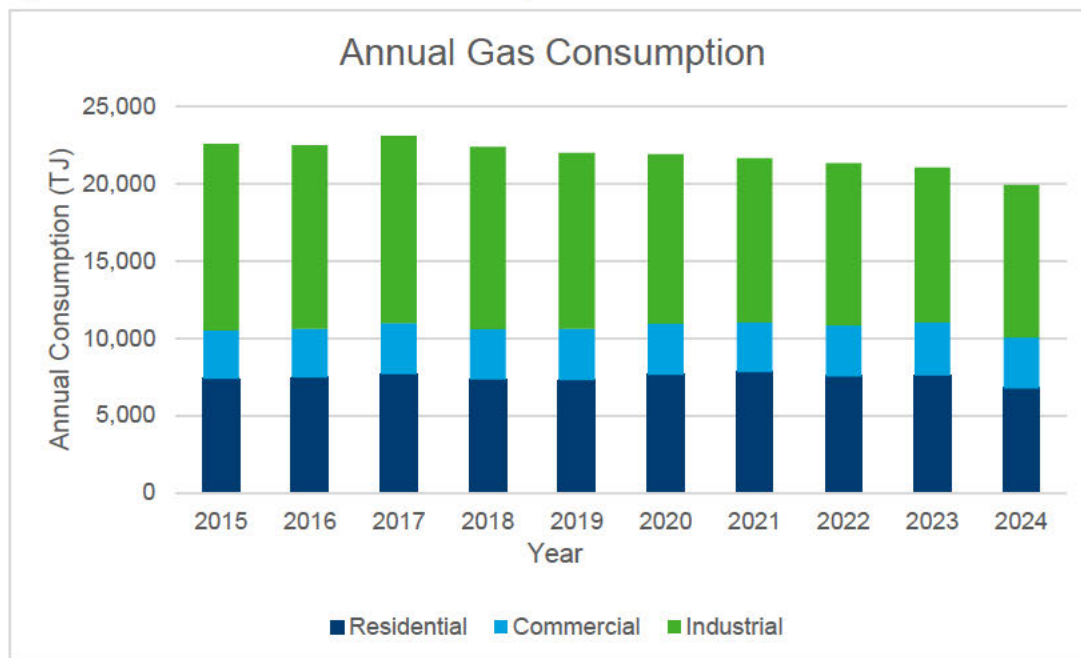
#### 4.2.4 Annual Gas Consumption

The annual throughput of AGN's network, since 2015, is shown in Figure 14.



Residential gas consumption has decreased slightly to 6,747 TJ in 2024, which accounts for approximately 33% of network throughput in 2024. While commercial consumption, which accounts for approximately 16% of network usage remained steady, industrial consumption – representing about 49% - has also shown a slight downward trend in 2024.

Figure 14: Network Performance - Annual Gas Consumption



#### 4.2.5 Unaccounted for Gas

Unaccounted for Gas (UAFG) refers to the difference between the measured quantities of gas entering the network (measured by Custody Transfer Meters) and the gas delivered to customers (measured by individual consumer meters).

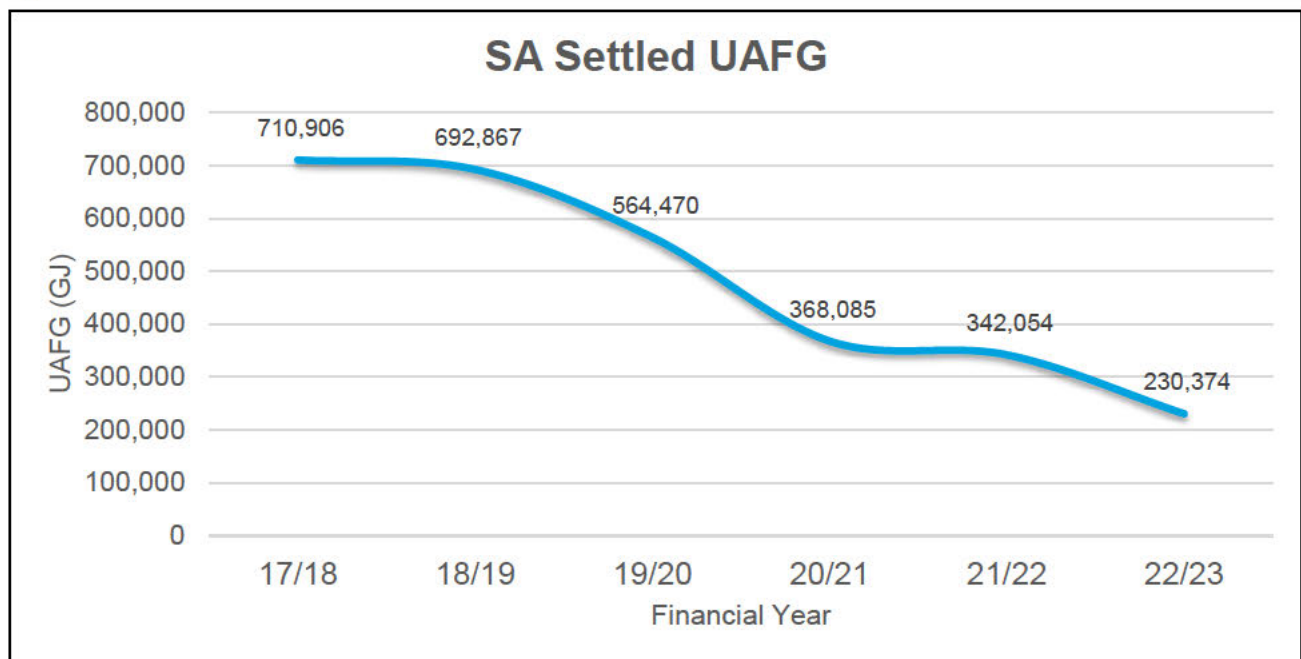
In South Australia, UAFG is calculated monthly and reconciled annually from data supplied by the Australian Energy Market Operator (AEMO) as part of the wash-up process, which reconciles actual gas volumes against estimates to determine any variances.

Under this system, AGN propose UAFG volumes as part of its Access Arrangement (AA) submission to the Australian Energy Regulator (AER), using historic UAFG data (usually 3 years prior) which the AER is required to approve. Once approved, AGN is responsible for purchasing sufficient volumes of UAFG from a UAFG supplier (usually an energy retailer) based on a Gas Sale Agreement with pricing set over a 5-year period.

Figure 15 below illustrates the settled UAFG throughout the current 2021-26 AA period. As AGN approaches the completion of its mains replacement project—targeting the replacement of ageing low-pressure cast iron and unprotected steel mains, along with sections of medium-pressure cast iron and early-generation HDPE—the resulting impact on UAFG is clearly observable.

The UAFG values (in GJ) presented below have been fully settled with AGN's UAFG supplier and are based on AEMO final data.

Figure 15: SA Settled UAFG





## 5 Network Expenditure

This section provides an overview of our network investment (i.e., capital expenditure) and operation activities (i.e. operational projects) forecast for the next AA period (1 July 2026 to 30 June 2031).

For regulated assets (i.e., our AGN South Australian networks), our investment forecast is grouped in the following categories, as defined by the AER:

- **Growth** (Connections) - Capital expenditure incurred when connecting new customers to the gas distribution network;
- **Mains Replacement** - Capital expenditure incurred for the replacement of existing mains and services in the network due to the condition of those mains and services;
- **Meter Replacement** - Capital expenditure incurred for the replacement of installed meters with new or refurbished meters;
- **Augmentation** - Capital expenditure incurred to change the capacity requirements of mains and services in the gas distribution network to meet the demands of existing and future customers;
- **Telemetry** - Capital expenditure incurred in the replacement of SCADA operating in the network due to the condition of the assets;
- **ICT** (Information Communication and Technology) - Capital expenditure associated with ICT assets but excluding all costs associated with SCADA expenditure that exist beyond gateway devices (routers, bridges etc.) at corporate offices;
- **Other** – Capital expenditure which is not captured by other capital expenditure categories (as defined above). Other expenditure is split between capital incurred on asset directly relating to the distribution network (Other – Distribution System) and assets not directly related to the network (e.g., vehicles and non-operational buildings).

Our forecast excludes capitalised network or corporate overheads, i.e. Direct costs only.

An overview of our capital program is contained in Table 7 and summarised in Figure 16. In total, we forecast \$448 million in direct network expenditure (excluding overheads, \$Jan 2025) over the next five-year AA period.

During the forecast period, network capital expenditure is expected to average \$90 million per annum, with an expected max of \$114 million in 2027/28, minimum of \$76 million in 2030/31. Annual variations are driven by program phasing and forecast economic activity influencing customer connections.

Figure 16: Direct Capital Expenditure by Driver (Regulated Networks)

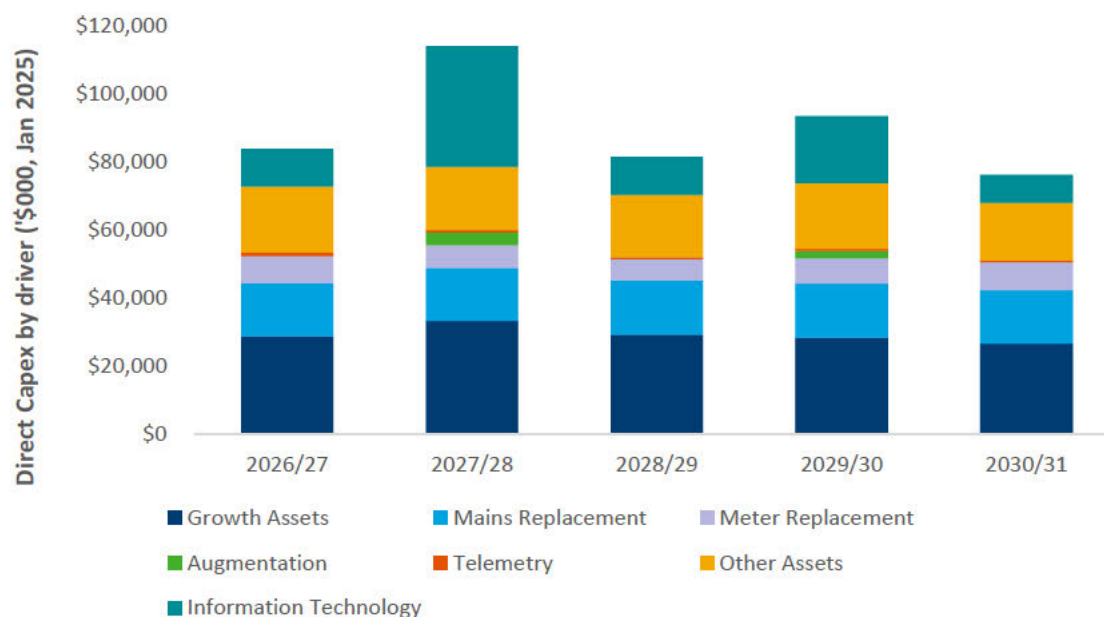


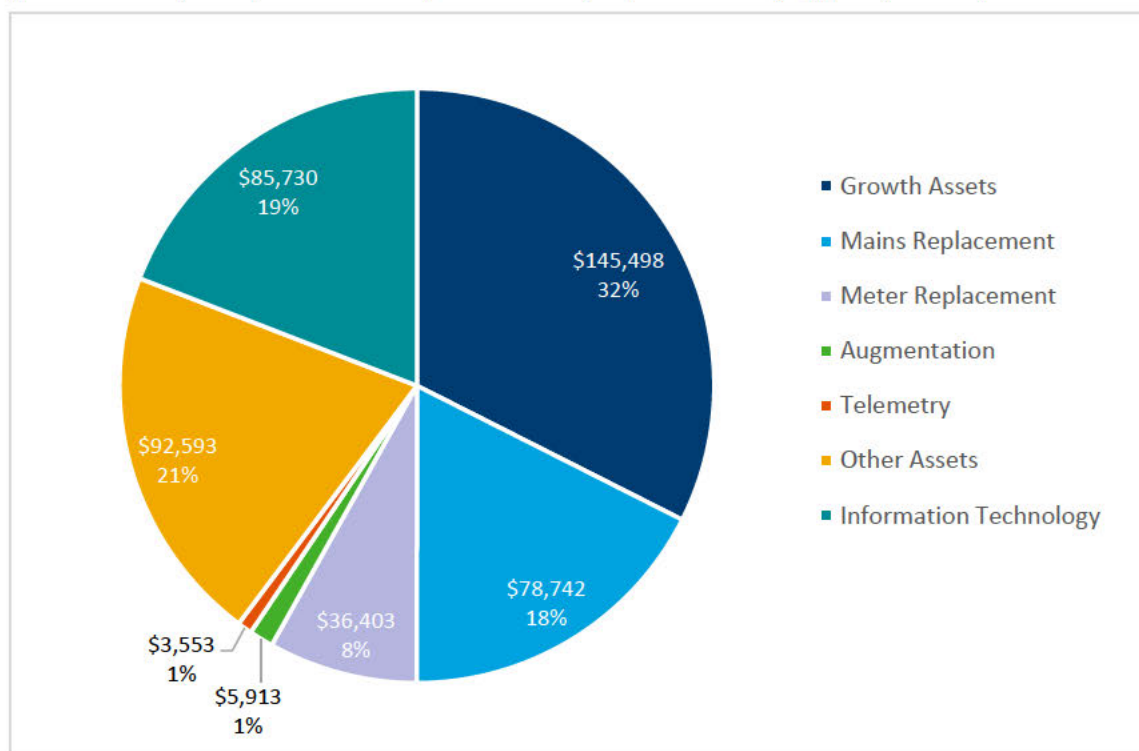
Table 7: Direct Capital Expenditure Summary - Regulated Networks (\$'000, Jan 2025)

Ref	Capex Category	2026/27	2027/28	2028/29	2029/30	2030/31	Total
5.1	Growth	28,564	33,131	29,085	28,235	26,482	145,498
5.2	Mains Replacement	15,668	15,668	15,868	15,868	15,668	78,742
5.4	Meter Replacement	7,867	6,579	6,306	7,431	8,220	36,403
5.5	Augmentation	-	3,716	-	2,197	-	5,913
5.6	Telemetry	1,150	650	605	573	573	3,553
5.7	Other Assets	19,394	18,627	18,329	19,290	16,951	92,593
5.8	ICT	11,052	35,546	11,187	19,819	8,125	85,730
<b>Total Capex</b>		<b>83,696</b>	<b>113,919</b>	<b>81,381</b>	<b>93,414</b>	<b>76,021</b>	<b>448,431</b>

Cumulatively, 32% of our forecast capital expenditure for the next AA period is related to our Growth programs; as shown in Figure 17. This is followed by Other asset projects at 21%.

Each expenditure category is further explained in the following sections.

Figure 17: Direct Capital Expenditure Summary – Breakdown by Capex Driver Category (\$'000, Jan 2025)



## 5.1 Network Growth

Network growth in the gas distribution system is driven by the connection of new customers within the existing network footprint, as well as the addition of customers in growth areas such as new estates (i.e. previously undeveloped land where gas infrastructure has not yet been established). In such cases, network expansion is typically required to support new connections and meet increasing demand.

New connections (also known as organic growth) involves incremental growth of the networks, typically involving small mains extensions within the network, urban renewal and infill projects within or adjacent to our existing network.

Our strategy to capture new residential growth opportunities is to install new mains and services in growth areas as they can be reticulated at significantly lower costs due to utilisation of common service trenching provided by the Developer, as well as reduced reinstatement and traffic management costs. Reticulating within the existing network is more technically challenging due to congestion of other third-party services, increased reinstatement costs associated with remediating established roads and footpaths, and increased traffic management costs to manage disruption to traffic and pedestrians. In addition to lower costs and fewer operational issues, reticulating growth areas generates much higher penetration rates as customers install multiple new gas appliances at time of building.

There are three general types of customers which connection to the distribution network:

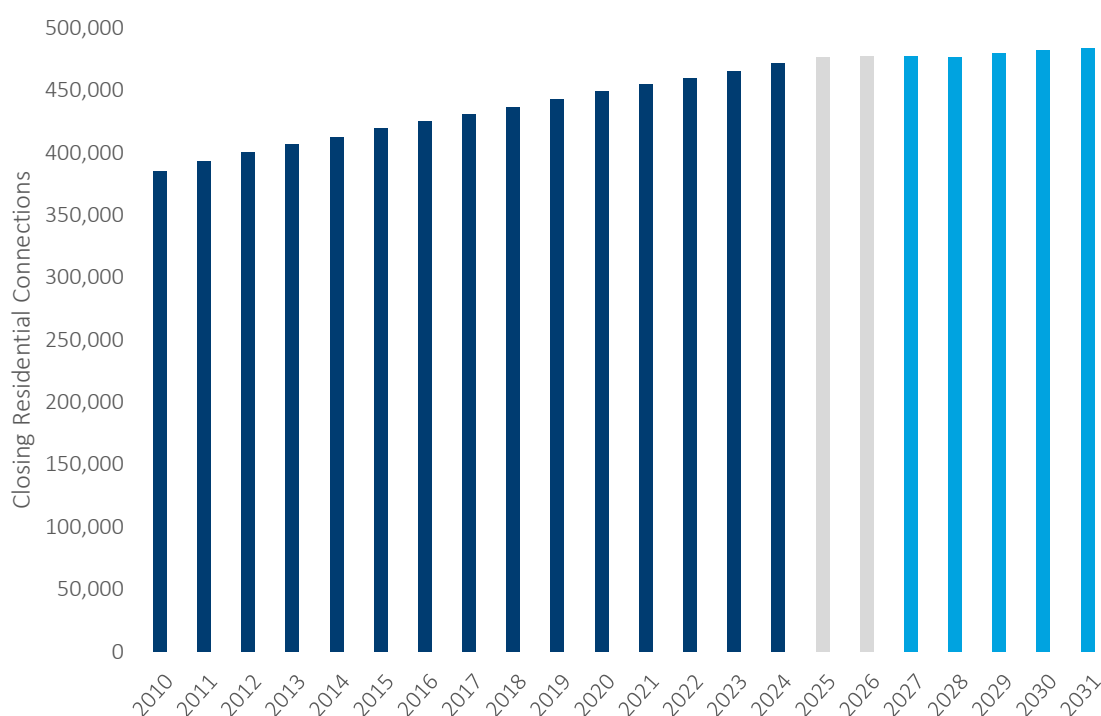
- **Residential Connections** – customers who use gas primarily for domestic purposes.
- **Commercial Connections** – customers who use less than 10 TJ per annum and use gas primarily for non-domestic purposes.
- **Tariff D Connections** – customers who use more than 10 TJ per annum, typically considered industrial connections.

Tariff D connections are considered self-funding, i.e. the connecting customer pays upfront for all dedicated connections assets. There is no incremental investment required for these connections, hence it is not included in our capital forecasts.

### Residential Connections

As of the end of 2024 AGN has circa 472,000 residential connections. Residential connections (net of forecast disconnections) are expected to grow by an average of 0.3% per year over the next AA period, reaching around 484,000 by the end of the period.

Figure 18: Residential Connections – Closing Balance at Year End

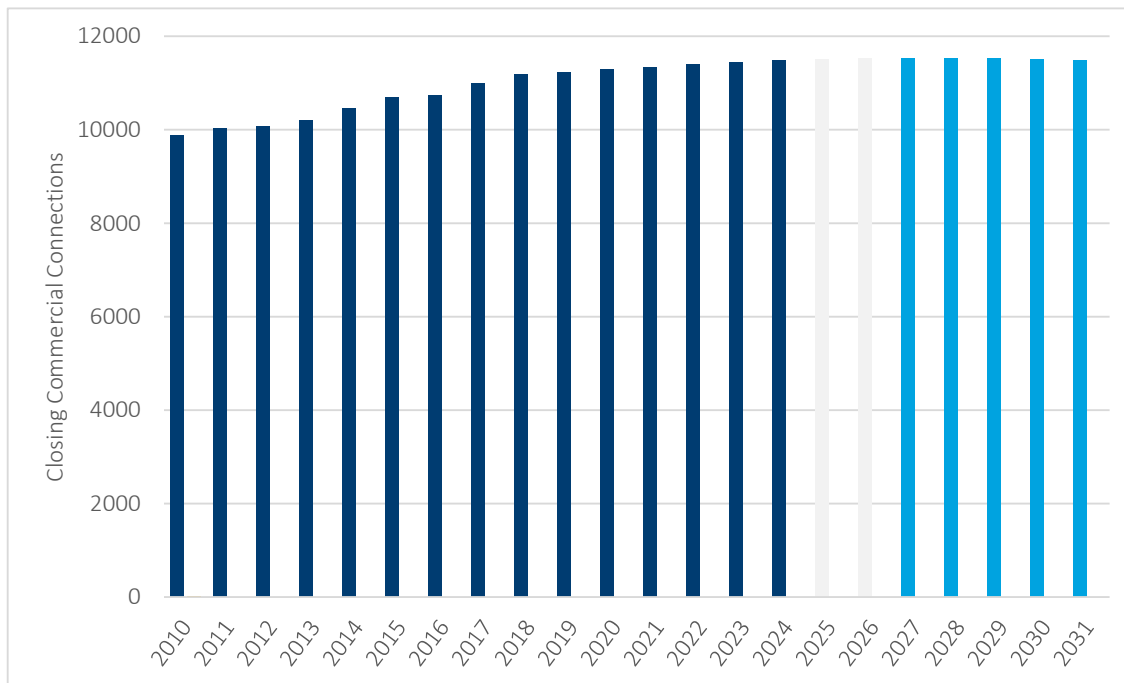


### Commercial Connections

As of the end of FY2024, AGN has circa 11,484 I&C connections. Over the next AA period, commercial connection growth is forecast to decline moderately at an average annual rate of - 0.02%, remaining broadly stable at the FY2024 level.



Figure 19: Commercial Connections – Closing Balance at Year End



### Forecast of Network Connections

We are forecasting to connect almost 34,000 new customers to the network during the next AA period, the majority of which will be domestic end users. On average we will connect 6,600 domestic and 150 commercial end users per year over the next AA period. Gross connection rates are taken from our demand forecast developed by Core Energy. Table 8 below provides our forecast for domestic and commercial connections:

Table 8: Growth – Gross Network Connections

Connection Type	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Residential	6,600	6,600	6,600	6,600	6,600	33,000
Commercial	150	150	150	150	150	750
<b>Total Gross Connections</b>	<b>6,750</b>	<b>6,750</b>	<b>6,750</b>	<b>6,750</b>	<b>6,750</b>	<b>33,750</b>

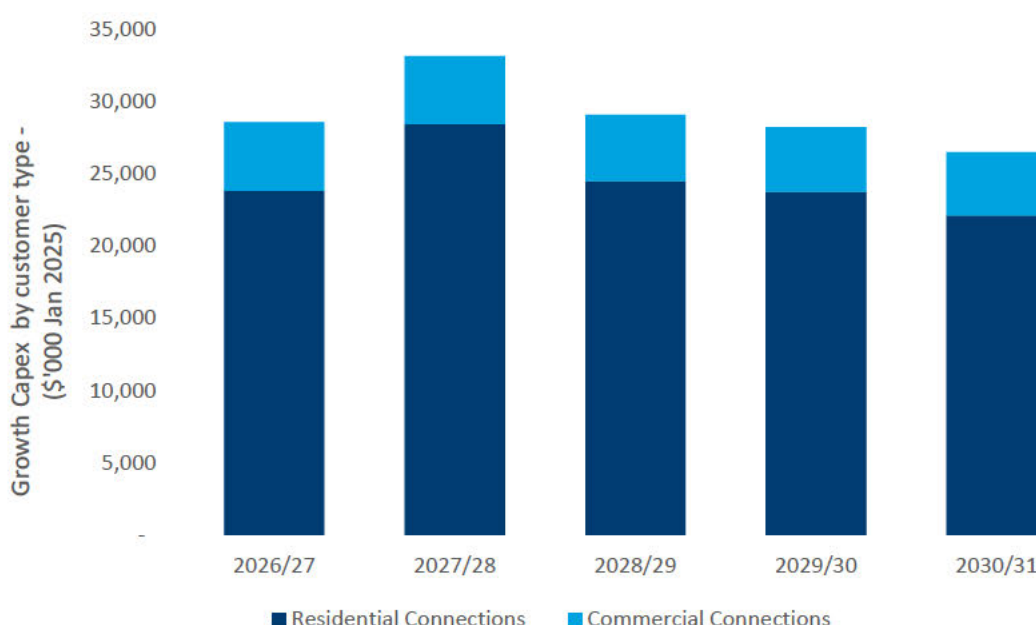
### Expenditure Breakdown by Connection Type

New connections expenditure forecasts are calculated with reference to our forecast of gross connection volumes (outlined above) and forecast unit rates incurred for the installation of mains, services and meters required to connect new customers. Our total expenditure forecast for new connection growth (by connection type) for the upcoming AA period is contained in Table 9 and Figure 20 below:

Table 9: Growth Capex by Customer Type

Category	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Residential Connections <sup>1</sup>	23,837	28,433	24,486	23,740	22,096	<b>122,591</b>
Commercial Connections	4,727	4,698	4,599	4,495	4,387	<b>22,906</b>
<b>Total Expenditure (\$'000)</b>	<b>28,564</b>	<b>33,131</b>	<b>29,085</b>	<b>28,235</b>	<b>26,482</b>	<b>145,498</b>

Figure 20: Growth Capex by Customer Type



Due to the cost disparity between residential and commercial connections, commercial connections contribute 16% of forecast expenditure, but 2% of total connection volumes.

### Breakdown by Asset Type

Connection type (residential and commercial) has been broken down by asset class - mains, service & meters – to highlight the distribution of asset investment across customer segments.

#### Mains

Mains expenditure is broken down into three (3) expenditure sub-categories; the installation of mains for new residential connections at both new estates and within the existing network (small mains extension), as well as new commercial connections. The required mains length (by category) is forecasted with reference to the average mains length required per connection over

<sup>1</sup> Residential connections also account for greenfield growth in Concordia, where 2.7 km of trunk mains are planned for installation in 2027/28

the past 3 years. Refer to our Unit Rates paper for the build-up of unit rates per category. A breakdown of mains by works program is provided in Table 10.

Table 10: Growth Assets – Capital Forecast Summary – New Mains

New Mains		2026/27	2027/28	2028/29	2029/30	2030/31	Total
New Residential Connections (New Estate)	Length (m)						
	Unit Rate (\$/m)						
subtotal		3,591	3,617	3,689	3,575	3,329	17,800
New Residential Connections (Existing Area)	Length (m)						
	Unit Rate (\$/m)						
subtotal		1,752	1,764	1,799	1,745	1,624	8,683
New Commercial Connections (I&C <10TJ)	Length (m)						
	Unit Rate (\$/m)						
subtotal		935	929	909	889	867	4,530
<b>Total Expenditure New Mains \$('000)</b>		<b>6,277</b>	<b>6,309</b>	<b>6,398</b>	<b>6,210</b>	<b>5,820</b>	<b>31,014</b>

## Services

Services expenditure is broken into four sub-categories; new residential connections for newly built homes in new estates, new residential connections to homes within the existing network, Multi User Sites (MUS) and commercial connections. The volume of services required is related to the forecasted volume of new connections during the AA period. Approximately 90% of service connections are forecast to occur at new homes, followed by 5% to existing homes, followed by 2% of service connections that will occur at Multi-user sites, and another 2% for commercial connections. Refer to our Unit Rates paper for the build-up of unit rates per service type. A breakdown of mains by works program is provided in Table 11.

Table 11: Growth Assets – Capital Forecast Summary – New Services

New Services		2026/27	2027/28	2028/29	2029/30	2030/31	Total
New Home	Service						
	Unit Rate (\$/service)						
	subtotal	12,824	12,914	13,174	12,772	11,887	63,571
Existing Home	Service						
	Unit Rate (\$/service)						
	subtotal	1,434	1,444	1,474	1,429	1,330	7,111
Multi User	Service						
	Unit Rate (\$/service)						
	subtotal	2,358	2,374	2,422	2,348	2,186	11,689
New Commercial Connections (I&C <10Tj)	Service						
	Unit Rate (\$/service)						
	subtotal	2,824	2,807	2,748	2,686	2,621	13,686
<b>Total Expenditure New Services (\$'000)</b>		<b>19,441</b>	<b>19,540</b>	<b>19,817</b>	<b>19,235</b>	<b>18,024</b>	<b>96,056</b>

## Meters

A meter is required at every connection point to the distribution network. The volume of meters forecast for the next AA period directly relates to the volume of expected connections, by connection type. Refer to our Unit Rates paper for the build-up of unit rates per meter type. A breakdown of meters by connection type is provided in Table 12.



Table 12: Growth Assets – Capital Forecast Summary – New Meters

<b>New Meters</b>		<b>2026/27</b>	<b>2027/28</b>	<b>2028/29</b>	<b>2029/30</b>	<b>2030/31</b>	<b>Total</b>
New Meter - Domestic	Meters						
	Unit Rate (\$/Meter)						
subtotal		1,878	1,891	1,929	1,870	1,741	9,308
New Meter - I&C	Meters						
	Unit Rate (\$/Meter)						
subtotal		968	962	942	921	898	4,690
<b>Total Expenditure New Meters (\$'000)</b>		<b>2,846</b>	<b>2,853</b>	<b>2,870</b>	<b>2,791</b>	<b>2,639</b>	<b>13,998</b>

## New Growth Area

New growth areas are step changes in the scope of our distribution network, involving larger mains extensions to service new regions of network growth. New connections in a specific growth area can be residential, industrial or mixed-use in nature. They are generally located on network fringes where major extensions of gas mains are required. Each new growth area is individually assessed to ensure their commercial viability.

The development of a new growth area in Concordia, north of Adelaide, is being planned for gas supply and reticulation by 2029. The project developer has confirmed the development will be supplied by gas and will form a natural extension of the existing Gawler township. The construction of the Gawler Gate Station with its connection to the SEA Gas transmission pipeline will provide sufficient supply for the anticipated 10,000 connections over the next 25 years.

To supply this new growth area in Concordia, construction of a trunk main and initial reticulation of the site is planned for the next AA. Table 13 provides a summary of the cost and timing of the project. Further details can be found in Business Case SA219.

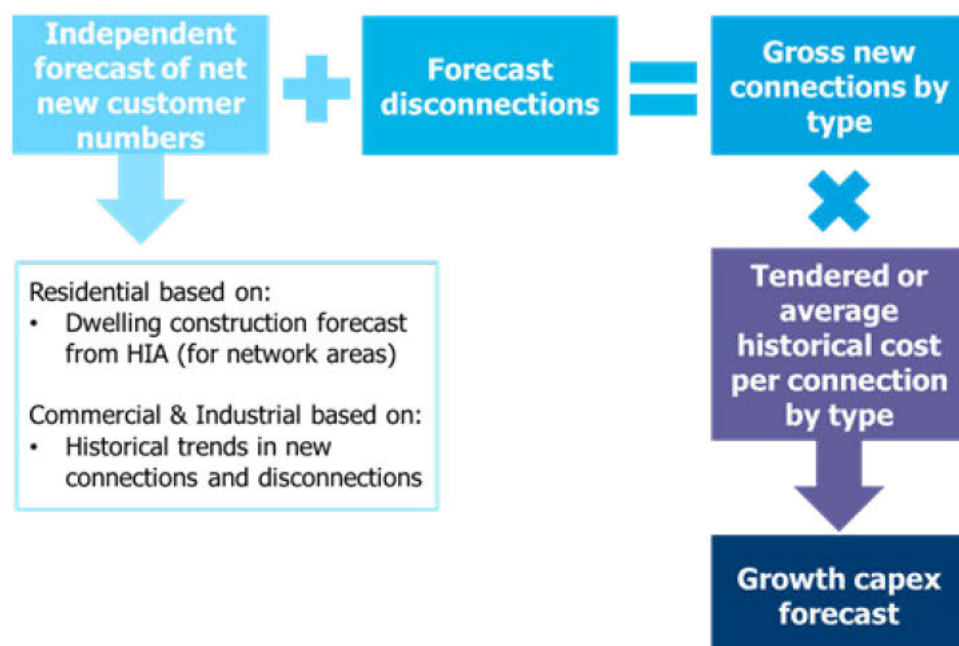
Table 13: Capex Summary Concordia

	<b>2026/27</b>	<b>2027/28</b>	<b>2028/29</b>	<b>2029/30</b>	<b>2030/31</b>	<b>Total</b>
Construct trunk	-	4,340	-	-	-	4,340
<b>Total expenditure \$('000)</b>	<b>-</b>	<b>4,340</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4,340</b>

## Forecast of New Growth Expenditure

Our growth expenditure forecasts are calculated with reference to our forecast of gross connection volumes (outlined in Figure 21 below) and forecast unit rates incurred for the installation of mains, services and meters required to connect new customers.

Figure 21: Growing the Network – Forecasting Approach

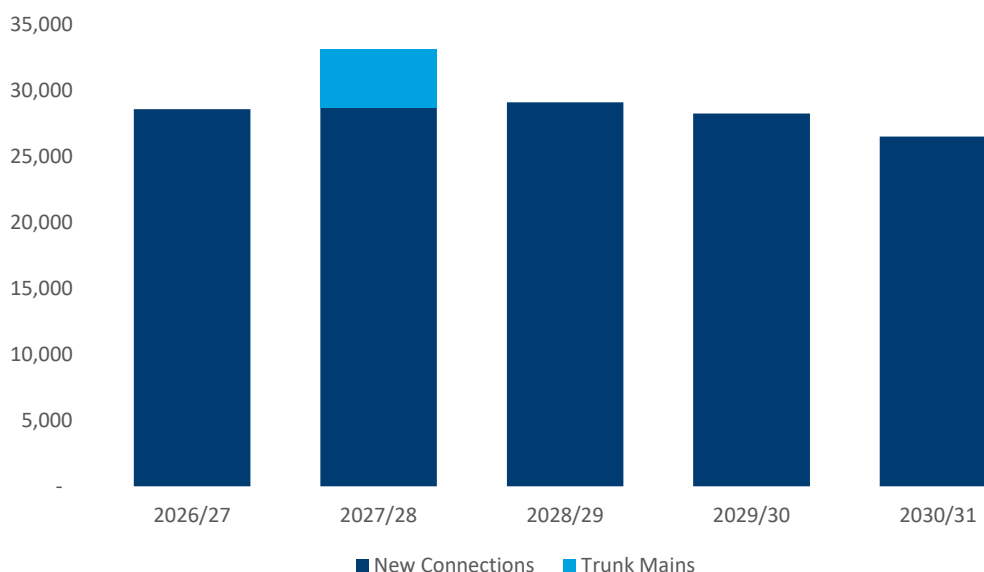


Our total expenditure forecast for growth (by category) for the upcoming AA period is contained in Table 14 and profiled in Figure 22.

Table 14: Growth Capex Summary (\$'000, Jan 2025)

Category	2026/27	2027/28	2028/29	2029/30	2030/31	Total
New connections	28,564	28,701	29,085	28,235	26,482	<b>141,068</b>
Concordia	-	4,430	-	-	-	<b>4,430</b>
(trunk main only)						
<b>Total Expenditure (\$'000)</b>	<b>28,564</b>	<b>33,131</b>	<b>29,085</b>	<b>28,235</b>	<b>26,482</b>	<b>145,498</b>

Figure 22: Capex Summary – New Connections & Trunk mains (\$'000, Jan 2025)



## 5.2 Mains Replacement

There were 8,510 kilometres of distribution mains in our network as of 1 January 2025. These mains consist of different material types, with diameters ranging from 16 mm up to 450 mm, operating at different pressures. Pressures vary from 1.7 kPa to over 340kPa across our low, medium and high pressure networks.

These material and pressure differences are the primary drivers of variability in condition and corresponding management activities over time. One of the key characteristics that helps inform and determine likely asset condition and performance is age. Typically, the longer a pipe has been in service, the more likely it is at risk of failure. Operating pressure, pipeline material, location, soil conditions, exposure to movement/impact are all risk factors that impact mains performance.

The next AA period comprises five programs of work. We will invest \$79 million to undertake the following:

### Protected steel mains replacement:

- Proactively replace [REDACTED] of the oldest and highest risk protected steel mains with the highest incidence of leaks; and
- Unplanned replacement of up to [REDACTED] of mains (based on historical failure rates).

### HDPE mains inspection, reinforcement and testing:

- Conduct [REDACTED] of inline camera inspections and reinforcement of HDPE 575 mains; and
- Take [REDACTED] samples of previously installed repair claims on HDPE mains for laboratory testing.

### Services replacement:

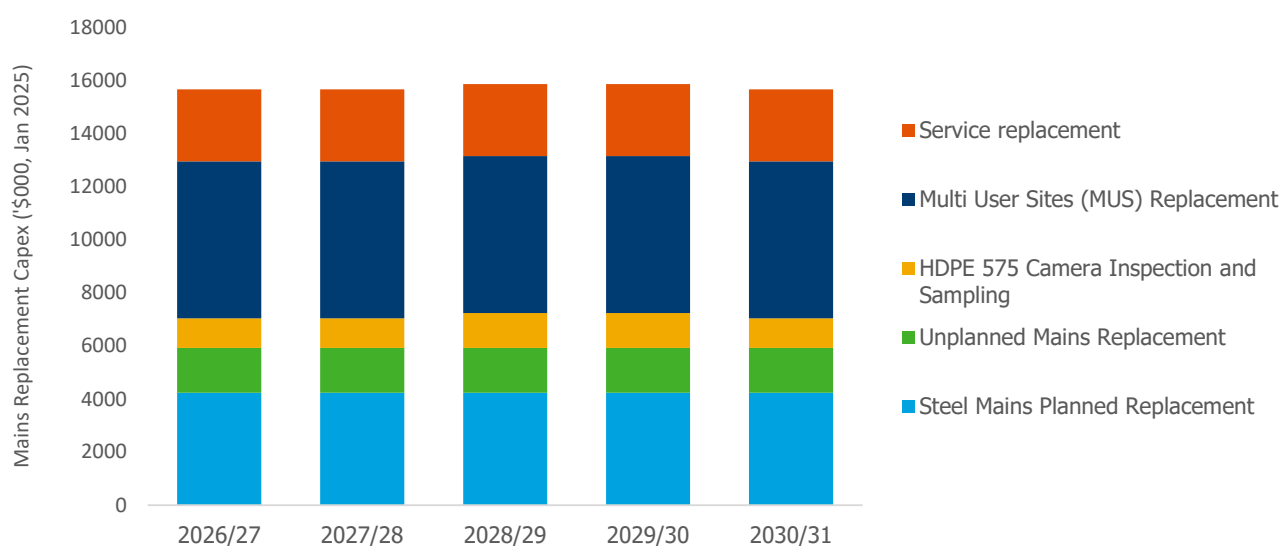
- Replace services at [REDACTED] Multi User Sites (MUS); and
- Provision for [REDACTED] unplanned service replacements.

Please see document Attachment 9.4 DMSIP further details on these programs.

Table 15: Capex Summary Mains Replacement

Program	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Steel Planned Replacement	4,241	4,241	4,241	4,241	4,241	<b>21,203</b>
Unplanned mains replacement	1,683	1,683	1,683	1,683	1,683	<b>8,414</b>
HDPE 575 – Camera Inspection and sampling	1,118	1,118	1,318	1,318	1,118	<b>5,990</b>
Multi User Sites (MUS) Replacement	5,916	5,916	5,916	5,916	5,916	<b>29,579</b>
Unplanned service replacement	2,711	2,711	2,711	2,711	2,711	<b>13,555</b>
<b>Total Capex \$('000)</b>	<b>15,668</b>	<b>15,668</b>	<b>15,869</b>	<b>15,869</b>	<b>15,668</b>	<b>78,742</b>

Figure 23: Capex Spend Profile - Mains Replacement



### 5.2.1 Mains Replacement Program Steel

There are more than 1,600 km of protected steel mains in the network. These steel mains are typically either PE coated (yellow jacket) or coated with Cold Tar Enamel (CTA) and are predominantly used for the high pressure system.

The overall risk of this asset class is escalating with time due to the pipeline age and increasing leak rates. The original protected steel mains are approaching 60 years old. These steel mains are still cathodically protected, however, cathodic protection becomes less effective as the pipeline integrity deteriorates with age.

Following an assessment of leaks, condition and location factors, we have identified [REDACTED] of the oldest and highest risk protected steel mains that should be replaced during the next 5 years. Based on reported leaks, this [REDACTED] (0.75% of the network) accounts for 10% of the leaks in the protected steel network.

Some main replacements are performed on an unplanned basis as a means of addressing urgent integrity issues, such as water ingress or shallow mains. Unplanned replacement is undertaken via direct burial and involves renewing and transferring any connected services, and tie back into



existing mains. We estimate up to [REDACTED] of unplanned replacement will be required in the next 5 years, refer Table 16 for details.

Table 16: Planned/unplanned mains replacement program

Program		2026/27	2027/28	2028/29	2029/30	2030/31	Total
Steel Planned Replacement	Length (m)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	Unit Rate (\$/m)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
	Subtotal (\$'000)	4,241	4,241	4,241	4,241	4,241	21,203
Unplanned Replacement	Length (m)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	Unit Rate (\$/m)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	
	Subtotal (\$'000)	1,683	1,683	1,683	1,683	1,683	8,414
<b>Total Expenditure (\$'000)</b>		<b>5,924</b>	<b>5,924</b>	<b>5,924</b>	<b>5,924</b>	<b>5,924</b>	<b>29,617</b>

### 5.2.2 HDPE (High Density Polyethylene) Inline Camera Inspections

Live camera inspection technology is used for the inspection of our early generation HDPE (high density polyethylene) mains. The camera system is a useful element to mitigate PE risks, specifically the risk associated with SCG (Slow Crack Growth) induced by mains squeeze-offs on early generation PE mains.

The inline camera is used to inspect the inside of the pipe and identify squeeze off points, i.e., points on the main susceptible to sudden failure. Once identified, the pipe is clamped and reinforced with a stainless-steel clip. This provides protection to the weakened parts of the pipe wall caused by squeeze off and reduces/removes the event of squeeze off failures that would release gas. By reducing the likelihood of squeeze off as a source of failure, the overall risk of these pipes is significantly reduced. This inspection and reinforcement option has only previously been available for mains with a diameter of 50mm, due to the available camera technology. A new camera has now been developed and approved to allow inspection of 40mm mains.

Inline camera inspection and reinforcement is a practical alternative to replacement for these mains and is now adopted as our primary management policy for mains where the technology can be effectively employed.

In the next AA period, we are forecasting to inspect the HDPE 575 DN40 mains that were installed prior to 1993 and two high pressure suburbs which have experienced squeeze off leaks. We will also conduct a sampling program in conjunction with Deakin University, to test the efficacy of previously installed reinforcement clamps. The total cost of this program is \$5.990 million which is significantly less than an alternate replacement program, refer to Table 17 for detail.

Table 17: Capex Summary HDPE camera inspection and reinforcement

Program		2026/27	2027/28	2028/29	2029/30	2030/31	Total
Inline Camera Inspections - HDPE DN40	Length (m)	■	■	■	■	■	■
	Unit Rate (\$/m)	■	■	■	■	■	
	Subtotal (\$'000)	1,118	1,118	1,118	1,118	1,118	5,590
HDPE clamp sample and assessment	Samples	-	-	■	■	■	
	Unit Rate (\$'000 /ea.)	-	-	■	■	■	
	Subtotal (\$'000)	-	-	200	200	-	400
<b>Total Expenditure \$('000)</b>		<b>1,118</b>	<b>1,118</b>	<b>1,318</b>	<b>1,318</b>	<b>1,118</b>	<b>5,990</b>

## 5.3 Service Replacement Program

### 5.3.1 Multi User Sites Replacement

Multi User Sites (MUS) are locations where gas services are provided to multiple consumers within higher density unit developments and commercial premises. Services can be steel, HDPE or PE depending on when they were installed.

During the current AA period we undertook MUS replacements of the highest risk sites and conducted a site survey of all outstanding MUS. Through this survey and the lessons learnt from the program so far, it has become evident that as MUS assets age their condition tends to deteriorate and the likelihood of failure increases. This information has then been used to inform how we will address the balance of MUS sites.

Our plan for the next AA period is to proactively replace all priority 2A MUS and the highest risk 2B MUS and increase monitoring/inspection of the remaining priority 2B. This program is forecast to cost \$29.6 million.

Table 18: Capex Summary MUS renewal

Program		2026/27	2027/28	2028/29	2029/30	2030/31	Total
Service Renewal - MUS	Services	■	■	■	■	■	■
	Unit Rate (\$/site)	■	■	■	■	■	
<b>Total Expenditure \$('000)</b>		<b>5,916</b>	<b>5,916</b>	<b>5,916</b>	<b>5,916</b>	<b>5,916</b>	<b>29,579</b>

### 5.3.2 Unplanned Service Replacement

Unplanned services replacement provides for an allocation of capital expenditure to allow for the renewal of services outside the planned mains replacement program. The need for such service replacements arise when leaks or damage occur on the service and inspection reveals that the service is heavily corroded or in such poor condition that repairs are not viable, or that the service is at a non-compliant depth.

A service is a dedicated network asset comprising of a service pipe, fittings, and metallic upstand with ball valve, which can be used to isolate customer supply in the event of an emergency.

Services are typically of the same vintage of the gas main to which they are connected, as they generally were laid together as one project. We assume the same level of replacement for the next AA as was observed in the current AA.

Table 19: Capex Summary Service Renewal

Program		2026/27	2027/28	2028/29	2029/30	2030/31	Total
Service Renewal – Unplanned services	Services	■	■	■	■	■	■
	Unit Rate (\$/service)	■	■	■	■	■	
Total Expenditure (\$,000)		2,711	2,711	2,711	2,711	2,711	13,555

## 5.4 Meter Replacement

AGN reticulates gas to approximately 485,000 customers in the South Australian natural gas distribution networks. The volume of gas delivered to a customer is measured through a meter, with meter measurements being a key input into customer bills.

AGN has a regulatory obligation to manage the integrity of these meters and ensure they operate within a prescribed tolerance band for metering accuracy. Periodic Meter Changes (PMCs) must therefore be carried out to:

- Test the accuracy of meters; and
- Replace meters when the accuracy of their measurements falls outside the prescribed band.

We also have an obligation to collect metering data and provide it to gas retailers in a timely manner for billing purposes.

Meter types are managed according to the following categories:

- Domestic meters – which are typically diaphragm meters with a capacity up to 10m<sup>3</sup>/hour that are used to supply both residential and small commercial and industrial customers;
- Industrial & Commercial (I&C) meters – which may be either diaphragm or rotary meters with a capacity greater than 10m<sup>3</sup>/hour that are used to supply medium to large scale commercial facilities; and
- Industrial meters – which are usually turbine meters with a capacity greater than 25m<sup>3</sup>/hour that are used to supply large industrial customers.

The latter group of these meters are used at Tariff D customer sites (i.e. customers consuming more than 10 TJ per annum). The cost of replacing industrial meters is recovered directly from Tariff D customers.

Domestic and I&C meters are subject to periodic testing to ensure families of meters are operating within prescribed accuracy tolerance bands. Where meters are found to be operating outside these bands, or at end of life and not suitable for field life extension, these meters are replaced.

In addition to replacing meters that no longer satisfy the prescribed tolerance band for metering accuracy, there are occasions where individual meters become defective and require replacement. This is referred to as reactive replacement.

Procurement of gas meters is required for:

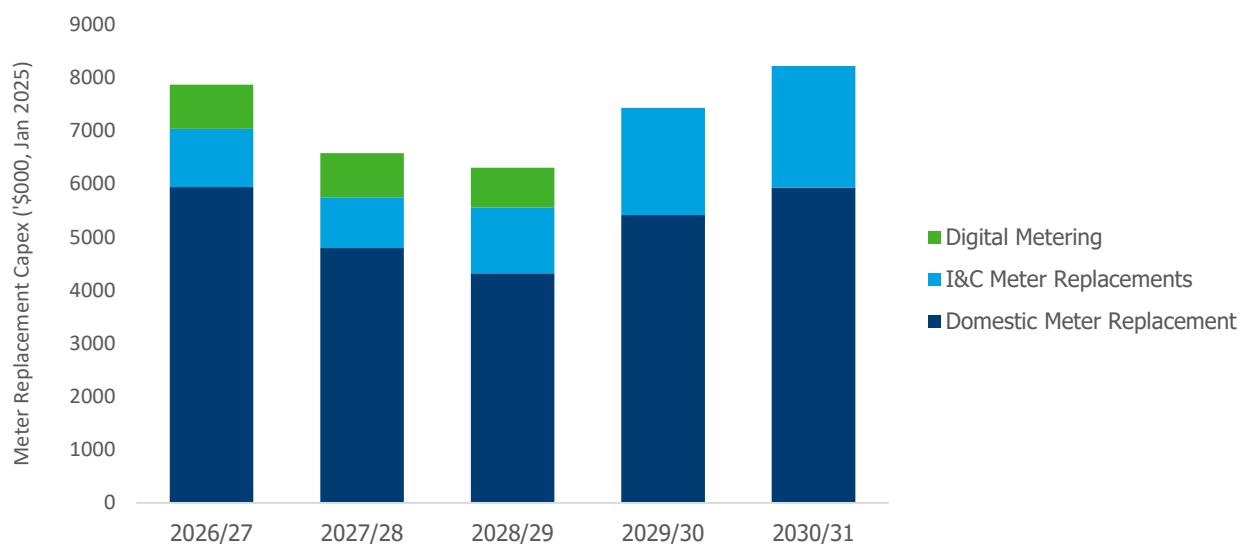
- New connections;
- Time expired meter replacement;
- Field life extension;
- Defective meter replacement; and
- Replacement with digital meters.

AGN meter replacement programs are summarised in the sections below. Additional details can be found in Attachment 9.10 Meter Replacement Plan

Table 20: Capex Summary Meter Replacement Plan (\$'000)

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Domestic Meters	5,940	4,795	4,319	5,413	5,932	26,400
I&C Meters	1,096	954	1,239	2,018	2,288	7,594
Digital Metering	831	831	748	-	-	2,409
<b>Total Expenditure (\$'000)</b>	<b>7,867</b>	<b>6,580</b>	<b>6,306</b>	<b>7,431</b>	<b>8,220</b>	<b>36,403</b>

Figure 24: Capex Summary Meter Replacement Plan



### 5.4.1 Meter Testing

AGN is required by the South Australian Gas Metering Code to carry out, or cause to be carried, various tests on meters prior to being placed into service, and during the life of its service. The



tests for Domestic and I&C meters vary slightly and are detailed in Attachment 9.10 Meter Replacement Plan.

The results from the testing will determine the meter life and when it is required to be changed which forms the basis of the planned meter changes.

### 5.4.2 Forecast PMCs for Domestic Meters

The total number of PMCs for meters sized  $\leq 10\text{m}^3$  per hour forecast for the next AA period in the South Australian networks is summarised in Table 21.

Table 21: South Australian Networks: PMC forecast for Domestic Meters:

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Low volume meter families	■	■	■	■	■	■
End-of-life meters	■	■	■	■	■	■
Initial in-service testing	■	■	■	■	■	■
FLE testing	■	■	■	■	■	■
Meters requiring replacement after failing FLE testing	■	■	■	■	■	■
Reactive replacements of defective meters	■	■	■	■	■	■
<b>Total</b>	■	■	■	■	■	■

### 5.4.3 Forecast PMCs for I&C Meters

The estimated number of meters of size  $>10\text{m}^3$  per hour that will need to be replaced in the next AA period is presented in Table 22.

Table 22: South Australian Networks: PMC forecast for I&C meters

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Low volume meter families	■	■	■	■	■	■
End of life meters	■	■	■	■	■	■
Initial in-service testing	■	■	■	■	■	■
FLE testing	■	■	■	■	■	■
<b>Total</b>	■	■	■	■	■	■

There is no allowance for reactive replacement due to the low value of failures, which are absorbed in the end-of-life meter replacement forecast.

#### 5.4.4 Forecast Cost of the Meter Replacement

The forecast cost of the PMC program has been calculated by multiplying the forecast number of PMCs by the unit rates set out in Attachment 9.10 Unit Rates Report of [REDACTED] per domestic meter and [REDACTED] per I&C meter.

Table 23 provides an annual forecast of Meter Replacement capital expenditure for the next AA period.

Table 23: South Australian Network: Periodic Meter replacement cost estimate, \$,000 Jan 2025

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
<b>Domestic meters (<math>\leq 10\text{m}^3</math> per hour)</b>						
Number of PMCs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Unit rate (\$/meter)				[REDACTED]		
Forecast cost (\$,000)	5,940	4,795	4,319	5,413	5,932	26,400
<b>I&amp;C meters (<math>&gt; 10\text{m}^3</math> per hour)</b>						
Number of PMCs	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Unit rate (\$/meter)				[REDACTED]		
Forecast cost (\$,000)	1,096	954	1,239	2,018	2,288	7,594
<b>Total program</b>						
<b>Total capex (\$,000)</b>	<b>7,037</b>	<b>5,748</b>	<b>5,558</b>	<b>7,431</b>	<b>8,220</b>	<b>33,994</b>

#### 5.4.5 Remote Digital Meter Solution

During the next AA period we propose to install digital meters at [REDACTED] domestic sites identified as inaccessible or difficult/dangerous to access. The meters can be installed at a customer's premises at a relatively low cost. This is a proactive replacement program, which means some of these sites will be replaced ahead of their scheduled PMC. The recurring PMC program will be adjusted to reflect this new meter family going forwards.

Table 24 shows the capital cost estimate for installing [REDACTED] digital meters at currently inaccessible sites.

Table 24: Capex estimate – Digital metering at inaccessible sites, \$,000 Jan 2025

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
No. of meters installed at inaccessible sites	[REDACTED]	[REDACTED]	[REDACTED]	1	1	[REDACTED]
Meter purchase and install (\$,000)	831	831	748	-	-	2,409

<b>Total capex (\$,000)</b>	<b>831</b>	<b>831</b>	<b>748</b>	<b>2,409</b>
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Table 25 sets out the forecast capital cost of the PMC and digital meter programs.

Table 25: South Australia Network: Meter replacement capex estimate, \$,000 Jan 2025

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
<b>PMCs</b>						
Domestic meters	5,940	4,795	4,319	5,413	5,932	26,400
I&C meters	1,096	954	1,239	2,018	2,288	7,594
<b>Total PMC program</b>	<b>7,037</b>	<b>5,748</b>	<b>5,558</b>	<b>7,431</b>	<b>8,220</b>	<b>33,994</b>
<b>Remote digital meter reading</b>						
Inaccessible meters	831	831	748			2,409
<b>Total meter replacement program</b>	<b>7,867</b>	<b>6,580</b>	<b>6,306</b>	<b>7,431</b>	<b>8,220</b>	<b>36,403</b>

## 5.5 Augmentation

Gas network augmentation involves expanding or upgrading infrastructure to meet growing demand, improve supply reliability, or support new customer connections. These works ensure the distribution network continues to operate safely and reliably, while accommodating changes in usage and future energy needs.

At the highest level, AGN is required to use all reasonable efforts to maintain network pressures above targeted levels as prescribed in industry standards such as AS4645 series. The need for network augmentation is determined by AGN's Network Planning team based on detailed modelling and analysis, which identifies both the drivers and optimal timing for each project.

Augmentation comprises the installation of new gas mains to reinforce areas of poor supply or construction of new network supply points to allow for additional feeds to our networks.

AGN's forecast expenditure for network augmentation is summarised in Table 26.

Table 26: Augmentation- Capital Forecast Summary

Project	Business Case #	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Network Augmentation	Attachment 9.12 Network Augmentation Plan		3,716		2,198		5,914
<b>Total</b>			<b>3,716</b>		<b>2,198</b>		<b>5,914</b>

### 5.5.1 Network Reinforcement

Pressure can decline gradually over time due to network growth. As the number of customers connected to our network grows, it can cause supply pressures to decline, particularly during peak consumption times. Declining delivery pressures are a particular risk when large numbers of new customers connect in the same area (for example a new housing estate). Put simply, the high pressure (HP) gas supply fed into that section of the network gets spread more thinly, and pressures can fall.

If pressures in the gas distribution fall below the minimum HP supply threshold the downstream gas supply to customers may be interrupted and/or gas appliances may become inoperable. This causes reliability issues and in extreme cases, safety risks.

Customers at the fringe of the network tend to be most at risk of substandard delivery pressures. This is because their premises are generally located far away from the district regulator station (supply point) and have limited route of supply. However, there is potential for all customers connected to that section of network to be impacted. We must therefore invest in our network to augment the HP systems and mitigate downstream issues.

Typically, the growth-driven delivery pressure risk is addressed by adding connection points or extending trunk mains feeding the affected section of distribution network, or by upgrading regulators to increase supply (or a combination of both).

A further consideration as the network grows is the level of back feeds in the distribution network. As the number of connections increase and new sections of distribution network are built, it is important to provide for the capacity to conduct for critical maintenance work or mains replacement without having to disrupt supply to large numbers of customers due to limited or no back feeds within the network design.


The projects covered in Table 27 and Table 28 are designed to address this risk of growth-driven pressure drop and capacity shortage.

Table 27: Network Reinforcement Program Breakdown

Project	Business Case	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Angle Vale	9.12 Network Augmentation Plan		3,716				3,716
Seaford Aldinga	9.12 Network Augmentation Plan				2,198		2,198

The drivers for these projects are essentially the same and are addressing the same risk – mitigating growth-driven delivery pressure decreases in parts of the downstream distribution network.

Table 28: Summary of proposed high pressure network augmentations 2026/27 to 2030/31

Project	Summary description
Angle Vale HP network augmentation	Install  of DN180 PE main along Dalkeith Road from Coventry Road to Angle Vale Road



Project	Summary description
Seaford Aldinga HP network augmentation	Duplicate [REDACTED] of DN280 trunk main from McLaren Vale to Aldinga

## 5.6 Telemetry

AGN uses a Supervisory Control and Data Acquisition (SCADA) system to monitor and report on the gas flow, pressure, and temperature of gas in real time. The effective operation of our SCADA system is necessary to ensure we have visibility of the network. In turn this improves our ability to manage our assets in a safe and reliable way and address any issues on the network as they arise. Capital expenditure incurred in the replacement or upgrade of our SCADA and Telemetry systems are contained within this expenditure category. SCADA facilities include:

- Pressure monitoring and control equipment;
- Network fringe point control; and
- Demand customer monitoring (including telemetry)

Refer to Table 29 for a forecast of our network monitoring program, with each program summarised thereafter.

Table 29: Summary Capital Expenditure Telemetry (\$'000)

Program	Business Case	2026/27	2027/28	2028/29	2029/30	2030/31	Total
SCADA Equipment (RTU) Replacement	SA210	■	■	■	■	■	■
Additional Network Pressure Monitoring	SA211	■	■	■	■	■	■
Monitoring facility	SA211	■					■
<b>Total Program Expenditure (\$'000)</b>		<b>1,150</b>	<b>650</b>	<b>605</b>	<b>563</b>	<b>563</b>	<b>3,553</b>

### 5.6.1 SCADA equipment (RTU) replacement

AGN uses a SCADA system to monitor and report real-time gas flow, pressure, and temperature across our South Australian network. This includes critical sites like city gate stations, regulating stations, network fringe points, and demand customers.

An effectively operating SCADA system is essential for network visibility, which allows us to manage our assets safely and reliably, addressing issues promptly as they arise. The data from SCADA also informs our future investment planning, ensuring prudent network development, and is vital for our mandatory compliance and operational reporting.

Furthermore, a functioning SCADA system is critical for monitoring minimum prescribed pressures at gas delivery points and network fringes. It's also integral to providing safe and reliable network service to our customers, aligning with the AS/NZS 4645 and AS/NZS 2885 standards.

SCADA equipment typically has a technical life of around 10 years. We're required to maintain this equipment according to AS/NZS 60079, which sets industry standards for electrical equipment in explosive atmospheres.

Remote Terminal Units (RTUs) are an integral component of our SCADA system, responsible for collecting, coding, and transmitting data back to the central station. Based on product lifecycle

stages published by [REDACTED], our RTU OEM, we anticipate 165 RTUs across five model families will transition from 'limited' to 'retired' status in the upcoming AA period. 'Limited' status means production has ceased but parts and limited bug fixes are still supported. 'Retired' status means the manufacturer no longer supports the product for parts, bug fixes, or security patches.

During the next AA period, we will commence a phased replacement of RTUs slated to shift from limited to retired status. After considering various options and volumes, we propose replacing 60 RTUs over the next five years. Our aim is to replace all 165 retired RTUs over the next two to three AA periods, which equates to a 15-year ongoing project.

This RTU replacement program covers several types and brands of RTU, along with miscellaneous ancillary telemetry items such as batteries and cables.

Table 30: Summary SCADA (RTU) Replacement

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
SCADA (RTU) equipment \$(000)	513.4	513.4	513.4	513.4	513.4	2,566.8
<b>Total \$(000)</b>	<b>513.4</b>	<b>513.4</b>	<b>513.4</b>	<b>513.4</b>	<b>513.4</b>	<b>2,566.8</b>

### 5.6.2 Additional Network Pressure Monitoring

The effective operation of our SCADA system is required to ensure we have visibility of the network. In turn this improves our ability to manage our assets in a safe and reliable way and address any issues on the network as they arise. The information provided through our SCADA system is also used in planning future investments to allow us to prudently invest in our network, and is crucial to our mandatory compliance and operational reporting activities.

The forecast network monitoring and control program for the next AA period is the continuation of a well-established program of work expanding the amount of real-time information we have for use in monitoring and controlling pressure in our network. Within this program AGN will address high priority SCADA and communications deficiencies by continuing the ongoing SCADA networks monitoring program by installing new SCADA points at the 11 fringe points and 2 district regulator facilities.

In addition to installing these additional monitoring points, we are looking to improve our 24/7 monitoring capabilities. Currently, the AGN distribution network in SA is not monitored by a dedicated operator/technician around the clock. While networks are monitored during business hours, outside of business hours we rely on an on-call rotation using text messaging and responding only to critical SCADA alarms.

To improve our monitoring capabilities and minimise the risk of network alarms being missed (or slow response times), we propose to establish a dedicated monitoring room, with modern and fit-for-purpose equipment in a secure and distraction-free environment. We will also increase our SCADA resourcing so that the monitoring room can be manned around the clock, meaning we will have true 24/7 monitoring rather than a minimal on-call crew outside of business hours.

Table 31: Summary SCADA network pressure monitoring (\$'000)

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
DRS monitoring (\$'000)	■	■	■	■	■	■

Fringe point monitoring (\$'000)	■	■	■	■	■	■
Monitoring room	■	■	■	■	■	■
<b>Total (\$'000)</b>	<b>637</b>	<b>137</b>	<b>92</b>	<b>60</b>	<b>60</b>	<b>986</b>

## 5.7 Other Assets

"Other Assets" includes capital expenditure not included in the subsequent expenditure categories. It is a diverse portfolio of work, drawing on programs from the following AGN business cases:

Table 32: Summary Other Programs (\$'000)

Program	Business Case#	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Corrosion management of steel pipework	SA201	2,643	3,306	2,936	2,853	2,959	14,699
Non-compliant Domestic Meter Sets	SA202	1,039	584	584	581	584	3,372
Isolation Valves	SA203	1,881	2,315	2,518	3,343	2,315	12,372
M42 Bridge and Pipeline Structure	SA204	376					376
ILI Pipeline modification	SA205	7,123	7,486	6,879	6,981	6,408	34,877
DRS Overpressure Risk Reduction	SA206	1,570	2,089	2,407	2,315	2,482	10,863
Asset Protection	SA209	302	303	303	303	302	1,513
Vehicle, Plant and Equipment Upgrade	SA213	871	994	1,242	1,455	432	4,994
End of Life I&C Meter Sets	SA229	220	220	220	220	220	1,101
Leak Monitoring and Data Analysis	DMSIP	2,340					2,340
<b>Total Program Expenditure (\$'000)</b>		<b>18,365</b>	<b>17,297</b>	<b>17,089</b>	<b>18,051</b>	<b>15,702</b>	<b>86,507</b>

### 5.7.1 Corrosion Management of Steel

South Australia's gas distribution network, comprising approximately 209 km of metropolitan transmission pressure (TP) pipelines and 1,600 km of distribution pressure (DP) steel pipelines, delivers gas to over 485,000 consumers. The majority of these TP and DP pipelines are between 40 and 60 years old.

Due to their age and material, these essential mains, along with their associated services, valves, and other steel structures, are susceptible to corrosion. If left unaddressed, corrosion can lead to integrity failures and uncontrolled gas escapes. Given that these metropolitan pipelines are typically located in or near developed areas and major population centres, the consequences of a significant uncontrolled gas escape could be severe.

To maintain steel integrity and extend asset life, the most cost-effective solution is to implement corrosion prevention measures such as cathodic protection (CP) and coatings. While highly effective, they require continuous monitoring and periodic inspection to ensure steel assets remain adequately protected.

Our proposed works for the upcoming period is a continuation of existing successful practices, enhanced proactive measures targeting emerging risks.

#### **5.7.1.1 Cathodic protection systems for TP and DP pipelines**

We protect steel gas pipelines using CP, primarily through two methods: Galvanic Sacrificial Anodes and Impressed Current Cathodic Protection (ICCP). Sacrificial anodes are simpler, self-powered, and cost-effective for dispersed areas, but have a shorter life (3-15 years) as they deplete. ICCP systems, while requiring an external power source and being less suitable for complex distribution networks due to potential interference, offer a longer lifespan (up to 25 years) and are more effective for larger current demands and longer pipeline sections, making them AGN's preferred choice where practicable. For this next AA period, our program focuses on replacing end-of-life CP assets (e.g., 4 ICCP power units, 3 ICCP anode beds, and 300 sacrificial anodes) and enhancing underperforming distribution network CP systems by installing 612 new sacrificial anodes (at 204 locations with a test point) and one new ICCP unit to ensure continued integrity and compliance.

#### **5.7.1.2 External corrosion direct assessments, direct current voltage gradient surveys and heat shrink sleeves**

We actively manage corrosion on the diverse range of coated steel pipelines, using Direct Current Voltage Gradient (DCVG) surveys to assess coating integrity, especially where inline inspection as per AS 2885 isn't feasible. DCVG identifies coating faults through electrical current leakage (IR readings), which, depending on severity and other factors, trigger External Corrosion Direct Assessments (ECDAs) – essentially "dig ups" to expose and repair the pipeline. While DCVG and ECDA provide sample data, their value is significant: historical data shows that even defects with IR readings under 15% can reveal critical issues, such as mechanical damage from third-party strikes, as demonstrated by an excavation on the M5 TP pipeline that prevented a high-consequence leak. We plan to continue our current five-year cycle of 25 TP pipeline dig ups, and will also conduct 7 targeted digs on high-risk DP trunk mains given the degraded cathodic protection performance in those areas.

Corrosion under Heat Shrink Sleeves (HSS) is an emerging issue. HSS were widely used on field joints during the construction of approximately 130 km of South Australia's transmission pipelines in the 1970s and '80s. These HSS have proven problematic, as poor bonding or degradation allows moisture to wick underneath, which can cause significant pitting that cathodic protection (CP) cannot effectively prevent, and DCVG surveys often struggle to detect. While Inline Inspection (ILI) is the ideal detection method, most of these pipelines are not yet "piggable." Consequently, the proposed strategy involves a continued program of DCVG surveys followed by extensive ECDAs (dig ups), where HSS are stripped, the steel is inspected, repaired, and recoated with modern systems. For the next five years, we plan to dig up and remediate 65 HSS locations.



### 5.7.1.3 Inspecting and reapplying coatings on valves, pipework, and air-to-soil interfaces

There is a growing concern with deteriorating protective coatings on critical steel assets within the AGN network, including valves and air-to-soil interfaces, which currently rely solely on these coatings for corrosion protection. Recent discoveries of corrosion, often found reactively during other work, highlight a potential systemic issue, as exemplified by a leaking main due to corrosion in North Haven, as well as other assets requiring full replacement due to unaddressed coating failures. To proactively tackle this, we propose a new coating inspection and remediation program for approximately 5% (over 170) of the over 2,800 steel valves and 560 air-to-soil interfaces over the next five years. This targeted approach aims to assess the true scale of the problem and inform future asset management strategies for these vulnerable assets.

### 5.7.1.4 Replacing obsolete stray current drainage systems, particularly those near rail systems

The Adelaide distribution network relies on DC traction drainage systems to protect its metallic pipelines from rapid corrosion caused by stray currents from electrified rail systems. Currently, four passive systems utilizing obsolete germanium diodes are in place; these diodes, with their low forward voltage, allow stray current to safely return to the rail system without compromising the pipeline's cathodic protection. However, as germanium diodes are no longer available, these four systems must be upgraded to Transformer Rectifier Assisted Drainage (TRAD) systems. TRADs are actively powered, industry-standard systems that, despite being more complex to install, offer enhanced management of pipe potential relative to the rail. Given the severe corrosion risks, we plan to proactively replace all four-germanium diode-based systems with TRADs over the next five years to prevent integrity issues and potential gas leaks.

### 5.7.1.5 Service Safety Program - Installing CP electrical isolation devices at customer premises to prevent stray current from compromising the CP system's effectiveness

AGN is committed to ensuring electrical separation between its metallic gas mains (Transmission Pressure and Distribution Pressure networks) and customer installations. This ongoing program is critical for three reasons: it prevents galvanic corrosion on customer equipment caused by our cathodic protection (CP) systems; maintains the effectiveness of AGN's CP systems on the distribution mains; and enhances overall safety by preventing electrical faults. To achieve this separation, the preferred method is installing an electrical isolation fitting between the customer's earthed meter and the CP-protected main. If this isn't feasible, the metallic service is replaced with a fully fused polyethylene (PE) solution.

The programs of work included in the corrosion management of steel and associated capex are provided in Table 33. Further details are provided in Business Case SA201.

Table 33: Capex Summary Corrosion Management of Steel

	2026/27	2027/28	2028/29	2029/30	2030/31	Total	Cost (\$'000)
<b>Cathodic Protection</b>							
<b>End of life replacement</b>							
ICCP units (each)	0	0	2	2	0	4	205
ICCP anode beds (each)	0	0	1	1	1	3	189



	2026/27	2027/28	2028/29	2029/30	2030/31	Total	Cost (\$'000)
Sacrificial anodes (each)	60	60	60	60	60	300	2,409
<b>Underperforming pipelines</b>							
ICCP system (each)	0	1	0	0	0	1	283
Sacrificial anodes (each)	41	41	41	41	40	204	2,197
<b>External corrosion direct assessment</b>							
TP DCVG ECDA	5	5	5	5	5	25	1,052
DP DCVG ECDA	0	3	3	1	0	7	295
TP HSS ECDA	13	13	13	13	13	65	2,736
<b>Coatings</b>							
Valves and air to soil interfaces	25	25	26	26	26	128	2,449
<b>Current drainage systems</b>							
DC drainage replacement	0	2	0	0	2	4	505
<b>Service safety program</b>							
Service modification	173	173	173	173	173	865	661
Service replacement	52	52	52	52	52	260	1,714
<b>Total cost (\$'000)</b>	<b>2,643</b>	<b>3,306</b>	<b>2,936</b>	<b>2,853</b>	<b>2,959</b>		<b>14,699</b>

### 5.7.2 Non-compliant Domestic Meter Sets

A number of domestic meter sets within the AGN SA distribution network don't comply with current standards, primarily due to legacy issues, renovations, or updated standards that result in meters being located near ignition sources or in enclosed areas. While AGN addresses approximately 60 non-compliant meters annually in the metropolitan area through existing crews, a rolling backlog of around 100 meters persists, with an additional 60 identified each year. Regional networks, specifically Port Pirie, Mount Gambier, and Whyalla, have a combined backlog of 489 non-compliant meters (totaling 589 across SA). Unlike the metro area where crews can manage most issues, regional crews are limited to essential operations, meaning only the highest-risk regional meters are addressed, and a proactive, dedicated program with specialist crews is needed to clear this growing backlog.

We propose to uplift our resources in the next AA to address the current backlog, particularly in regional areas, while continuing to address new non-compliances and relocate 900 meter sets to compliant locations.

Table 34 summarises the capital expenditure and timing associated with this program. Further details are provided in Business Case SA202.

Table 34: Capex summary Non-compliant Domestic Meter Sets (\$'000)

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Relocate 900 domestic meter sets	1,039	584	584	581	584	3,372
<b>Total expenditure (\$'000)</b>	<b>1,039</b>	<b>584</b>	<b>584</b>	<b>581</b>	<b>584</b>	<b>3,372</b>

### 5.7.3 Isolation Valves

Australian Standards AS/NZS 2885 and AS/NZS 4645 require Transmission Pressure pipeline and distribution network operators to install and maintain isolation valves to allow the pipeline or network to be isolated for emergency and maintenance purposes. In SA networks, there are 1,207 steel valves, with 283 on transmission pipelines (TP) and 924 on distribution mains (DP). Most of these valves were installed in the 1970s and 80s in suburban areas.

Despite an ongoing replacement program that addresses 4-5 seized or failed valves annually, this rate is insufficient, leading to a backlog of 38 inoperable valves. To prevent this backlog from growing, a dedicated 10-year program is proposed to clear existing and new failures. The replacement program would address 9 TP valves and 31 DP valves.

Additionally, two new isolation valves will be installed on the M42 TP pipeline near the Torrens River crossing. This is crucial for the critical M42 pipeline given the 60-year-old bridge's disrepair and the need for rapid isolation in case of structural or pipeline failure.

Table 35 summarises the capital expenditure and timing associated with this program.

Table 35: Capex Summary Isolation Valves (\$'000)

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Replacement of 9 TP valves	■	■	■	■	■	■
Installation of 2 TP valves			■	■		■
Replacement of 31 DP valves	■	■	■	■	■	■
<b>Total expenditure (\$'000)</b>	<b>1,881</b>	<b>2,315</b>	<b>2,518</b>	<b>3,343</b>	<b>2,315</b>	<b>12,372</b>

Refer Business Case SA203 for further details.

### 5.7.4 M42 Bridge and Pipeline Structure

The M42 transmission pipeline, operating at 1,750 kPa and now in its 61st year (exceeding its 50-year design life), faces critical challenges where it crosses the Torrens River. Unlike other sections, AGN owns both the bridge structure and the pipeline, which are integrated and were not designed for future inspections or to accommodate current demand. A visual inspection in 2023 revealed surface corrosion at the steel-to-pipeline weld, leading to several issues: the river crossing is currently unpiggable; there are no established structures for safe external inspection; and historical design information is limited. These factors prevent AGN from fulfilling its obligations under AS/NZS 2885.3. A major challenge is that the M42 pipeline is now critical for supplying over 2,000 domestic and one large industrial and commercial customers, meaning any isolation of this section would cause significant supply interruptions.



To address this, we propose to conduct an external examination by specialist contractors to inform future asset management strategies for replacement or life extension at a cost of \$376,000.

Refer Business Case SA204 for further details.

### 5.7.5 Pipeline Modifications for ILI

AGN has 209km of regulated transmission pipelines in South Australia. Inline Inspection (ILI), or 'pigging' is recognized by AS 2885.3-2022 as the industry standard for comprehensive pipeline condition assessment, enabling informed decisions on extending asset life, targeting repairs efficiently, and learning from defects.

Despite its benefits, many older TP pipelines are not currently piggable due to features like tight bends and obstructions. We have identified 36 sections (146km) of non-piggable TP pipeline that could reasonably and safely be made piggable following modification based on current technology. To optimize this work, we're proposing five campaigns of modifications and inspections in the next AA period, covering 78km of TP pipelines.

Table 36 provides a summary of the cost and timing of the program. Further details can be found in Business Case SA205.

Table 36: Capex Summary Pipeline modification for Inline Inspection

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Feature assessment digs	■	■	■	■	■	■
Design, drafting and engineering	■	■	■	■	■	■
Execution	■	■	■	■	■	■
<b>Total capex \$('000)</b>	<b>7,123</b>	<b>7,486</b>	<b>6,879</b>	<b>6,981</b>	<b>6,408</b>	<b>34,877</b>

### 5.7.6 DRS Overpressure Risk Reduction

AGN has 90 TP and 88 DP District Regulator Stations (DRS) in South Australia. Each DRS has a service bypass line designed to maintain supply during maintenance, but many older ones pose a risk of overpressure. Around 30 years ago, the standard design changed to include a secondary isolation valve on the bypass line, and in 1998, it was updated to require a regulator instead of a valve. Since August 2020, the latest industry standard requires at least two full regulation runs with compliant overpressure protection on each run, eliminating human error as a cause of overpressurization and allowing indefinite bypass use.

Over the past decade, AGN has systematically addressed its TP DRSs, but 17 still lack compliant overpressure protection. While half of the DP DRSs are expected to be non-compliant, a comprehensive remediation plan will be developed in the upcoming period. However, four high-risk DP DRSs supplying Adelaide's CBD have been identified for priority remediation due to their critical role.

Where possible, it is proposed to modify the existing DRS in situ to meet the current standard design by replacing the existing bypass line. Six TP DRS will require full replacement as they are unable to be isolated due to supply criticality. A further five TP regulator replacements will be deferred to a future AA period.

Table 37 summarises the costs and timing for this program. Further details can be found in Business Case SA206.

Table 37: Capex Summary: DRS Overpressure Risk Reduction

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
TP DRS replacements	■	■	■	■	■	■
TP DRS modifications	■	■	■	■	■	■
CBD DP DRS modifications	■	■	■	■	■	■
<b>Total capex \$('000)</b>	<b>1,570</b>	<b>2,089</b>	<b>2,407</b>	<b>2,315</b>	<b>2,482</b>	<b>10,863</b>

### 5.7.7 Asset Protection

Some of AGN's below-ground gas distribution and transmission assets, including transmission pressure syphons, valves, and District Regulator Stations (DRS), are vulnerable to damage from traffic and construction vehicles due to their lack of visibility or protective barriers. A May 2024 incident on the M6 pipeline, where a road profiler damaged a syphon causing a leak, highlighted this risk.

A subsequent review identified 23 syphons and 20 buried valves needing attention. AGN proposes to excavate, inspect, and install syphon chambers on these 43 assets, enhancing their visibility and protection while also complying with AS 2885.3 – 2018, which mandates accessibility and periodic inspection of buried mechanical fittings. Their locations will also be updated on "Before You Dig" plans.

Additionally, 86 of our DRS are located below ground level and near to roadways. Sixteen (16) of these have engineered bollards designed to prevent traffic driving over or parking on the DRS lids. The remaining 70 have little or no traffic controls in place, making them susceptible to vehicle impact, especially with increasing traffic volumes and road widening projects. To address this, AGN plans to install permanent metal bollards around these DRS units. While new DRS installations include asset protection and reactive bollards to be installed, the new strategy shifts to a proactive, planned program. This program will prioritize the 70 identified locations, starting with 10 high-risk locations within the next AA period. Both the syphon chamber and bollard installations align with current industry best practices.

Table 38 summarises the costs and timing of this program. Further details can be found in Business Case SA209.

Table 38: Capex Summary Asset protection

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Asset protection	302	303	303	303	302	1,513
<b>Total capex \$('000)</b>	<b>302</b>	<b>303</b>	<b>303</b>	<b>303</b>	<b>302</b>	<b>1,513</b>



### 5.7.8 Vehicle, Plant and Equipment Upgrade

A standard suite of vehicles, plant and equipment (P&E) is required on an ongoing basis to enable our workforce to conduct repair and alteration work on the pipelines and other gas asset infrastructure. This equipment is used for activities such as stopping gas flow, underground asset detection, gas detection, welding and fusion, and pressure testing.

As existing plant and equipment age, they must be replaced before they become unfit for purpose due to wear or obsolescence.

There are three categories of plant and equipment (P&E) expenditure:

- Small P&E – general (small value) replacement and new plant and equipment items that require ongoing purchase each year;
- Vehicles – trucks and other vehicles, which are replaced as and when they become unsafe, or it becomes inefficient to continue to use and maintain them.
- High pressure flow stopping – Stopple equipment, which is used to stop the gas flow in high pressure steel pipelines, enabling safe isolation of the gas supply and controlled gas release.

Table 39 shows the expenditure associated with the Vehicle, Plant & Equipment Renewal program. Further details are provided in Business Case SA213.

Table 39: Capex Summary Vehicle, Plant & Equipment

	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Vehicles	580	580	580	944	246	2,930
Small P&E	291	414	362	311	186	1,564
High pressure flow stopping	-	-	300	200	-	500
<b>Total capex \$('000)</b>	<b>871</b>	<b>994</b>	<b>1,242</b>	<b>1,455</b>	<b>432</b>	<b>4,994</b>

### 5.7.9 Leak Detection and Analysis

Regular leak surveys of our gas network are important to maintain public safety, operational efficiency and compliance. We are looking to replace our current system with a modern industry standard alternative offering a broader range of gas detection capabilities with advanced data analytics.

This new modern alternative is the [REDACTED] - gas detection technology which is more sensitive in detecting leaks, can account for wind detection and speed to greater accuracy, can be used for mobile leak detection or stationary monitoring, and can monitor significantly larger areas. It will deliver analytical insights, scalability and data to inform future mains replacement.

We plan to purchase one new gas detection system at a cost of [REDACTED].

### 5.7.10 I&C End of Life Meter Sets

The South Australian gas distribution network serves over 11,000 I&C customers, with 690 of these requiring large meter sets due to high gas consumption. While the meters themselves are replaced periodically, the meter sets—comprising valves, pipework, regulators, and fittings—can be



over 40 years old. Historically we have managed our meter sets through specific targeted programs addressing key risks as they emerge. This has meant we have not had a general program for meter set refurbishment and replacement.

Over the last 10 years we have made investments in meter sets to mitigate the risk of overpressure events by installing overpressure shutoff valves and regulated bypass lines. The rate of remediation has increased over time to a sustainable level, with an average of approximately 20 meter sets addressed per year, for the last three years. This rate of rectification results in an ongoing program that will address the number of known non-compliant meters over approximately 20 years. AGN has identified 460 large meter sets requiring refurbishment, modification, or replacement due to non-compliance or end-of-life status. For the next AA period, we are proposing a holistic approach to meter set risks, combining efforts to address issues like corrosion and unregulated bypass lines. Given the scope, a risk-based prioritization will guide a feasible program of work over a reasonable timeframe commencing with 100 meter sets in the next AA period.

Table 40 provides a summary of the I&C end of life meter set program and further details are provided in Business Case SA229.

Table 40: Capex Summary I&C Meter Refurbishment

	26/27	27/28	28/29	29/30	30/31	Total
Meter set compliance and corrosion	220	220	220	220	220	1,101
<b>Total Capex \$('000)</b>	<b>220</b>	<b>220</b>	<b>220</b>	<b>220</b>	<b>220</b>	<b>1,101</b>

### 5.7.11 Renewable Gas Adaption

To prepare for the injection of hydrogen—both at 20% volume blends and for future 100% hydrogen conversion—AGN must update its asset management practices and processes to ensure all assets are hydrogen-compatible prior to introduction. Different parts of the network will require tailored modifications depending on whether they are being prepared for a 20% blend or full 100% hydrogen conversion. The planned capital works include:

#### Replace Incompatible Parts

Hydrogen can cause embrittlement of some metals, leading to a reduction in tolerance to crack- like defects and an acceleration of fatigue failure. We have identified that components with parts made from copper alloys, most aluminium alloys, and stable austenitic stainless steels are suitable for 20% and 100% hydrogen service. Other metals with poor performance such as cast irons, high strength carbon steels (e.g. chrome-moly), martensitic stainless steels and nickel alloys may not be compatible with hydrogen.

Working with the manufacturers to eliminate as many components as possible, AGN has identified that there are only 232 incompatible parts within its network that require remediation to allow for the safe introduction of a hydrogen blend. Under the staggered approach, we will replace ■ incompatible parts in the next AA period.

#### Weld Procedures and Hardness Testing

A compatibility review found that most of AGIG's pipelines (>1,050kPa) with design factors below 0.04 and network steel piping (<1,050kPa) can safely be used to transport hydrogen blends or pure hydrogen. However, existing weld procedures will not be appropriate and must be re-qualified.

As such, we will need to develop new weld procedures for ■ steel pipelines, to ensure the safe operation of our steel pipelines. We must also undertake hardness testing for a random sample of welds in each pipeline, to show compliance with the hardness limits of ASME B31.12.



### Pipeline Repair Equipment

Further work is required to assess compatibility of transmission pipeline repairs undertaken with Plidco & Smith Clamps and the purchase of compatible equipment. This project will be delivered during the first two years of the upcoming AA period, and will assist with the development of proactive upgrade and replacement plans.

### Hazardous Area Equipment

Compared to natural gas, renewable gas will likely include hydrogen blends, and over a certain concentration of hydrogen by volume we require a larger minimum hazardous area size in open spaces.

However, over the next five years we do not foresee a full conversion to, for example, hydrogen being completed. Therefore, a more conservative target of conversion to 20% hydrogen mixtures has been undertaken. For hazardous area equipment no work currently needs to be done for these levels of concentration. 'AGN technote - Group designation for Hazardous area electrical equipment in Hydrogen blends' provides further detail into the reasons behind this.

Renewable gases with a hydrogen content greater than 20% will require a change to the equipment group, due to the reduced ignition energy compared to natural gas. This solution involves replacing Cat. IIA & IIB rated equipment with Cat. IIC, hydrogen ready equipment.

AGN SA's Hydrogen Adaption Capital Expenditure forecasted in the next AA period is summarized in Table 41.

Table 41: Capex Summary Renewable Gas Adaption (\$'000)

Program	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Hazardous area equipment	-	-	-	-	-	-
Replace incompatible parts	330	330	-	-	-	660
Weld procedures & hardness testing	700	850	1,240	1,240	1,250	5,280
Pipeline repair equipment	-	150	-	-	-	150
<b>Total \$(000)</b>	<b>1,030</b>	<b>1,330</b>	<b>1,240</b>	<b>1,240</b>	<b>1,250</b>	<b>6,090</b>

Please refer to Business Case SA242 Renewable Gas Adaption for the operational activities relating to hydrogen injection. The associated operational expenditure of the programs will be absorbed internally.

## 5.8 Information Technology

Capital expenditure relating to our Information Technology (IT) platforms is contained within the "Information Technology" capital expenditure category.

The AGN IT Investment Plan (Attachment 9.7) outlines the key IT investments forecast for the next AA period. The plan covers traditional IT such as enterprise applications, IT hardware, corporate data and managed infrastructure, as well as the operational technology (OT) systems for our Supervisory Control and Data Acquisition (SCADA). The forecast IT expenditure is designed to maintain the existing IT environment and services, reduce a range of IT safety and security risks, deliver on key business strategies, improve the service experience of our customers and transition a number of core systems into AGIG's IT environment.

Over the AA period, AGN will renew its critical applications and IT infrastructure in line with good industry practice, undertake a large program of work to transition key operational IT systems from AGN's current third-party operational partner (APA) to an in-house AGN Operations function, build on work already delivered to rationalise IT across AGIG, and continue to enhance the way we communicate and provide information to our customers, how we collaborate across the business, our utilisation of data analytics and visualisation to support reporting and decision making, and appropriately manage cyber risks.

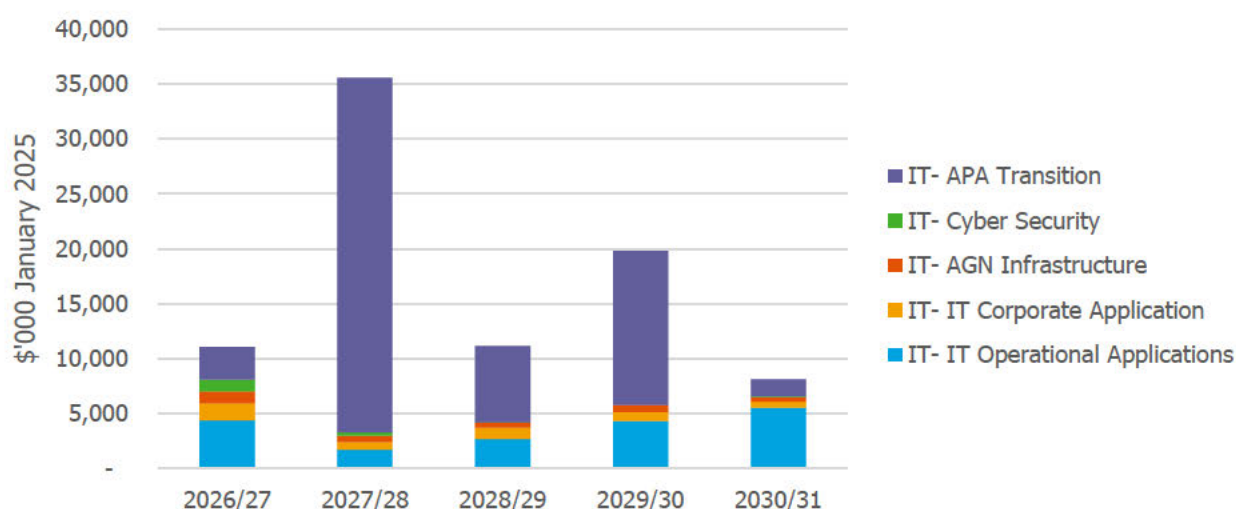
AGN's IT expenditure forecast for the next AA period is summarised in Table 42 and profiled in Figure 25.

Table 42: Information Technology Expenditure Summary (\$'000 January 2025)

IT program of work	2026/27	2027/28	2028/29	2029/30	2030/31	Total
<b>IT Operational Applications (SA217)</b>	<b>4,404</b>	<b>1,743</b>	<b>2,717</b>	<b>4,331</b>	<b>5,560</b>	<b>18,755</b>
Recurrent	2,999	1,443	2,417	4,031	5,260	16,150
Non-recurrent	1,405	300	300	300	300	2,605
<b>IT Corporate Applications (SA238)</b>	<b>1,526</b>	<b>718</b>	<b>1,001</b>	<b>814</b>	<b>555</b>	<b>4,614</b>
Recurrent	673	472	832	814	555	3,347
Non-recurrent	853	245	169	-	-	1,267
<b>IT Sustaining Infrastructure (SA239)</b>	<b>1,112</b>	<b>552</b>	<b>497</b>	<b>641</b>	<b>400</b>	<b>3,203</b>
End-user devices – recurrent	411	156	156	156	156	1,037
Network and currency – recurrent	599	382	326	465	230	2,002
Network and currency – non-recurrent	49	-	-	-	-	49
Data centre - recurrent	52	14	14	20	14	115
<b>Cyber Security (SA240)</b>	<b>1,039</b>	<b>296</b>	<b>17</b>	<b>-</b>	<b>51</b>	<b>1,403</b>
Maintain cyber currency – recurrent	388	-	16	-	51	455
Uplift data privacy & security – non-recurrent	524	-	-	-	-	524
Uplift access control	127	296	2	-	-	424
<b>APA IT Transition (SA241) – non-recurrent</b>	<b>2,971</b>	<b>32,237</b>	<b>6,954</b>	<b>14,033</b>	<b>1,559</b>	<b>57,755</b>
<b>Total Recurrent</b>	<b>5,123</b>	<b>2,468</b>	<b>3,762</b>	<b>5,487</b>	<b>6,266</b>	<b>23,106</b>
<b>Total Non-recurrent</b>	<b>5,929</b>	<b>33,078</b>	<b>7,425</b>	<b>14,333</b>	<b>1,859</b>	<b>62,624</b>
<b>Total</b>	<b>11,052</b>	<b>35,546</b>	<b>11,187</b>	<b>19,819</b>	<b>8,125</b>	<b>85,730</b>



Figure 25: Information Technology Expenditure Summary (\$'000 January 2025)



There are also additional operating costs that have been identified with the IT investment proposed over the next AA period. These are summarised, by IT Business Case, in Table 43.

Table 43: Information Technology Additional Operating Expenditure Summary (\$'000 January 2025)

IT Additional Opex	2026/27	2027/28	2028/29	2029/30	2030/31	Total
IT Operational Applications	269	326	383	300	192	1,469
IT Corporate Applications	403	416	430	461	493	2,203
IT Sustaining Infrastructure	33	38	49	58	62	239
Cyber Security	25	269	277	277	277	1,125
AGN Transition	-	6,096	8,594	3,417	-117	17,990
<b>Total Additional Opex</b>	<b>730</b>	<b>7,145</b>	<b>9,733</b>	<b>4,513</b>	<b>907</b>	<b>23,026</b>

### 5.8.1 Recurrent versus non-recurrent expenditure

Broadly, IT expenditure can be categorised either:

- **Recurrent programs** – investments targeted at maintaining the current levels of IT services. This includes application and infrastructure renewals and maintaining cyber currency.
- **Non-recurrent programs** – investments that are seeking to improve the efficiency and/or the effectiveness of our operations. This includes investment in new capabilities, capability uplift and one-off programs.



Figure 26: Information Technology Expenditure Summary – Recurrent / Non-recurrent Expenditure (\$'000 January 2025)

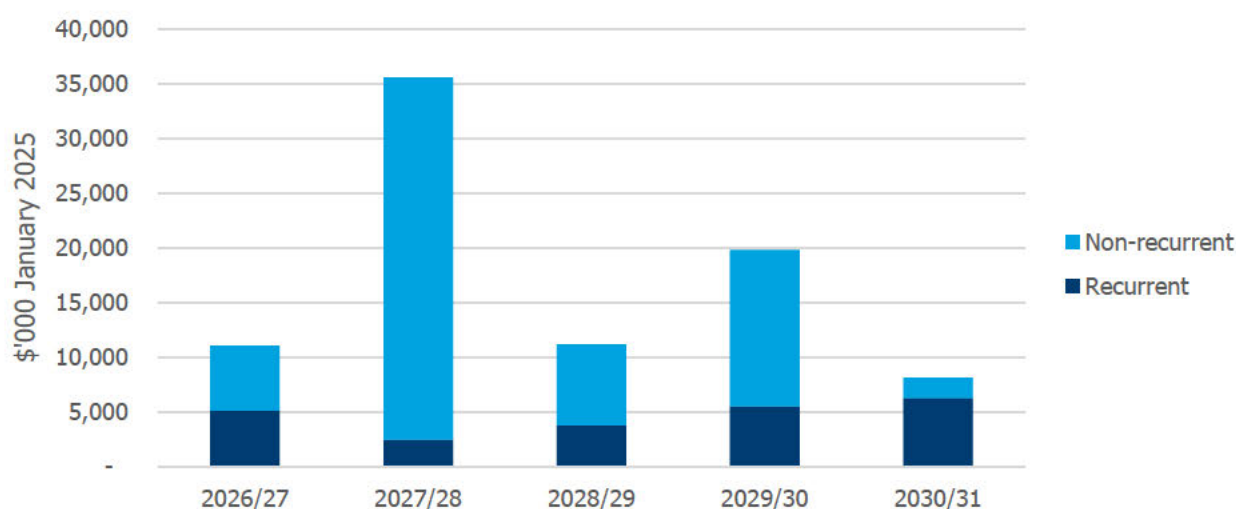
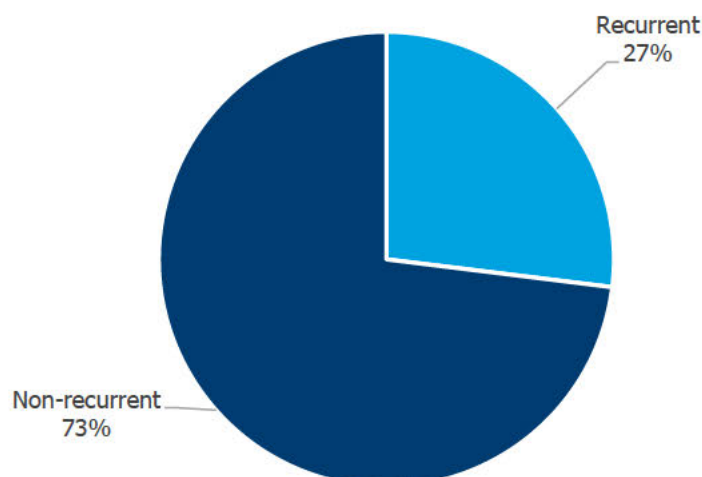


Figure 27: Information Technology Expenditure Summary – Recurrent / Non-recurrent Expenditure



Non-recurrent IT expenditure, driven by the AGN Transition program, makes up the majority (73% or \$62.6M) of the IT expenditure in the next AA period. Recurrent programs, make up the other 27% or \$23.1M of IT capital expenditure in the next AA period. The recurrent program is a relatively flat profile over the period with the exception of the AGN Transition years, where there is a corresponding drop as application renewals for operational applications are largely paused during the transition of those applications. The IT programs and drivers are summarised in more detail in section 2 of AGN's IT Investment Plan (Attachment 9.7).

### 5.8.2 IT Operational Applications

The IT Operational Applications program is largely (86%) recurrent 'stay in business' expenditure that involves periodic updates to critical business software applications, in particular, vendor version updates. The updates ensure we have reliable, resilient, compliant and efficient business processes and systems, which preserves the ongoing integrity of our services. It includes ensuring any known issues, including security vulnerabilities, can be addressed.

The non-recurrent expenditure will implement new higher heating zone and Meter Data Management (MDM) activities to support accurate billing for distribution connected facilities and managing data from digital meters.

The forecast capital cost of IT Operational Applications over the next AA period is \$19 million. There is also additional operating cost associated with the IT Operational Applications program of \$1 million.

Refer to Table 44 for a forecast of our IT Operational Applications program for the next AA period. Refer to AGN's IT Investment Plan (Attachment 9.7) for further details.

Table 44: Capex Summary IT Operational Applications (\$'000 January 2025)

IT Operational Applications	2026/27	2027/28	2028/29	2029/30	2030/31	Total AA
Enterprise asset management	-	-	440	2,114	352	2,907
FRC gateway	-	-	264	264	264	793
GIS	1,057	-	-	-	1,057	2,114
Metering & billing	35		687	687	1,374	2,784
Workday	35	35	35	-	-	107
Middleware	881	-	-	-	-	889
Mobility apps	747	747	747	747	747	3,735
Business intelligence	218	218	218	218	218	1,092
Call centre telephony	-	35	-	-	-	35
Historian update	-	407	-	-	1,221	1,628
UiPath	25	-	25	-	25	75
Higher heating zone	300	300	300	300	300	1,500
MDM	1,105	-	-	-	-	1,105
<b>Total capex</b>	<b>4,404</b>	<b>1,743</b>	<b>2,717</b>	<b>4,331</b>	<b>5,560</b>	<b>18,755</b>

Table 45: Opex Summary IT Operational Applications (\$'000 January 2025)

IT Operational Applications	2026/27	2027/28	2028/29	2029/30	2030/31	Total AA
Digital metering data and cloud costs	22	79	136	177	192	606
Enterprise asset management extended support	176	176	176	88	-	617
FRC gateway extended support	35	35	35	-	-	106
Metering & billing extended support	35	35	35	18	-	123

Total opex	269	326	383	300	192	1,469
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### 5.8.3 IT Corporate Applications

The IT Corporate Applications covers both recurrent maintenance and currency activities to ensure our suite of IT Corporate Applications is operationally functional, secure and kept 'in-support', as well as non-recurrent new/replacement application projects which respond to new or changing business needs.

In the next AA period, we are forecasting \$5 million investment in IT Corporate Applications to deliver a risk-based approach to recurrent maintenance and currency activities and non-recurrent business-driven enhancement projects. There is also additional operating costs associated with IT Corporate Applications of \$2 million.

Refer to Table 46 for a forecast of our IT Corporate Applications program for the next AA period. Refer to AGN's IT Investment Plan (Attachment 9.7) for further details.

Table 46: Capex Summary IT Corporate Applications (\$'000 January 2025)

IT Corporate Applications	2026/27	2027/28	2028/29	2029/30	2030/31	Total AA
Recurrent maintenance and currency activities						
SAP S4/HANA	-	-	216	216	-	433
GTreasury	177	-	-	71	-	248
SAP SuccessFactors	17	17	17	17	17	87
Public websites	83	-	113	-	-	196
SAP S/4HANA incremental functionality	87	87	87	87	87	433
Digital Experience	248	192	213	232	225	1,110
Data, Analytics and Visualisation	61	115	101	92	93	462
AAT - periodic refresh	-	28	28	24	21	102
HSE - periodic refresh	-	33	-	33	-	66
GRC - periodic refresh	-	-	57	-	54	111
Data archiving - periodic refresh	-	-	-	40	59	99
<b>Total recurrent</b>	<b>673</b>	<b>472</b>	<b>832</b>	<b>814</b>	<b>555</b>	<b>3,347</b>
Non-recurrent new/replacement application projects						
HSE capability - INX	73	-	-	-	-	73
Data archiving	147	-	-	-	-	147
Protecht GRC	120	-	-	-	-	120
Application architecture tool	26	-	-	-	-	26



Project Portfolio Management Software (PPM)	63	59	-	-	-	122
Contract management system	423	186	169	-	-	778
<b>Total non-recurrent</b>	<b>853</b>	<b>245</b>	<b>169</b>	<b>-</b>	<b>-</b>	<b>1,267</b>
<b>Total capex</b>	<b>1,526</b>	<b>718</b>	<b>1,001</b>	<b>814</b>	<b>555</b>	<b>4,614</b>

Table 47: Opex Summary IT Corporate Applications (\$'000 January 2025)

IT Corporate Applications	2026/27	2027/28	2028/29	2029/30	2030/31	Total AA
SAP S4/HANA	116	118	118	118	118	590
GTreasury	81	81	81	88	88	419
SAP SuccessFactors	30	30	30	30	30	152
Digital Experience	46	48	52	57	74	277
Data, Analytics and Visualisation	21	24	24	35	42	147
HSE capability - INX	17	20	20	27	30	115
Data archiving	13	13	13	13	13	63
Protecht GRC	34	34	37	37	41	183
Application architecture tool	10	13	19	21	22	85
Project Portfolio Management Software (PPM)	9	9	9	9	9	45
Contract management system	25	25	25	25	25	127
<b>Total opex</b>	<b>403</b>	<b>416</b>	<b>430</b>	<b>461</b>	<b>493</b>	<b>2,203</b>

### 5.8.4 IT Sustaining Infrastructure

IT sustaining infrastructure is a 'stay in business' program that involves periodic renewal of network, data centre and end-user devices such as laptops, audio/visual equipment, telephony, internet links and servers that underpin the delivery of all AGN services.

The forecast cost of infrastructure refresh over the next AA period is \$3 million. This investment provides for AGN's allocation of shared infrastructure and SA's allocation of direct costs of AGN specific infrastructure, office and end user equipment. There is also additional operating costs of \$0.2 million associated with IT sustaining infrastructure over the period.

Refer to Table 48 for a forecast of our IT sustaining infrastructure program for the next AA period. Further details are provided in AGN's IT Investment Plan (Attachment 9.7).





Table 51: Opex Summary IT Cyber Security \$'000 January 2025

Cyber Security	2026/27	2027/28	2028/29	2029/30	2030/31	Total AA
<b>Total opex</b>	<b>25</b>	<b>269</b>	<b>277</b>	<b>277</b>	<b>277</b>	<b>1,125</b>

### 5.8.6 AGN Transition

The AGN Transition is a large one-off program of work required to transition the suite of operational apps required to run the AGN networks from APA's IT environment to our AGIG IT environment.

We forecast \$58 million in capex will be required in AGN SA to complete the transition in the next AA period. There is also additional operating costs of \$18 million required for the AGN Transition.

Refer to Table 52 for a forecast of AGN Transition program for the next AA period. Further details are provided in AGN's IT Investment Plan (Attachment 9.7).

Table 52: Capex Summary AGN Transition (\$'000 January 2025)

Transition	2026/27	2027/28	2028/29	2029/30	2030/31	Total AA
Solution delivery	1,798	18,868	5,000	9,999	-	35,665
Integration management office	1,173	3,409	1,624	3,248	-	9,454
Infrastructure delivery	-	9,960	330	785	1,559	12,635
<b>Total capex</b>	<b>2,971</b>	<b>32,237</b>	<b>6,954</b>	<b>14,033</b>	<b>1,559</b>	<b>57,755</b>

Table 53: Opex Summary AGN Transition (\$'000 January 2025)

Transition	2026/27	2027/28	2028/29	2029/30	2030/31	Total AA
<b>Total Opex</b>	<b>-</b>	<b>6,096</b>	<b>8,594</b>	<b>3,417</b>	<b>-117</b>	<b>17,990</b>

## 5.9 Operational Expenditure – Regulated Networks

AGN's network and asset strategies identify programs of work required for the ongoing lifecycle management of AGN's networks. This includes capital investment works (outlined in sections 5.1 to 5.8) and operational activities (outlined in this section).

In the interests of efficiency, we are proposing to absorb some additional operating activities into our repairs and maintenance forecasts, which have been identified in business cases for certain capital projects, such as for the implementation of the SCADA alarm management and control program at the national level and 24-7 network monitoring, and hydrogen compatibility technical reviews and assessment.

As part of step changes proposed in the next AA period, we plan to abolish 3,500 identified 'redundant' sites - where there has been no meter for at least two years and the service pipe still needs to be removed for safety reasons (\$4.4 million). Further details on these programs are provided below.

### 5.9.1 Redundant Service Removal

The South Australian network currently has 3,500 redundant "inlet only" residential gas services, where a live gas supply pipe and standpipe remain on properties despite the meter being removed for over 24 months due to various reasons like billing issues or renovations. These services pose an unnecessary risk of damage from third-party work, leaks, and potential ignition, as customers may be unaware of the live gas asset. Currently, removals are only reactive. To mitigate this risk, we propose a proactive five-year program to remove 700 redundant services annually, aiming to clear the backlog and then establish a sustainable rate of ongoing removal, drawing on successful past experiences and cost data from Victorian networks.

Please see section 2.2.1.3 and the Distribution Mains and Services Integrity Plan at Attachment 9.4 for more information.

Table 54: Redundant Service Removal Opex Summary

Program	2026/27	2027/28	2028/29	2029/30	2030/31	Total
Redundant Service Removal (\$'000)	■	■	■	■	■	■

# Glossary & Definitions

Term / Abbreviation	Definition
AA	Access Arrangement
AER	Australian Energy Regulator
AMP	Asset Management Plan
Augmentation Expenditure	AER defined expenditure category (MGN Regulatory Information Notices)
CAPEX	Capital expenditure
CI	Cast Iron
CP	Cathodic Protection
CRM	Customer relationship management
EDD	Effective Degree Day
EDMI	Company supplying metering equipment and supplies
FLE	Field Life Extension
GAAR	Gas Access Arrangement Review
GDSC	Gas Distribution System Code
GJ	Giga Joule 1 GJ = 1000 MJ
Growth Assets	Capital expenditure relating to the connection of new customers or users of our distribution network is contained within the "Growth" capital expenditure category
I&C	Industrial and Commercial
kPa	Kilopascals
LP	Low Pressure
HDPE	High Density Polyethylene
HP	High Pressure
ICCP	Impressed Current Cathodic Protection
Mains Replacement Expenditure	AER defined expenditure category including all proactive and reactive mains and service replacement. (MGN Regulatory Information Notices)
MP	Medium Pressure

Term / Abbreviation	Definition
Meters Expenditure	AER defined expenditure category including (MGN Regulatory Information Notices)
NGR	National Gas Rules
NIEIR	National Institute for Economic and Industrial Research
OEM	Original Equipment Manufacturer
Other Expenditure	AER defined expenditure category (MGN Regulatory Information Notices)
OPEX	Operating expenditure
OT	Operational technology
PE	Polyethylene
RTU	Remote Telemetry Unit
SCADA	Supervisory Control and Data Acquisition
Sm <sup>3</sup> /hr	Standard cubic meters per hour
SMS	Safety Management Study
SMS	Short Message Services – i.e. a Text Message
Telemetry	AER defined expenditure category (MGN Regulatory Information Notices)
TJ	Tera Joules, 1 TJ = 1000GJ
UPS	Unprotected steel