Attachment 7.1

Reference Service Proposal

July 2025

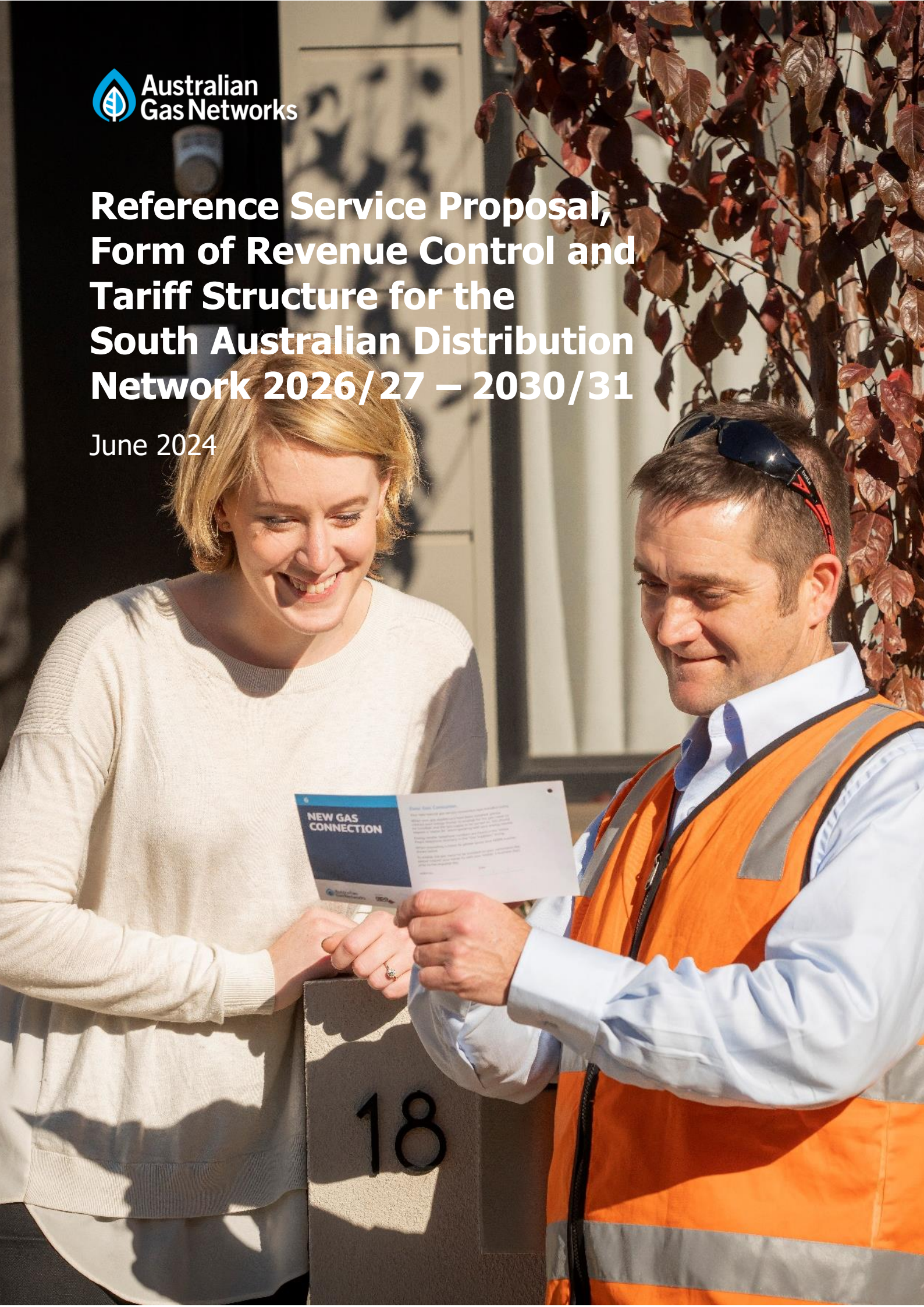
PUBLIC

Australian Gas Networks

Australian Gas Networks

Reference Service Proposal, Form of Revenue Control and Tariff Structure for the South Australian Distribution Network 2026/27 – 2030/31

June 2024



1. Introduction

We are developing our plans for our South Australian natural gas distribution network (AGN SA) for the 2026/27 – 2030/31 period (the next Access Arrangement (AA) period). As part of this process, we have developed our Reference Service Proposal which also includes our approach to the Form of Revenue Control and Tariff Structures.

The Reference Service Proposal sets out the services we will provide over the next AA period and nominates which of those services meet the criteria for Reference Services. We are generally proposing a continuation of the current reference services in the next AA period with the addition of one service.

We have also proposed the form of revenue control to apply in our next AA, as well as overarching tariff structures.

The Australian Energy Regulator (AER) recently considered these approaches in its *Review of gas distribution networks reference tariff variation mechanism and declining block tariffs.* The AER determined that network service providers preparing AA plans must consult on the form of revenue control and best tariff approach specific to the distribution network, as part of Reference Service Proposal consultation.[1]

We engaged on a draft proposal and sought feedback on our proposed reference services, form of revenue control and tariff approach. Our final proposal incorporates the feedback we received from stakeholders and customers on our plans in these areas.

1.1. Summary of our proposal

We offer several pipeline services to meet customer needs, including reference services for haulage and ancillary purposes.

Reference services will form the basis of the prices and terms and conditions we develop for the next AA period. We propose to maintain the same suite of reference services as was available in the 2021/22 – 2025/26 period (the current AA period), but with the addition of the abolishment service as a reference service. The classification of the abolishment service as a reference service responds to feedback from our stakeholders on our draft RSP and allows for further engagement regarding how we charge for it in the next AA period if required. Altogether, our proposed reference services represent over 99% of our revenue in the current AA period to date.

We have also analysed and considered the form of revenue control and tariff structure. After considering stakeholder feedback on our draft RSP, we propose a continuation of a price-cap form of revenue control as opposed to some other form such as a revenue-cap. We also propose continuing with declining block tariffs as opposed to flat or inclining block tariffs. Stakeholder feedback has indicated majority support for these approaches from our customers and stakeholders. We maintain that a shift in either approach is not warranted at this time because it would increase prices significantly for many of our customers and increase the risk burden for price instability, with only marginal emission reduction benefits.

1.2. About AGIG

Australian Gas Infrastructure Group (AGIG) is one of Australia's largest gas infrastructure businesses. We have over two million customers across every Australian mainland state and the Northern Territory, 34,900 km of distribution networks, over 4,300 km of gas transmission pipelines and 60 petajoules of gas storage capacity.

[1] AER, *Final decision: Review of gas distribution networks reference tariff variation mechanism and declining block tariffs*, October 2023 (AER review), pp 1-2.

1.3. South Australian distribution network

In South Australia, as Australian Gas Networks (AGN), we own and operate the gas distribution network.

Natural gas is delivered to more than 460,000 homes and businesses through 8,600 km of distribution network.

We serve residential, commercial and industrial business customers in Adelaide (from Two Wells in the north to Aldinga in the south) and regional centres in the upper North, Barossa, Riverland and Southeast of the state. Retailers pay charges for our services, which are passed on to customers through retail gas bills.

Figure 1 below shows our South Australian network and other key pieces of gas infrastructure in the state. A description of our South Australian distribution network is also available on our website.

Figure 1: Our AGN SA distribution network

2. Regulatory framework

2.1.1. Reference services

Under Rule 47A of the National Gas Rules (NGR), we are required to provide the Australian Energy Regulator (AER) with a Reference Service Proposal (RSP) 12 months prior to the submission of our AA proposal for the South Australian distribution network.

Our RSP must list all the services we can reasonably offer on the network and specify at least one service as a reference service.

The AER considers and approves our proposed reference services based on reference service factors specified in the NGR,[2] and can undertake its own consultations with service users. The reference service factors to be taken into account are, in summary:

- actual and forecast demand for the service;
- whether the service is substitutable for another reference service;
- whether it is feasible to allocate costs to the service;
- whether the service is useful in supporting access negotiations; and
- the likely regulatory costs of making the service a reference service.

2.1.2. Revenue Control and Tariff Structure

Although there is no explicit requirement in the NGR, the AER has determined that it will consider the form of revenue control and tariff structures as part of its RSP assessment, in advance of this AA review.[3]

Under this approach, we must submit a proposal which combines our proposed reference services together with our proposed form of revenue control (such as a price-cap or revenue-cap) and proposed tariff structure (such as declining block tariffs or an alternative option).

The AER requires that in consulting on our proposal, we actively consider how best to balance the efficiency and abatement objectives within the National Gas Objective (NGO).[4] The emissions reduction objective relates specifically to the relevant jurisdiction's emission reduction targets. The South Australian Government has set goals to reduce greenhouse gas emissions by more than 50% below 2005 levels by 2030, and to achieve net zero by 2050.[5]

The AER will release its decision on our form of revenue control and tariff structure, together with its reference service proposal decision in December 2024, which is at least 6 months before we must submit our AA plan.

2.2. Customer and Stakeholder Engagement

We engaged with a diverse cross-section of the community to ensure our RSP serves the long-term interests of all customers and stakeholders. The parties we engaged with include:

- residential and business gas customers,
- customer and stakeholder representative groups for residential customers and older Australians, multicultural communities, and small and large businesses, reflecting the diversity of our customer base, and

[2] NGR 47A (15).
[3] AER review, p 1.
[4] The amended NGO came into effect on 21 November 2023.
[5] www.environment.sa.gov.au/topics/climate-change/net-zero-pathway.

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

Our key engagement activities on the Draft RSP can be summarised as follows:

- **Direct feedback sessions with retailers and other stakeholders –** we held a briefing session with key stakeholders and RRG on 16 May 2024 to provide them with an overview of the draft RSP. We then held separate sessions with the stakeholders and the RRG on 31 May 2024 to enable them to provide feedback directly on our Draft RSP. In total, 27 participants attended these sessions.
- **Customer workshops –** we hosted five (5) online sessions involving customers from across our network, with representatives from metropolitan Adelaide and regional areas (Port Pirie/Whyalla, the Barossa, Murray Bridge and Mount Gambier). Altogether, 47 customers participated. We tested key questions with our customers in these workshops. The sessions were facilitated by KPMG, who generated a summary report of the feedback from customers, which is submitted to the AER with this proposal.
- **Gas matters website –** we published our draft RSP and slides from our engagement sessions on this website where customers and stakeholders can also interact with us via a two-way digital platform.

Our engagement activities were focused upon:

- all the services we offer as well as those which should be considered as reference services. This process sought to understand whether the proposed reference services are appropriate to meet customer needs and whether customers require additional services.
- our proposed tariff approach, including the form of regulation (price or revenue-based) and tariff pricing structure (declining tariff block or alternative approach). This process sought to ensure that the form of regulation and tariff approach best balances the needs of our customers, including protecting them from significant price rises or shocks, and NGO emission abatement objectives.

We circulated our draft RSP to our stakeholders on 15 May 2024 for feedback, proposing that the current list of services be maintained, and that we continue with the current tariff and revenue control approaches for the next AA period. We received five written submissions on our Draft RSP.

Through our engagement, the majority of stakeholders and customers indicated they are generally supportive of a continuation of the current reference services in the next AA period and the current price cap and declining block tariff approach. Some stakeholders indicated the importance of the abolishment service being classified as a separate service, in the interests of transparency and to cater for any possible future increase in demand.

Table 1 presents a summary of the level of support indicated for our proposed approaches in our draft RSP, the issues raised by stakeholders and customers, and our responses.

Table 1 Summary of feedback on our draft RSP.

Topic	Feedback on the draft RSP	Our Response
Haulage and ancillary reference services	No concerns about our proposed reference services were raised in our customer workshops, briefing sessions or the submissions we received, which indicates stakeholder support for the continuation of the current haulage and ancillary reference services. The only proposed non-reference service that was identified by stakeholders for potential reclassification to a reference service was the abolishment service, as discussed below.	Our proposed suite of reference services remains the same, consistent with the support indicated by these engagement outcomes. Our response on the abolishment service is provided below.
Abolishment service	In the briefing sessions and written submissions, most of our stakeholders indicated support for the continuation of the abolishment service as a non-reference service without charge. Two submissions from the Essential Services Commission of SA (ESCOSA) and the Energy and Water Ombudsman SA (EWOSA) suggested that the abolishment service warranted further consideration. Both ESCOSA and EWOSA acknowledged that the policy situation in South Australia is different to Victoria but that it was possible that this could change in the future. EWOSA suggested there would be better transparency for customers if the service is a "specified service". ESCOSA cited that there could still be an increasing trend in service demand in the future. On the other hand, one retailer indicated how not charging for abolishment leads to better customer outcomes. It submitted that a charge would create challenges for recovery of the cost and safety risks and that it had experienced instances where customers "look for cheaper solutions that leave network assets idle or in an unsafe state".	We acknowledge that there are mixed views among our customers and other stakeholders regarding the classification of the abolishment service as a reference service and whether we should charge for it. We have carefully considered the matters raised, including related to safety concerns and the incidence of service demand and possible growth in demand in the future. On balance, we have decided to propose classifying the abolishment service in a small scale context as a reference service. This responds to concerns from our stakeholders and customers about the need for greater transparency regarding the service and to enable us to have flexibility regarding the charging and cost recovery approach. We intend to consult further on the charging approach as part of our broader proposal for the next AA, if required. With abolishments accounting for less than 0.5 percent of all connections each year, there is only a small benefit to other gas customers from introducing a charge for this service - likely to be less than $5 per annum for our residential customers. It is not evident that the incidence of demand for this service will increase over the next AA period, or that policy settings towards gas

	In our customer workshops, a small majority (51%) of customers preferred that we retain our current approach and not pass on a direct charge to the customer. Customers indicated concern for how abolishment charges may impact network safety, by reducing incentives to order the service when needed. They also acknowledged that the impact on other customers on the network was currently small. A further 43% of customers indicated that they want the cost passed on to customers either in part or in full, consistent with the principle of 'user pays'. We did not test the preference for the classification of the abolishment service as a 'reference' or 'non-reference' service with our customers. In our experience, customers would be more concerned about whether there was a charge for this service, and we tailored our questions accordingly.	will change in SA during the next AA period. Recent abolishment requests do not indicate any material growth in the demand for this service, outside the impacts of the building cycle (see Figure 3 in section 3.2.2.1). However, ESCOSA is currently reviewing the disconnection and abolishment requirements as part of its current *Australian Gas Networks regulatory framework review 2026 – 2031.*[6] The review considers the role of the Commission in defining disconnection and abolishment services, as well as related consumer protections which may include establishing monitoring and reporting requirements and setting associated service standards.[7] Establishing the abolishment service for small scale customers as a reference service would be consistent with an elevated regulatory focus on this service in the current energy transition environment, and the approach in our other distribution networks in Victoria. It would also enable us to tailor the charging approach accordingly, in consultation with our stakeholders, and cater for any changes in demand for the service, should they occur, via the cost recovery mechanism. It is important to note that the classification of the service does not necessitate that the charge be based on full cost recovery, given safety considerations, but it does allow this to be one option for further consultation regarding our broader AA proposal, as required.
New connection service	EWOSA submitted that the new connection service should also be "designated as a specific service" and have cost recovery explained in our RSP because there was enough demand and listing the service would provide more transparency to customers about the costs and whether there are any charges involved.	We have never charged for new connections in SA. Only recently, the Essential Services Commission (ESC) in Victoria, through its Gas Distribution Code of Practice, has enforced an installation charge for gas based on full cost recovery of this service to apply from

[6] ESCOSA, *Issues Paper - Australian Gas Networks regulatory framework review 2026 – 2031* (ESCOSA Issues Paper), March 2024.
[7] ESCOSA Issues Paper, p 11.

1 January 2025 in that state. No such requirements currently exist in SA.

In addition, ESCOSA has not identified a connection charge as an issue to be reviewed in its current regulatory framework review.

The Distribution Gas Code administered in SA does have preconditions to be met for new connections. These preconditions are currently being reviewed by ESCOSA.

We note that ESCOSA's position in its Issues Paper is that "precondition requirements establish important consumer protections and continue to be necessary. The preconditions limit the obligation that AGN must connect a customer to situations where there are contracts in place, there is gas supply at the boundary, and extensions have been completed. They do not oblige AGN to ensure that gas is available or to extend its network. The preconditions allow for safety and technical requirements to be implemented that protect the public, individual customers and AGN."8

We consider that a review of these preconditions should help to address EWOSA's concerns about the information available to customers about the connection service. As it is offered free of charge, we are not aware of any concerns from customers about its cost recovery, which is currently (and has always been) through haulage tariffs.

[8] ESCOSA Issues Paper, pp 14-15.

Form of revenue control	Stakeholders in our briefing sessions and written submissions indicated support for the continuation of the price cap approach as the most appropriate form of revenue control in the next AA. In our customer workshops, most customers (68%) indicated that they preferred the price cap approach over a revenue cap or hybrid option. Few customers (5%) preferred a revenue cap, and some customers (21%) indicated a preference for a hybrid option. Customers generally identified price stability as being of high importance to them and saw a revenue cap as being potentially inconsistent with the level of price stability and predictability that they preferred.	Consistent with most of our stakeholder and customer preferences for price stability and the continuation of the price cap, we propose to maintain this form of revenue control for the next AA. We consider that we are best placed to manage demand risk year to year over the regulatory period. Although some customers indicated support for a hybrid option (such as a 'cap and collar'), we also see little additional value in this type of approach. It would still shift demand risk onto our customers during the regulatory period when demand assumptions can still be reset at the next AA. Further, the changes in prices are unlikely to be material under this approach, when prices will still be reset at the end of the regulatory period. Should they be substantial, it is likely that there are significant unforeseen forces impacting demand, which could then result in a an application to reopen the AA for review (and so, a reset of prices may be required). Our position is discussed more in section 4.1.

Tariff structure	The majority of our stakeholders and customers indicated support for the continuation of the Declining Block Tariff structure on the basis that it is the most efficient pricing structure to recover fixed costs on our network and that the impacts on customers would be too high from switching to an alternative structure such as flat tariffs. Of the five submissions we received, four supported the current approach. However, one recommended an alternative to the Declining Block Tariff approach. The South Australian Council of Social Service (SACOSS) indicated a preference for flat tariffs so long as negative customer impacts were offset by support measures. ESCOSA indicated that it would like to see more granular information about the distribution of our customer base across usage levels and the associated bill impact from a change in tariff structure in our RSP. In our customer workshops, the majority of customers (57%) indicated they preferred the current Declining Block Tariff structure. A small share of customers (26%) indicated a preference for us to look at flat tariffs, mainly due to the potential positive impact on their bills. Some of these customers indicated a preference for a change to a flat structure with support measures to offset the negative impact on other customers, similar to the SACOSS recommendation. Other customers acknowledged that only residential customers should be charged flat tariffs since commercial customers would be particularly adversely affected, and consumers also (indirectly) by the inflationary impact. Consistent with most of our stakeholder and customer preferences for a continuation of the Declining Block Tariff structure, we have not changed our proposal to maintain this approach in the next AA. In response to ESCOSA's request, we have provided more granular information about customer usage levels and bill impacts from a change in tariff structure in section 4.2.2.3. This information reinforces that there are small bill benefits from changing to flat tariffs for many customers, but that for another large portion (around a third of residential customers or some 143,539), the annual bills would be higher. For more than half of these customers, bills would be higher by more than $242 per annum. We maintain that the likely negative bill impact is too extreme for many customers to shift from the current approach. Gas is an essential service, and many households rely on gas heating, gas hot water and gas cooking in their daily lives. Support measures for higher usage customers such as large families are not feasible given the extent of negative bills impacts that would be created by the shift in tariff structure. The potential emission reduction benefits would also pale in comparison to these negative impacts, as we discuss in section 5.1. We also observe that governments in Australia have not implemented any direct support programs for households which would sufficiently offset these negative bill impacts. The NGL and regulatory framework provide for us to recover the efficient costs of the network from our service users. Therefore, should we attempt to further rebalance the costs among customers, this would lead to another increase in tariffs across the network. We would most likely need to increase the fixed charge to compensate for the negative impact on many customers. This would potentially eliminate any positive bill impacts for very low usage customers (some of our most vulnerable customers), who would most likely experience a bill increase in this circumstance.

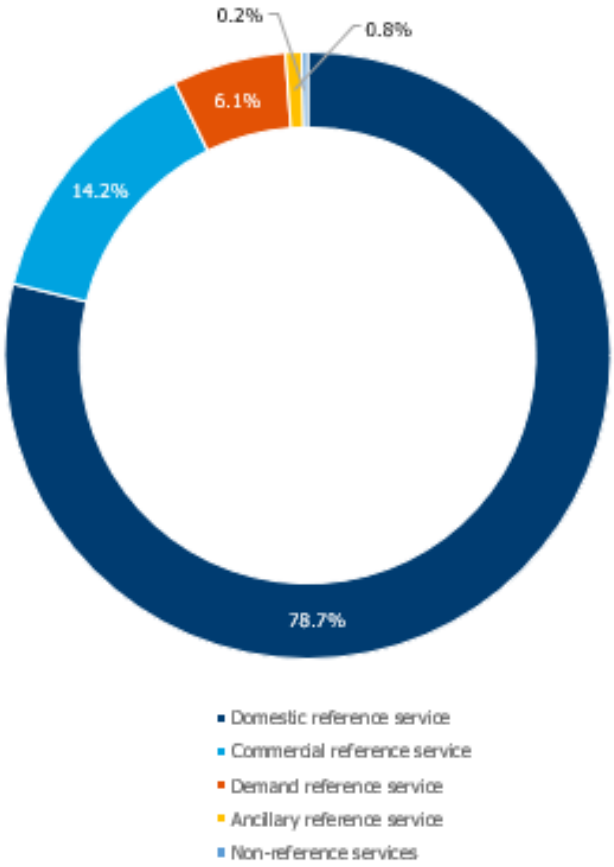
3. Reference Service Proposal

3.1. Services in 2021/22 – 2025/26

The reference services offered in the current AA period are outlined in Table 2.

In the current AA period, reference services make up over 99% of our revenue on the South Australian distribution network (see Figure 2). This is consistent with that observed in the prior AA period (2016/17 to 2020/21) and reflects the stable nature of the services we provide.

Figure 2: SA distribution network revenue share 2021-23



3.2. Proposed services for 2026/27 – 2030/31

For the next AA period, our full list of proposed services, including our proposed reference services, is the same as in the current AA period, except for the addition of the abolishment service.

We have discussed our rational for including the abolishment service as a reference service in section 3.2.2.1 below.

Table 3 includes the proposed reference services and reflects on the reference service factors, by considering what we think are key factors for each service.

For all ancillary services, we have also included information on the total number of times the service has been used and the average annual revenue from the service during the current AA period to date, as well as any other information relevant to the reference service factors.

3.2.1. Haulage reference services

Our haulage reference services, supported by several commonly used ancillary reference services, remain the most appropriate to specify as reference services. These services:

- are the most demanded and form the basis of our forecasts;
- are generally not substitutable with other services;
- have largely predictable costs which can either be attributed to individual users or reasonably allocated across users of a particular service;
- form the basis for negotiated access; or
- generate most of our revenues.

3.2.2. Ancillary references services

Other services such as meter gas and installation test or meter reinstallation have been specifically requested by retailers or other stakeholders to be reference services in previous periods.

Table 2: Reference Services available on the South Australian distribution network over the current period

Service	Description
Haulage reference services	
Domestic Haulage Service	A haulage reference service that comprises the delivery of gas through an existing domestic Delivery Point (DP).
Demand Haulage Service	A haulage reference service that comprises the delivery of gas through an existing demand DP. A DP is a demand DP at a given time if: (a) that DP is not a domestic DP at that time; and (b) the quantity of gas delivered through that DP during the then most recent metering year was equal to or greater than 10TJ in total.
Commercial Haulage Service	A haulage reference service that comprises the delivery of gas through a Commercial DP. A DP is a Commercial DP at a given time if that DP is not a Demand DP or a Domestic DP at that time.
Ancillary reference services	
Special Meter Read	A meter reading for a DP and provision of the associated meter reading data that is in addition to the scheduled meter readings that form part of the haulage reference services.
Disconnection	The use of locks or plugs at the metering installation of a domestic or commercial DP to prevent the withdrawal of gas at the DP.
Reconnection	Action to restore the ability to withdraw gas at a DP, following an earlier disconnection (that is, the removal of any locks or plugs used to isolate supply, performance of a safety check and, where necessary, the lighting of appliances).
Meter and Gas Installation Test	On-site testing to check the measurement accuracy of a metering installation and the soundness of the gas installation downstream of the metering installation.
Meter Removal	Removal of a meter at a metering installation to prevent the withdrawal of natural gas at the DP.
Meter Reinstallation	Reinstallation of a meter at a metering installation, performance of a safety check and the lighting of appliances where necessary.

3.3. Abolishment service

AGN operates across a range of jurisdictions, not just in South Australia (SA), and we aim to maintain a consistent set of pipeline services (whether reference or non-reference services) across these areas, where possible.

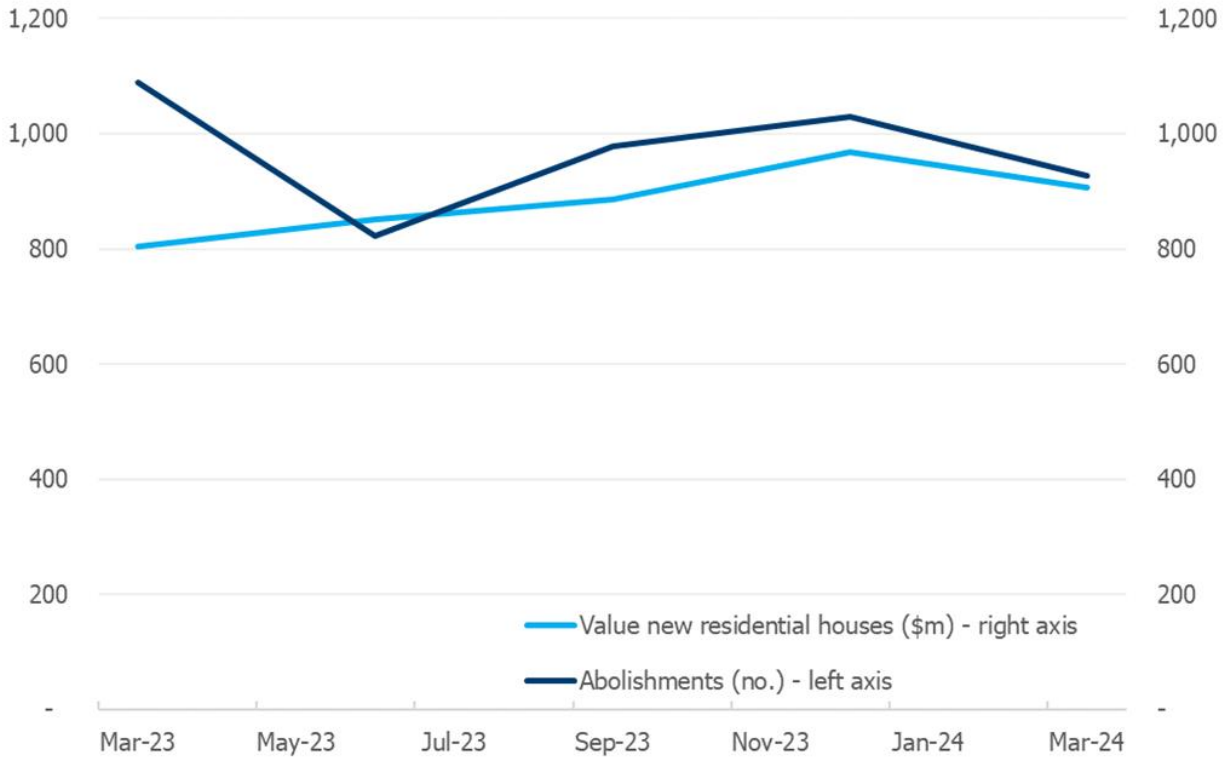
Our recently commenced access arrangements in Victoria included residential connection abolishment as an ancillary reference service for the first time. This change was in response to the expected increase in demand for this service from the policies of the Victorian Government.[9]

The South Australian energy policy and market environment is quite different. South Australia leads the nation in decarbonising its electricity supply and understands the important role natural gas plays today. It also understands the important role renewable gases will play in the future.

We do not expect a policy to ban new gas connections or otherwise constrain availability of gas via our gas distribution networks in SA and the present SA government has not given any indication that it will introduce such policies. The current rates of abolishment remain stable and generally reflect abolishments for 'knock down rebuilds' where the gas service is removed and then reinstalled for a new home. This is evident from the correlation between the value of new home construction in SA and the incidence of abolishments, as shown in Figure 3.

However, we acknowledge stakeholder feedback that has suggested we should include the abolishment service as a

Figure 3: AGN SA Residential Abolishments (no.) and SA Value of New Residential Construction – Houses (ABS) ($m)



[9] See Victoria's Gas Substitution Roadmap (GSR) and Update to the GSR.

reference service for better transparency and to better cater for any changing market conditions in the future. This classification would be consistent with our current AAs for our distribution networks in Victoria. It also gives us flexibility regarding how we propose to charge for the service in the next AA.

In our view, the abolishment service can be considered to meet the reference service factors under NGR 47(A)15 in that there is currently moderate demand for the service and because is not substitutable with any other service.

We can also allocate costs for this service for residential properties and other small scale abolishments, because they are relatively standard in scope.

We propose the abolishment service (small scale) as a reference service, but we intend to undertake further engagement for our broader AA proposal on the approach to cost recovery, as required.

3.3.1. Ancillary non-references services

Regarding the remaining pipeline services that we offer, we consider that these do not meet one or more of the reference service factors, particularly those relating to substitutability, consistency of demand and the practicality of allocating costs.

Premium ancillary services like out of hours special meter reading and same day service can in almost every case be substituted with the equivalent ancillary reference service.

In addition, most ancillary non-reference services have low and/or unpredictable demand. For example, the relocation of a service pipe is not frequently required. Similarly, ancillary non-reference services often have highly variable costs depending on the specific customer requirements. For example, the costs of altering the position of a meter or the relocation of a service pipe to a property, will vary depending on the specific circumstances. Therefore, it is impractical to allocate these costs across the network.

Three proposed ancillary non-reference services (meter alter position/removal, out of hours special meter reading and same day service) generate more revenue and are generally in higher demand than two reference services. However, we believe these should remain as non-reference services for specific reasons.

Firstly, meter alter position / removal, represents a highly variable service, with charges ranging from approximately $100 to $23,200. It is important to ensure that costs for this service are allocated to the customers who stand to benefit. Given the highly variable nature of these costs, a standard charging methodology risks allocating costs unfairly and is not consistent with the long-term interests of customers.

Secondly, out of hours special meter reading and same day service represent premium charges for other reference services and so costs should be allocated to specific users of these services only.

We also propose to separately identify two non-reference services (Downgrade Meter Size and Pressure Change) which were previously categorised as 'Other' non-reference services. These recategorisations follow the Enquiry Codes in 2021 as part of the Australian Energy Market Operator's (AEMO) package of gas industry B2B work across all jurisdictions.

Table 3: Proposed services for the South Australian distribution network 2026/27 – 2030/31

Service	Description	Issues relevant to the Reference Service Factors
Haulage reference services		
Domestic Haulage Service	A haulage reference service that comprises the delivery of gas through an existing domestic Delivery Point (DP).	High demand Not substitutable Predictable costs which can be reasonably allocated across users Forms the basis of regulatory proposals
Demand Haulage Service	A haulage reference service that comprises the delivery of gas through an existing demand DP. A DP is a demand DP at a given time if: (a) that DP is not a domestic DP at that time; and (b) the quantity of gas delivered through that DP during the then most recent metering year was equal to or greater than 10TJ in total.	High demand Not substitutable Predictable costs which can be reasonably allocated across users Forms the basis of regulatory proposals
Commercial Haulage Service	A haulage reference service that comprises the delivery of Gas through a Commercial DP.	High demand Not substitutable Predictable costs which can be reasonably allocated across users Forms the basis of regulatory proposals

Ancillary reference services		
Special Meter Reading	A meter reading for a DP and provision of the associated meter reading data, that is in addition to the scheduled meter readings that form part of the haulage reference services (Special Meter Reads will be charged in accordance with location as either metropolitan or non-metropolitan).	Annual average usage: 106,749 Annual average revenue: $1.2 million High demand Fixed charge allocated to individual user
Disconnection	The use of locks or plugs at the metering installation of a domestic or commercial DP in order to prevent the withdrawal of gas at the DP.	Annual average usage: 3,787 Annual average revenue: $291,985 Moderate demand Fixed charge allocated to individual user
Reconnection	Action to restore the ability to withdraw gas at a DP, following an earlier disconnection (that is, the removal of any locks or plugs used to isolate supply, performance of a safety check and, where necessary, the lighting of appliances).	Annual average usage: 3,485 Annual average revenue: $269,260 Moderate demand Fixed charge allocated to individual user
Meter Gas and Installation Test	On-site testing to check the measurement accuracy of a metering installation and the soundness of the	Annual average usage: 48 Annual average revenue: $10,948

	gas installation downstream of the metering installation.	Low demand Fixed charge allocated to individual user
Meter Removal	Removal of a meter at a metering installation in order to prevent the withdrawal of natural gas at the DP.	Annual average usage: 1,907 Annual average revenue: $147,580 Moderate demand Fixed charge allocated to individual user
Meter Reinstallation	Reinstallation of a meter at a metering installation, performance of a safety check and the lighting of appliances where necessary.	Annual average usage: 39 Annual average revenue: $3,136 Low demand Fixed charge allocated to individual user
Service Abolishment	Cut and cap of the service within the street and removal of all above ground assets (meter etc.) This service generally applies to small scale abolishment services, which covers most residential property requests. AGN will ultimately determine which cessation of supply service is applicable to each DP.	Annual average usage: 1,866 (estimate based on Jul22-Dec23 quarterly data reported to the AER) Annual average revenue: (no charge currently) Moderate demand Costs are relatively similar for small scale requests (estimated to be around $1,000). Service mainly for 'knockdown rebuild' requests where reconnection occurs.

Ancillary non-reference services		
Meter Alter Position / Removal	When a customer is requesting the relocation of an existing gas meter to a new position, or the removal of a second meter on the premises.	Annual average usage: 191 Annual average revenue: $241,418 Low demand Variable costs requiring quotation Charges for this service vary to reflect the cost for each customer. In the current AA period charges range from around $100 to $23,200. Around 70% of requests for the service were between $500 and $5,000.
Out of Hours Special Meter Reading	Request for an appointment to read a meter (Special Meter Reads will be charged in accordance with location as either metropolitan or non-metropolitan).	Annual average usage: 354 Annual average revenue: $13,577 Low and unpredictable demand: the service has been requested less frequently than the previous AA period. It was requested 441 times in 2019/20, but only 298 in 2020/21 and 329 times in 2022/23 Substitutable with the Special Meter Reading reference service undertaken during hours. The out of hours service has represented just 2.5% of special meter reads in the current AA period, with the vast majority of requests undertaken as a reference service Fixed charge allocated to individual user

Same Day Premium Service	Request for a service on the day of request in addition to the charge for the requested service.	Annual average usage: 175 Annual average revenue: $40,647 Low/unpredictable demand: the service was requested 216 times in 2019/20, but only 138 times in 2019/20 and 164 times in 2022/23 Substitutable with regular service Fixed charge allocated to individual user
Relocate/Remove Service Pipe	Relocate the service or "Inlet" pipework.	Annual average usage: 8 Annual average revenue: $9,956 Low/unpredictable demand Variable costs requiring quotation
Downgrade Meter Size	A retailer request for a customer's meter to be downgraded.	Annual average usage: 0 Annual average revenue: $0 Low/unpredictable demand Variable costs requiring quotation The regulatory costs are likely to be disproportionate
Pressure Change	A customer request for a change in gas pressure and may involve a regulator.	Annual average usage: 0 Annual average revenue: $0

		Low/unpredictable demand Variable costs requiring quotation The regulatory costs are likely to be disproportionate
Other Negotiated Service	A network service that is different from the Reference Services on terms and conditions.	Annual average usage: 2 Annual average revenue: $27,004 Low/unpredictable demand Variable costs requiring quotation

4. Form of Revenue Control and Tariff Structure

4.1. Form of Revenue Control

The Form of Revenue Control establishes how the building block revenue determined by the AER will be recovered through tariffs during each AA period. AGN SA has historically operated under a weighted average price cap form of revenue control. Another common form of revenue control applied by regulators in Australia to electricity businesses is a revenue cap.

4.1.1. Price cap and Revenue cap form of controls

A price cap control places a constraint on the overall average movement in tariffs from one year to the next (referred to as a weighted average price cap, or WAPC). The constraint allows average prices to change by the annual change in the Consumer Price Index (CPI) less the X-factor[10]. Under a price cap, the business is exposed to volume risk – that is, any variation in volume and subsequent revenue impact is borne by the business. This significantly reduces price volatility for customers within an AA period.

In addition to reducing price volatility, the economic rationale for the price-cap form of control was to provide a financial incentive for regulated businesses to rebalance prices among their service offerings towards a form that is more allocatively efficient.[11]

Under the revenue-cap form of control, tariffs are set such that only the building block revenue determined by the AER is recovered over the AA period. Therefore, any annual difference in revenue between the actual and the approved allowance will be passed through to customers: via lower tariffs if actual revenue is higher than the allowance, and higher tariffs if actual revenue is lower than the allowance. For this reason, the tariffs can change in real terms from year to year under this approach, depending on demand outcomes.

Therefore, a shift from a price cap to a revenue cap would shift volume risk to our customers and could lead to considerable price volatility during the regulatory period, particularly given the variance in weather from year to year and the subsequent volatility in volume of gas delivered through the network.

4.2. Historical demand variation

Volume forecasts are based on the best available market information at the time and are subject to close assessment by the AER. Therefore, it is reasonable to expect relative alignment between actual and forecast demand over time, noting they will rarely be perfectly aligned in any one period.

In our submission to the AER for its tariff approach review,[12] we showed how over the long term (from 1997-98 to 2021-22), the sum of actual gas delivered across the South Australian network was only 0.5% different from the amount forecast over this period (i.e., 255 PJ actual vs 254 PJ forecast). There was more variation from actual demand in recent years, but this was partly due to the impact of COVID lockdowns, which increased residential consumption from 2020.

Also, the actual gas delivered since 2016/17 has been higher than forecast because of strong new connection growth, which in turn

[10] In the case of AGN South Australia, there is also an adjustment factor reflecting the movement in the annual price of unaccounted for gas.

[11] See proof in Laffont, J and J Tirole (2001), *Competition in Telecommunications*, MIT Press, pp.66-67 (as advised by Incenta Economic Consulting in our submission to the AER review, June 2023).

[12] AGIG, *Gas distribution network tariffs review, AGIG submission to AER issues paper June 2023*, p 2.

has resulted in growth capex exceeding allowances set by the AER.

More recently, demand has been relatively aligned with forecasts. Figure 4 below shows the quarterly variation in actual demand from benchmark demand for residential and commercial segments (consuming <10TJ per annum) from the start of the current AA. The average variation from the benchmark was 1% over this period. For the past two quarters (September and December 2023), actual demand has been lower than benchmark (or the approved forecast) demand.

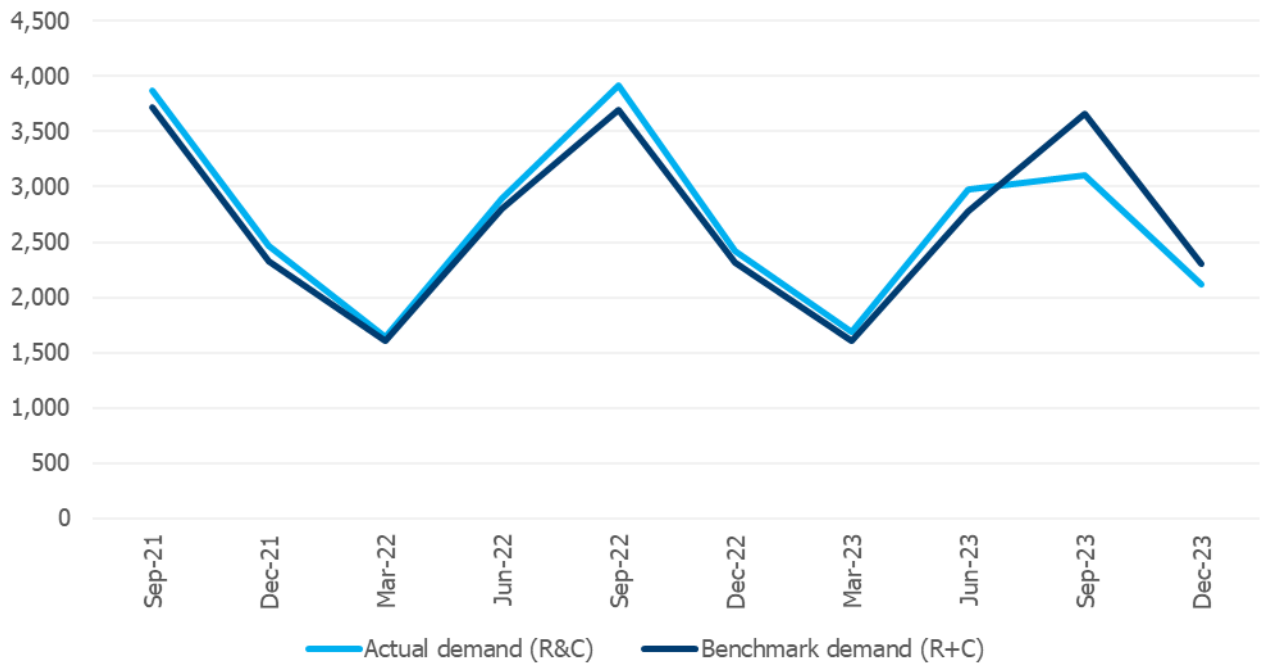
We observed during the AER review that many of our customers prefer to avoid the price uncertainty and/or risk of price shocks that accompany a revenue cap form of control. Our engagement on our draft RSP reinforced this sentiment indicating our customers prefer the price stability of a price cap approach.

4.2.1. Hybrid approach

Another alternative to the price or revenue cap form of revenue control is a hybrid approach. Hybrid tariff variation mechanisms combine two or more of the mechanisms above which typically involves a proportion of revenue that is fixed and a proportion that varies according to one or more pre-determined parameters, such as related to volume.

A hybrid mechanism forming part of a price cap form of control can incorporate a 'cap and collar' approach. Under this approach, incremental variations to volumes demanded from the AER-approved forecast level in any one year, past a certain point (such as plus or minus 10%), can be passed on to customers directly in the next year. This would occur through the annual tariff variation mechanism.

Figure 4: AGN SA Residential (R) and Commercial (C) Actual vs Benchmark Demand (TJ)



Should demand be substantially higher than forecast (by more than 10%, for example), consumers will benefit from an incremental adjustment to tariffs in the next year. On the other hand, should demand be much lower than forecast, consumers will face higher tariffs than they otherwise would be in the next year.

Despite there being some volume risk sharing benefits between us and our customers, we have not proposed a hybrid approach. This is because this approach, like a revenue cap, would still shift volume risk to our customers albeit to a lesser degree than a revenue cap. The feedback from our customers and stakeholders is that price stability is critical during an AA. We do not consider a hybrid approach is consistent with this feedback.

With a price-cap approach, tariffs can still be reset at the start of the new regulatory period with proper consideration of demand factors, trends and risks, and of efficient investment and operational needs for the network, rather than occurring in isolation in response to short term events. The reset effectively provides for a rebalancing of risks between the customers and our business each period without placing the risk of price volatility onto our customers within the five years. We believe that a five-yearly rebalancing of risk remains appropriate under the current environment in South Australia.

4.3. Tariff Structure

4.3.1. Declining block tariffs

AGN SA currently has a declining block tariff structure, as shown below in Table 4 for two of our main tariff categories (for the year from 1 July 2023). We are proposing to maintain this structure for the next AA, although the actual tariff levels will be determined by the building block modelling, as our plan is developed and consulted upon.

Table 4: 2023/24 Tariffs R and C (excluding Tanunda)

Tariff R excl. Tanunda (Domestic Haulage Service - Charges per Network Day excl. GST)	
Fixed Charge	0.3193
GJ 0 - 0.0274	37.1077
GJ 0.0274 - 0.0493	10.8035
GJ > 0.0493	3.6573
Tariff C excl. Tanunda (Commercial Haulage Service – Charges per Network Day exc. GST)	
Fixed Charge	0.6729
First 0.9863 GJ	18.3662
Next 4.2740 GJ	5.9784
Next 11.1780 GJ	2.5826
Additional GJ	2.1366

Our declining block tariffs represent a form of efficient non-linear pricing. That is, by charging a lower price for higher volume gas distribution, we ensure that demand is not zero, and so we can spread our fixed costs over more demand. Removing declining block tariffs would remove the ability to obtain these types of efficiency gains for our customers.

4.4. Smoothing bills through the year

Our tariff bands are structured such that most of space heating demand occurs in the highest (lowest-priced) band for many of our customers. Therefore, our tariff structure also has the practical effect of smoothing bills through the year, making them higher in

summer than they would be under a flat or inclining block tariff and lower in winter.

4.5. Retailer's tariffs

While we apply these tariff structures for use of our network, retailers have their own tariff structures when charging households and businesses for gas usage. The end use customer is only exposed to the retailer's tariff structure, not that of the distributor.

Our distribution charges will typically make up around half of a retailer's bill. Retailers have other costs to recover and their own risks and incentives when setting their tariff structures.

We have observed that most gas retailers in SA also have declining block tariffs, but with fewer charging blocks than our distribution tariffs for residential and non-residential customers. While a change in tariff structure could be passed on by retailers, there is no guarantee that it would be in full.

4.5.1. Assessing the impact of flat or inclining block tariffs

We have also considered the impact of shifting to flat or inclining block tariffs for our distribution network in the next AA.[13]

To ensure we consulted effectively on these alternative tariff structures, we modelled the impact on annual distribution bills[14] from a change to a flat or inclining block tariff structure. Table 5 provides the estimated bill impacts for residential customers in SA (excluding Tanunda) and Table 6 provides the estimated bill impact for our non-residential customers in SA (also excluding Tanunda). In response to feedback from ESCOSA on our draft RSP for more granular information on customer impacts, we have included more usage levels in these tables, as well as the distribution of customer usage on our network in section 4.2.2.3. Figures 6 and 7 demonstrate the extent of the variation in estimated annual bills under the different tariff structures as consumption levels increase.

4.6. Our modelling assumptions

In undertaking this modelling, we have assumed that:

- Volumes are based on 2022/23 actual volumes demanded in each tariff block.
- Tariffs are the existing haulage rates from 1 July 2023.
- Not all usage blocks are fully utilised by our customers all the time. We have adjusted the estimated bills under declining and inclining block tariffs to account for a portion of customers not fully utilising the lower consumption blocks. This does not apply to flat tariffs.
- Revenue is the same after accounting for reduced volumes, because of the price elasticity and appliance switching impacts.
- There is no change to the fixed charge (when adjusting for lower volumes and the impact on the fixed charge is negligible from the assumed change in net connections). We acknowledge that the fixed charge could be increased with a change in tariff structure if lower revenue for usage is collected from customers at lower consumption levels. This would reduce the cost benefit to consumers at lower usage levels.
- The inclining block scenario is based on one possible scenario for

[13] AER review, p 1.

[14] Distinct from retail gas bills.

distribution tariffs to demonstrate potential bill impacts and the direction of those impacts, in particular (and other tariff levels would yield different bill amounts).[15]

- The representative retail prices (from which price elasticity impacts have been estimated) are the current (2023/24) basic rates for Origin Energy in Adelaide.
- The retailer's pricing structure would also change, but the degree to which prices would change under an inclining block structure is also based on one possible scenario for block prices only.[16]

Impacts are assumed to be dynamic such that the volume demanded will be impacted by price increases with:

- changes in consumer behaviour and reduced usage of gas such as from choosing a lower heating setting, for example, and
- lower connections over time due to consumers switching from gas to electric appliances (for cooking, hot water or space heating).

We also assumed that there wouldn't be any material volume impacts from reduced prices in lower usage blocks, which is consistent with AEMO's previous assumption (in a 2019 paper) of an asymmetric response by consumers to gas price changes.[17] It is also consistent with our own observations regarding volume variation across blocks on our network.

4.7. Price elasticity impacts

We applied 'own price' elasticity factors to projected changes to a current retail price scenario to capture the reduced usage effects.

In doing so, we used estimates of long run price elasticity of demand by Core Energy and Resources, as applied in 2020 for our current AA.[18] The long run elasticity factors, which represent the proportional percentage change in the quantity (or volume of gas) demanded for a percentage change in price, are -0.30 for residential customers and -0.35 for commercial customers.

We found that the reduction in the amount of gas demanded was 2% for flat tariffs and 4 to 5% for inclining block tariffs.

In addition, we included a further small volume adjustment for a reduction in gas connections due to the impact of consumers switching from gas to electric appliances. This impact was not covered by the application of the elasticity factors which assumed the same level of connections and changes in how much gas is consumed at these connections.

In this step, we assumed that one fifteenth of the customer base is ready for appliance renewal each year.

[15] The assumed residential tariffs after elasticity and appliance switching impacts are factored in are: $19.4033 per GJ in the first usage block, $22.2133 in the second and $24.1988 in the third; and the assumed commercial tariffs are $9.5997 per GJ in the first usage block, 9.7733 in the second, $13.050 in the third and $17.2185 in the fourth.

[16] The assumed residential retail tariffs under the new structure are: $26.12 per GJ in the first usage block, $58.47 in the second and $58.58 in the third; and the assumed commercial retail tariffs are $30.39 per GJ in the first usage block, $40.00 in the second and third, and $55.00 in the fourth.

[17] AEMO 2019, Gas demand forecasting methodology information paper, March, p 19.

[18] AGN, SA Gas Access Arrangement 2022-2026, *Attachment 12.1 Core Energy. Demand Forecasting Report - SA Final Plan July 2021 – June 2026*, Final Report, July 2020.

We used a simulation model to estimate the probability of conversion to electric appliances based on the net present value of relative gas and electric consumption and installation costs in the near term. We then converted a set of randomly generated price changes to calculate an average elasticity factor of -0.17%. This factor represents the additional change in net gas connections (and subsequent change in gas volume) from a price change.

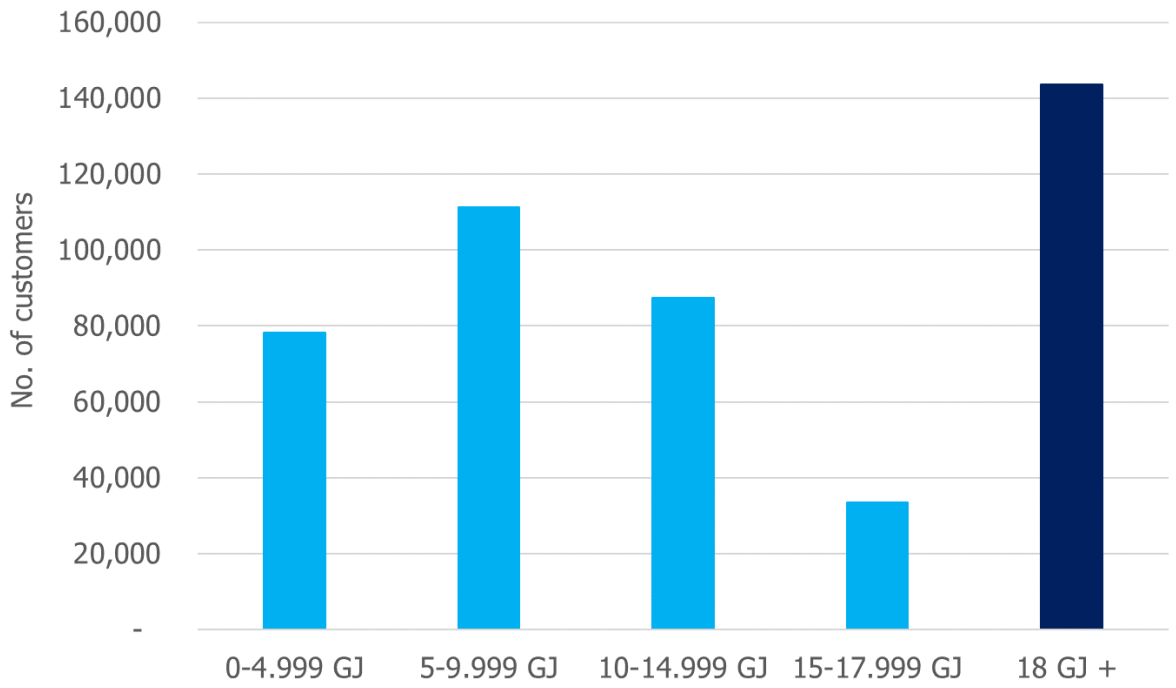
The resulting net impacts under both

alternative tariff scenarios were very small – a fall in volume of less than 0.05%.

4.8. Projected impact on bills

Based on our overall assessment for residential customers, under a flat tariff scenario,[19] the estimated bills are lower at low annual consumption levels (e.g. 2 or 15 GJ per annum) but are higher for all other consumption levels (Table 5). We have estimated the point where the impact on customer bills turns from positive to negative to be an annual consumption level of 18 GJ, which is close to the annual average across all customers (16 GJ). This level of usage is consistent with a larger household using a mix of gas appliances, but not necessarily for heating. The current distribution of our customer base across different annual usage levels, including at or above 18 GJ, is in Figure 5.

Figure 5: Distribution of AGN SA Residential Customers by Annual Usage (2022)



[19] With a variable charge of $20.8781 per GJ after long term demand elasticity impacts are factored in.

We estimate that 32% of our customers (143,539) will be worse off including:

- 86,430 customers by $242 or more
- 62,890 customers by $328 or more.

A large household consuming 45GJ with gas appliance use including gas heating would be $500 a year worse off.

Conversely, among households consuming less than 18 GJ per annum, 68% of all customers would be better off by a much smaller amount:

- 31,331 customers by at least $20,
- 80,608 by $20 to $49 and
- 198,686 by between $48 to $99.

As Table 5 shows, for commercial customers, the flat tariff scenario[20] results in higher annual bills across different consumption levels because there is more variation across different usage blocks (with more gas usage occurring beyond the first usage block, even at lower annual consumption levels). The higher bills are also due to the impact of assumed volume changes (from own-price elasticity effects) flowing through to the tariff level.

The inclining block tariff scenario shows a similar trend for estimated residential customer bills, but the extent of the impact is more extreme given the larger price changes. For commercial customers, the bill impacts would be positive up to at least annual consumption of 300 GJ and then there would be significant increases in annual bills (e.g., from 1,000 GJ).

This assessment serves to demonstrate that there are only small customer benefits by way of lower bills at lower usage levels from a change from declining block tariffs and any customers with higher usage patterns, even if the higher usage is seasonal or intermittent, will incur much more expensive charges. In addition, as previously mentioned, there is also the possibility that the fixed charge would be increased to recover more costs at lower usage levels, which would reduce any small customer bill benefits.

For these reasons, we do not favour a change to tariff structures, which would also be unnecessarily disruptive to our customers to generate the same amount of revenue.

[20] With a variable charge of $10.4344 per GJ.

Table 5: Estimated annual distribution network charges under Declining Block Tariffs and alternative approaches – Residential tariff R (South Australia excl. Tanunda)

Annual Consumption	**Declining Block Tariff (DBT)**	**Flat Tariff Scenario**			**Inclining Block Tariff (IBT) Scenario**		
GJ	Estimated annual charge (DBT)	Estimated annual charge (Flat Tariff)	$ change from DBT	% change from DBT	Estimated annual charge (IBT)	$ change from DBT	% change from DBT
2GJ	$178	$158	-$20	-11%	$157	-$21	-12%
10GJ	$424	$325	-$99	-23%	$317	-$107	-25%
15GJ	$478	$430	-$48	-10%	$428	-$50	-10%
25GJ	$483	$638	$156	32%	$679	$196	41%
35GJ	$519	$847	$328	63%	$921	$402	77%
45GJ	$556	$1,056	$500	90%	$1,163	$607	109%
60GJ	$611	$1,369	$758	124%	$1,526	$915	150%
100GJ	$757	$2,204	$1,447	191%	$2,494	$1,737	229%
150GJ	$940	$3,248	$2,308	246%	$3,704	$2,764	294%
200GJ	$1,123	$4,292	$3,169	282%	$4,914	$3,791	338%

Table 6: Estimated annual distribution network charges under Declining Block Tariffs and alternative approaches – Commercial tariff C (South Australia excl. Tanunda)

Annual Consumption	Declining Block Tariff (DBT)	Flat Tariff Scenario			Inclining Block Tariff (IBT) Scenario		
GJ	Estimated annual charge (DBT)	Estimated annual charge (Flat Tariff)	$ change from DBT	Estimated annual charge (DBT)	Estimated annual charge (Flat Tariff)	$ change from DBT	Estimated annual charge (DBT)
15GJ	$398	$402	$4	1%	$391	-$6	-2%
45GJ	$702	$715	$13	2%	$683	-$19	-3%
100GJ	$1,260	$1,289	$29	2%	$1,217	-$43	-3%
300GJ	$3,289	$3,376	$86	3%	$3,160	-$129	-4%
1000GJ	$7,724	$10,680	$2,956	38%	$9,998	$2,274	29%
3000GJ	$15,203	$31,549	$16,346	108%	$33,067	$17,865	118%
5000GJ	$20,681	$52,418	$31,737	153%	$59,137	$38,457	186%
8000GJ	$27,117	$83,721	$56,604	209%	$106,609	$79,492	293%

Figure 6: Residential (excluding Tanunda) Annual Distribution Bill by Tariff Structure

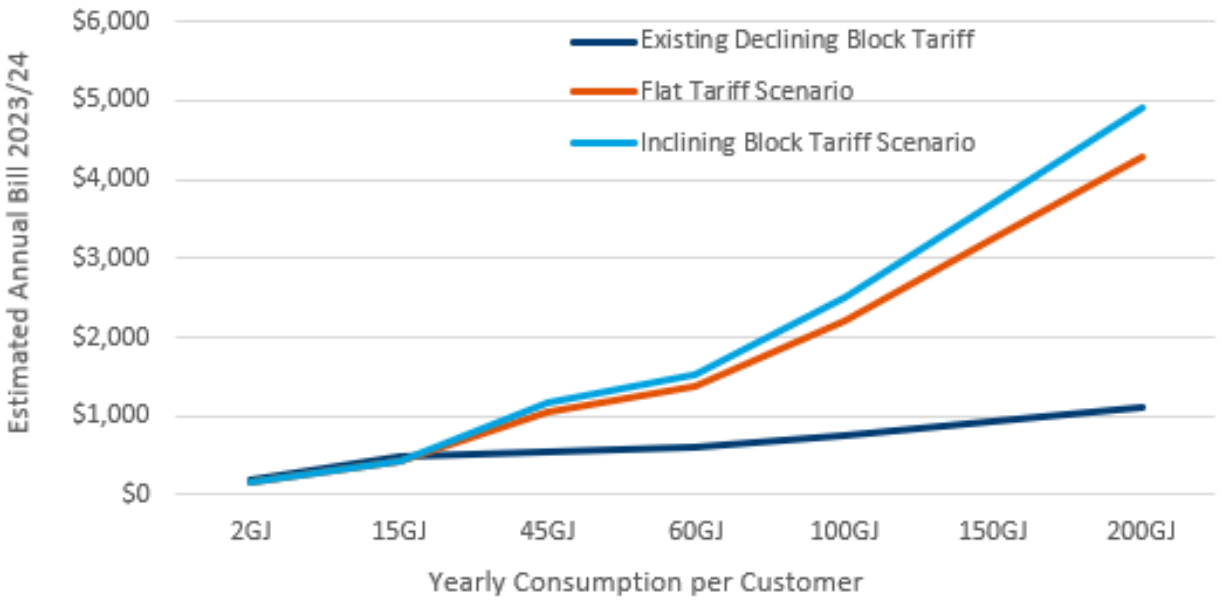
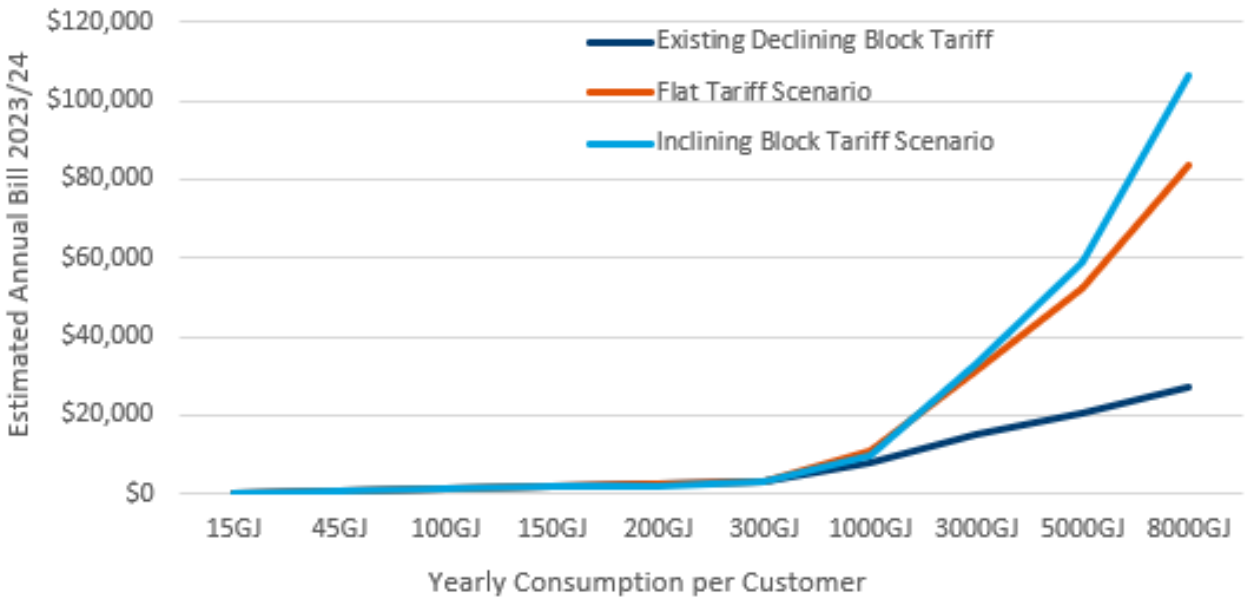


Figure 7: Non-Residential (excluding Tanunda) Annual Distribution Bill by Tariff Structure



5. Emission reduction objectives

The objective of the NGO regarding emission abatement targets is to support prudent decisions about emission reduction investments in our gas transportation networks.

We remain committed to decarbonisation of the AGN SA distribution network and meeting our obligations under the Commonwealth Government's Safeguard Mechanism[21]. AGN SA will fall below the Safeguard threshold of 100,000 tonnes of direct scope 1 carbon emissions[22] per annum during 2024/25 and is forecast to remain below the threshold until at least 2030/31.

In our current AA, we replaced our cast iron main pipes for safety and reliability reasons. The mains replacement program also helps to make our network hydrogen ready.

In our plans for the next AA, we will canvass potential decarbonisation initiatives with our stakeholders, ultimately to reduce our net emissions.

Since the AER's review,[23] the AEMC has published rules that harmonise the national energy rules with the emissions reduction component.[24] These rules require the AER to consider the economic value of emission impacts when it assesses expenditure proposals by network service providers, in addition to other economic value assessments. We look forward to this occurring in this next AA as part of the consideration of any proposed decarbonisation initiatives.

5.1. Estimated emission impacts from tariff or revenue control changes

We believe that the changes to the NGR in respect of the consideration of emissions extend only to scope 1 emissions; the change in emissions by us.

There are no intrinsic emission reduction benefits from shifting away from a price-cap form of revenue control; the outcome for gas volumes on our network will continue to be dictated by demand, as it is with a price-cap.

The key characteristic of a revenue cap is that it shifts a revenue shortfall in one year onto the allowed revenue for the following year, raising price.[25] If customers are relatively price insensitive, then the increase in price will have a small impact on volumes and thus a small impact on emissions.

In addition, there do not appear to be sufficient emission reduction benefits for the operation of our network from shifting away from declining block tariffs.

In the context of a change in tariff structures, the impact on our emissions would be those

[21] www.cleanenergyregulator.gov.au/NGER/The-Safeguard-Mechanism

[22] Scope 1 greenhouse gas emissions are the emissions released to the atmosphere as a direct result of an activity such as manufacturing or energy production, or series of activities at a facility level. They include fugitive emissions such as methane emissions.

[23] of distribution networks to consider the form or tariffs and revenue regulation to address emission reduction objectives. See footnote 1.

[24] AEMC, *Rule Determination – National Gas Amendment (Harmonising the national energy rules with the updated energy objectives) Rule 2024*, 1 February 2024.

[25] We note that a revenue cap is symmetric, so an increase in demand in one year would lead to lower prices in the following period which, to the extent that customers are sensitive to price, leads to an increase in demand. This further underscores the key point that it is price and price sensitivity that leads to changes in emissions, and not the form of control. A revenue cap could just as easily lead to an increase in emissions depending on how demand evolves.

associated with less unaccounted for gas (UAFG), because we are transporting less gas.

We estimate that the volume of emissions per GJ of gas transported on our network is around 0.0024 tCO2e.[26] With the volume of gas demanded estimated to fall by approximately 2% for residential and commercial customers under flat tariffs and 4-5% under inclining block tariffs, the value of the associated emission reductions is limited.

For residential customers, we estimate that the annual benefit would be equivalent to $0.08 to $0.18 or just 0.02 to 0.04% of the annual bill, on average. For commercial customers, we estimate it to be $1.91 to $3.18 or just 0.08 to 0.13% of the average annual bill. These estimates assume a long term forecast for the price of carbon of $88 per tonne.[27] The current spot price is around $35-40 per tonne.

Regarding tariff structure, any small benefit by way of emissions reduction must also be considered against the overall bill impacts on customers. Our medium to high usage customers would experience significant bill increases if we altered our tariff structure, up to around double or triple the existing annual amount. These bill increases far outweigh the value of the small projected emission reduction benefits. Further, a less efficient pricing structure could result in higher fixed charges for all customers.

With price-cap revenue control, any changes to demand trends will flow through to tariffs at the end of each regulatory period. Under this approach, we can then align our investment and operational plans with any revised trends in demand, which considers emission-reduction objectives and the impact on our consumers over the period.

6. Conclusion

Our *Reference Service Proposal, Form of Revenue Control and Tariff Structure* has been prepared to ensure our plans are developed based on services appropriate to our customers' needs and to meet the new requirements of the AER.

We offer several pipeline services to meet our customers' needs, including reference services for haulage and ancillary purposes.

We are proposing to maintain the same suite of reference services but with the addition of the abolishment service (small scale), and to continue with a price-cap form of revenue control and declining block tariffs for the next AA period.

Our proposal incorporates consideration of stakeholder and customer feedback on all issues, and we can consider that we have reasonable support for each of our proposed approaches.

[26] Based on our forward emission estimates (72,300 tCO2-e) from our National Greenhouse Emissions Reporting Scheme (NGERS) calculation template and 2022/23 actual gas volume transported on the AGN SA network (29.599 PJ).

[27] Based on Reputex's forecast for the 2030 price of an Australian Carbon Credit Unit.