

APGA Submission

**Reliability and supply adequacy
framework for the east coast gas market**

Stage 2 Framework Development

21 July 2023

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Executive summary

APGA welcomes the opportunity to provide a submission to the consultation on the second stage of the East Coast Gas System Reliability and Supply Adequacy Framework reforms (the **Stage 2 Reforms**). The Stage 2 Reforms have an opportunity to deliver a more secure, resilient and flexible East Coast Gas Market (the Market) by utilising market forces to address shortness in supply - which caused the 2022 gas crisis.

The overarching structure of the Market is a gas supply and transport market facilitated through execution of firm supply and transport contracts. Gas customers which secured firm supply and haulage did not experience undersupply risks during the 2022 gas crisis. As further reforms are considered, including through this process, APGA considers the need to ensure contractual rights are preserved is paramount.

It is important to understand that not all wholesale gas customers value secure supply in the same way that it is valued in the electricity market. Gas customers should be free to choose not to have firm supply contracts, accepting the consequences of short supply events. In 2022, gas customers who were covered by firm supply contracts did not experience any supply issues, while those that were not experienced price shocks – an entirely foreseeable consequence of that business decision.

The proposed Stage 2 reforms present a number of solutions and tools to manage the Market when it is short in supply. The need for this is understood and APGA supports measures to do so. There is also significant benefit in delivering measures that will facilitate a return to a Market which has sufficient supply.

In our recommendations on the proposed reforms, APGA frames within its submission the circumstances which led to the need for the reforms; identifies lessons learned and principles gained from these events. We also recommend addressing the underlying problem of a market short in supply without undermining wholesale gas customer rights or the rights of retail gas and electricity customers.

APGA's responses to the consultation questions are found in Appendix 2.

Recommendations

1. APGA recommends implementing a probabilistic Reliability Standard for gas supply that applies to the southern jurisdictions.

A combination of an unserved gas (USG) measure and an appropriate peak demand target which applies to production (not infrastructure) in the southern jurisdictions should be used.

2. To support the Reliability Standard, APGA recommends implementing a modified Reliability and Supply Adequacy (RSA) Contracting Mechanism.

Reforms should centre on a requirement for wholesale gas customers to demonstrate contractually secured supply in a supply adequacy event. Reforms should not impose a mandate to contract if insufficient supply security is demonstrated. Instead, a wholesale gas customer without a contract should be subject to:

- a) Retraction of AEMO Supply Assurance secured under Stage 1 reforms.

- b) Repositioning at the top of the demand response mechanism list.
3. **To provide protections for customers of gas retailers and GPG who fail to secure supply under the modified RSA Contracting Obligation, APGA also recommends:**
- a) A Gas Retailer Reliability Obligation (Gas RRO) within the NERL requiring gas retailers to be required to always demonstrate supply adequacy.
 - b) A GPG Security Mechanism within the NEL allowing AEMO to identify how much GPG is required and incentivise GPG to secure sufficient secure gas supply to meet this.
4. **A short term (ST) PASA should use existing data to provide a rolling 7-day forecast. APGA does not support the need for a medium term (MT) PASA.**
- Adequate Market transparency will allow wholesale gas customers to accurately manage risk by securing supply through contracting firm gas supply and transport. Hence, we also suggest improvements to AEMO's gas forecasting models to accurately forecast gas demand.
5. **To support additional supply coming into the market, APGA recommends all investment (greenfield or brownfield) specifically targeted at addressing supply adequacy concerns receive the Greenfield Incentive plus Price Protection.**

About

The Australian Pipelines and Gas Association (APGA) represents the owners, operators, designers, constructors and service providers of Australia's pipeline infrastructure, connecting natural and renewable gas production to demand centres in cities and other locations across Australia. Offering a wide range of services to gas users, retailers and producers, APGA members ensure the safe and reliable delivery of 28 per cent of the end-use energy consumed in Australia and are at the forefront of Australia's renewable gas industry, helping achieve net-zero as quickly and affordably as possible.

To discuss any of the details within this submission further, please contact APGA's National Policy Manager, Jordan McCollum, on +61 422 057 856 or jmccollum@apga.org.au.

1 Introduction

Supply adequacy in the Market is assured through firm gas supply and transport contracts. The Stage 2 Reforms have the opportunity to utilise market forces to drive increased customer contracting of firm gas supply. Firm contracting of gas supply and transport will be a key driver of investment to secure supply adequacy.

APGA has been explicit in communicating the circumstances that led to the 2022 gas crisis through decades of commentary on gas market reform. Reforms to the Market have systematically reduced market resilience and disincentivised investment in secure and affordable gas supply across the past two decades. As explained through this submission, it has done so by consistently obscuring of the link between gas consumption and contracting of firm gas supply and transport, incentivising shortness of supply in the Market.

The unmitigated introduction of undersupplied LNG export capacity ultimately transitioned the Market from being long in supply to being short in supply. However, the obscured connection between gas consumption and firm gas supply contracting has allowed the Market to remain short in supply across the decade since the market became short.

It is this short market condition that the Stage 2 Reforms must address to reduce gas price, increase supply adequacy, and increase Market resilience.

In a short market, the highest paying customer, not the next highest cost supplier, sets market prices. This shortness in Market supply allowed gas prices to increase by 100's of per cent in the medium term.¹ Shortness in supply also reduced market resilience, opening energy consumers to the risk of Market price shocks in the order of 100's to 1000's of per cent if adjacent markets saw a rapid increase in prices. This is what happened to the Market when adjacent LNG and electricity markets simultaneously ran short on supply in 2022.

APGA takes five lessons from the 2022 gas crisis and past decades of Market reform (Section 2.2). From these lessons we derive seven principles which should provide a more secure, resilient and flexible Market (Section 2.3). Our recommended framework protects energy consumers while allowing for market forces to efficiently secure supply adequacy, informed by greater market transparency (Section 3.2).

¹ Australian Energy Regulator (AER), combined reports of Gas Enquiry 2017-2030, available at <https://www.accc.gov.au/inquiries-and-consultations/gas-inquiry-2017-30>

2 Preface: Impacts of past interventions on today's gas market

The current state of the Australian gas market is the result of a succession of past government interventions which have ultimately undermined the business case for investing in both new supply and security of supply. There is now an opportunity to break this cycle by recognising how the market works best, why it is not working today, and using this knowledge to address current challenges.

To support the current governments' augmentation of the gas market, this section of APGAs submission provides:

- A brief history of gas market intervention, including how each step has helped cause the current state that the market finds itself in.
- Lessons learned throughout the past two decades of market intervention.
- Principles to take forward in consideration of how to address current market problems.

2.1 A brief history of East Coast Gas Market intervention

In seeking to develop a package of reforms to support a more secure, resilient and flexible Market, it is important to understand how the reforms of the past have created the circumstances of the present to avoid a repeat of these circumstances in the future. The Market was founded upon tenets of good economic regulation as framed within the 1993 Hilmer Report.² As can be seen via the brief history of Market intervention below, reforms over the last decade – which have departed from those economic tenets – facilitated the gas crisis of 2022. A return to these tenets, alongside recognition for the risk that regulation can impede investment, is needed to rebuild a more resilient Market from here.

While each intervention to date may have had some positive short to medium term impacts for customers, each of the factors seen in the table below introduced long term supply adequacy and price risk, compounding across each successive intervention. It is this multi-intervention disregard for the long-term market impacts upon the Market which has contributed to the circumstances of the 2022 gas crisis and the need for further intervention.

Key to reversing this trend will be intervention which seeks to return the Market to a market long in supply. In a long supply market, the next highest cost supply sets market price, where in a short supply market, i.e. the Market of today, price is set by the highest paying un-serviced customer.

In doing so it will be important to recognise the diversity the Market customer base. While it is unreasonable for a gas retailer to undermine its customers by not securing gas supply, there are a number of customers for which the cost of secure gas supply is economically

² Hilmer, F, Raynor, M and Taperell, G, 1993, *National Competition Policy*, Report of the Independent Committee of Inquiry, available at <http://ncp.ncc.gov.au/docs/National%20Competition%20Policy%20Review%20report,%20The%20Hilmer%20Report,%20August%201993.pdf>

inefficient. These customers must be provided the right to not secure their gas supply where this is the right economic decision for their business.

A more detailed account of the reforms identified in Table 1 can be found in Appendix 1.

Table 1: Impacts of Market interventions since 1990 and impacts on gas cost

Intervention	Positive Market Aspects/Impacts	Negative Market Aspects/Impacts
Modern Market Foundation (Late 1990s)	<ul style="list-style-type: none"> • Gas supply and transport markets both wholly via bilateral contracting (GSAs & GTAs) • Firm bilateral contracts facilitated supply & infrastructure investments • Customers for which the cost of firm contracts was not the right business decision were able to access short term GSAs & GTAs • Infrastructure regulated sparingly where use of monopoly power observed by regulators • Gas market long in supply provided supply security 	<ul style="list-style-type: none"> • Lack of transparency around pricing factors may have increased risk of inefficient supply and transport pricing (10s of per cent cost risk)
Introduction of facilitated markets (1999–early 2010s)	<ul style="list-style-type: none"> • Customers able to access increased price transparency in the short to medium term, increasing supply price transparency (10s of per cent of cost benefit) • More customers able to choose to accept risk of not securing supply or transport via firm bilateral contracts, increasing customer market liquidity. 	<ul style="list-style-type: none"> • Link between gas consumption and gas supply or transport investments becomes obscured, increasing risk of underinvestment and driving the Market towards a short gas market in the long term (100s of per cent cost risk)
Introduction of LNG exporters (early 2010s)	<ul style="list-style-type: none"> • Allowed for substantial expansion of supply at costs below slowed staged development of the same supply. (10s of per cent of cost benefit) 	<ul style="list-style-type: none"> • Introduced substantially more demand than supply into the Market, transitioning the Market from being long in supply to being short in supply (Immediate 100s of per cent cost impact plus 1000s of per cent cost risk) • It is worth noting that while proactive reform to address this risk could have been put in place in the leadup to LNG export development, this was not done.
Introduction of moratoria & long-term forecasting (mid 2010s)	<ul style="list-style-type: none"> • Forecasting provided a level of foresight into medium- to long-term gas supply adequacy, allowing for future shortfalls to be identified. 	<ul style="list-style-type: none"> • Moratoria impeded gas supply investment, further driving the Market towards a short gas market in the long term (100s of per cent cost risk) • Forecasting consistently underrepresented shortfall risk due

		to under forecasting of GPG demand and assumptions of gas use electrification.
Tightening of gas infrastructure regulation (late 2010s to early 2020s)	<ul style="list-style-type: none"> • Economic regulation of all pipelines sought to reduced likelihood of overpricing of gas transport (units of per cent cost benefit) • Introduction of Day Ahead Auction (DAA) provided opportunistic gas customers access to contracted but un-nominated pipeline capacity from \$0 starting price (10s of per cent cost benefit) 	<ul style="list-style-type: none"> • DAA gave firm transport capacity purchased by gas customers for security of supply and provided it at \$0 starting price to their competitors, reducing business case for investing in firm transport, in turn risking localised market shortages (100s of per cent cost risk) • Note that this reform occurred at a time when gas prices multiplied due to the Market transitioning to a short supply market, rather than addressing this transition.
Market ahead of 2022 gas crisis (Mid 2022)	<ul style="list-style-type: none"> • Wholesale gas customers save 10s of per cent on gas and transport costs and have accessed additional marginal volumes of gas otherwise only available via bilateral contracting 	<ul style="list-style-type: none"> • The Market is short in supply, increasing gas prices by 100s of per cent from long market prices. • Long term investment in supply is disincentivised by moratoria, underestimated demand, and facilitated markets obscuring the connection between gas supply investment and gas consumption. • Investment in firm transport disincentivised as DAA transfers benefits of firm haulage investment to firm shippers competitors which do not invest.
Market after Stage 1 Reforms (start 2023)	<ul style="list-style-type: none"> • Wholesale gas customers which do not invest to ensure their own supply security can rely on AEMO to direct market participants if a Market supply adequacy event arises. 	<ul style="list-style-type: none"> • Incentive for gas customers to contract firm gas supply or haulage further reduced by AEMO powers to direct supply in the event of a gas supply adequacy event, risking increased shortness of gas supply in the ECGS.

2.1.1 Sum of Market reform impacts

The Market began as a long in supply gas market with direct connection between gas consumption and gas supply or infrastructure investment (Figure 1). Following the above reforms and impacts, the Market has become short in supply, with the linkages between gas consumption and gas supply or infrastructure investment obscured or worse, disincentivised (Figure 2).

The impact to customers is a transition from market with concerns of 10s of per cent price risk from a lack of price setting transparency to a market with 100s or 1000s of per cent price risk due to a shortness of supply allowing the highest paying customer to set Market price. This is the legacy of two decades of reform which has consistently undermined supply and infrastructure investment in return for marginal reductions in their rate of return.

This has reduced market resilience, contributing to the 2022 gas crisis, and may cause future gas crises if these reforms do not seek to incentivise market participant investment to return the Market to being long in supply.

Figure 1: Foundation of the modern gas market (Late 1990s)

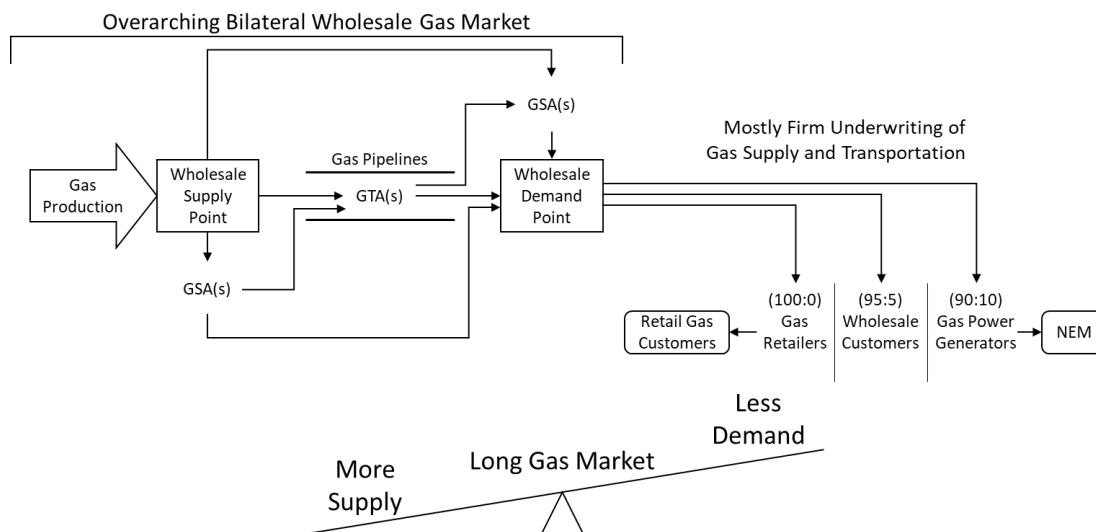
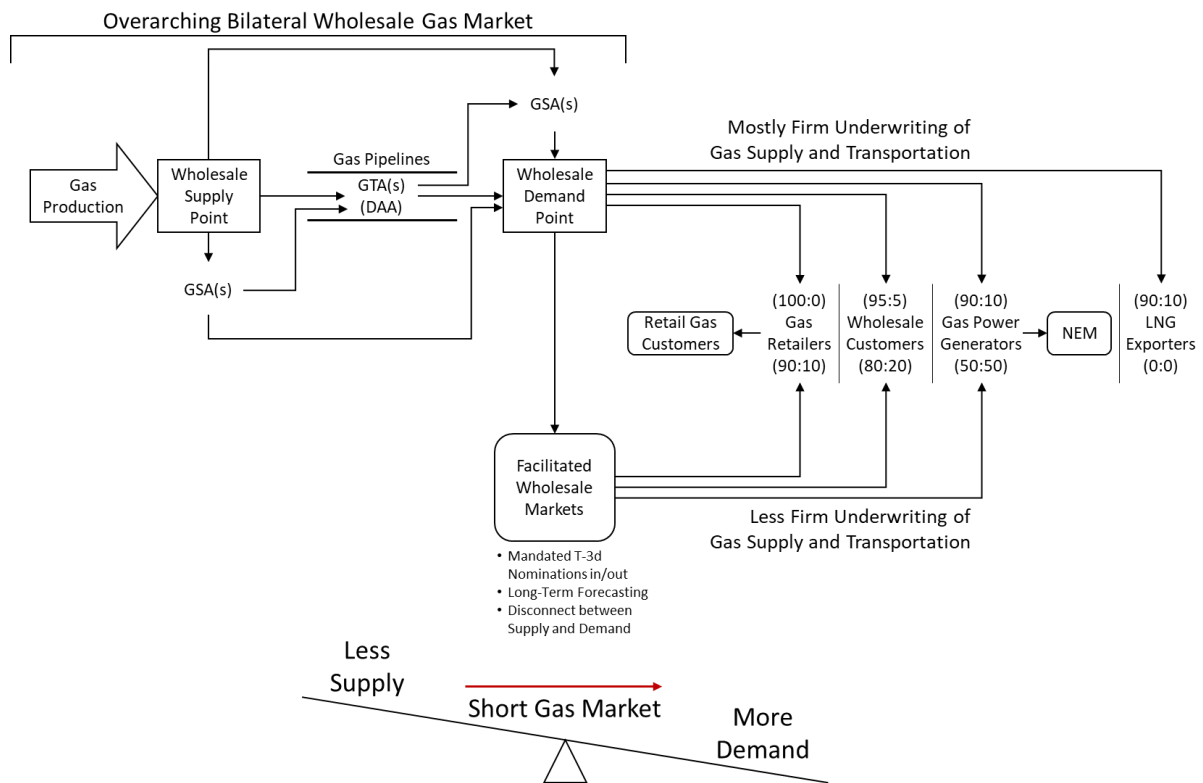


Figure 2: The Market prior to the 2022 gas crisis



2.2 Lessons learned

There are five key lessons from the last two decades of Market reform, and the 2022 gas crisis which they helped cause. It is hoped that through these lessons the Stage 2 Reforms can redirect the Market towards being long in supply.

Market gas price and supply security are secured through commercial gas contracts

The overarching structure of the Market is a gas supply and transport market facilitated through execution of firm supply and transport contracts. Gas customers which secured firm supply and haulage did not experience undersupply risks during the 2022 gas crisis. As further reforms are considered, including through this process, APGA considers the need to ensure contractual rights are preserved is paramount.

The Market needs to be long in supply to secure low gas prices

When a market has sufficient supply, the next highest supplier sets market prices; when a market is short in supply, the highest paying customer sets market prices. Market prices were seen to rise 100s of per cent as the Market moved from long in supply to short in supply, lowering resilience to price shocks. The impact of combined price shocks from LNG and NEM shortages upon the short-supply market was an increase in gas prices of 1000s of per cent.

The benefit of past reforms is outweighed by the cost of a Market short in supply

Successive Market reforms have claimed to deliver some price optimisation in the order of 10s of percent by reducing the opportunity for inefficient pricing. These Market reforms have also obscured the connection between gas consumption and contracting of firm gas supply

and transmission, and reduced customer contracting of firm gas supply trends the Market towards shortness in supply. This impedes the return to the Market being long in supply, and this shortness of supply has increased gas prices by 100s of per cent as seen through the 2010s. Shortness of supply has reduced the Market's resilience to price shocks, allowing for gas price increases in the order of 1000 per cent, as experienced in the 2022 gas crisis (i.e. from approx. \$46/GJ to around \$460/GJ).³

While some Market customers need security of supply, others do not

As of 2021, around 16 per cent of gas purchased by wholesale gas customers was unfirmed supply from facilitated markets.⁴ While the value of supply security tends to be greater than the cost of firm gas contracting, there are gas market participants for which it is the right business decision to not pay for gas supply security.⁵ This becomes a problem when other customers rely upon a wholesale gas customer for their energy security, i.e. retail gas customers relying upon gas retailers, and the NEM relying upon gas power generation.

When gas retailers or GPG do not have secure gas supply, gas and electricity consumers suffer unreasonably high prices.

Departure from economic regulation orthodoxy risks unintended consequences

The past two decades of Market reform have departed from economic regulation orthodoxy by prioritising regulation as a solution in all cases, while disregarding the risk of overregulation to investment.

2.3 Principles for developing Stage 2 Reforms

APGA offers seven principles based upon the lessons learned from Section 2.2. It is hoped that basing Stage 2 Reforms upon these principles will deliver a package of reforms which support a more secure, resilient and flexible Market by returning to a Market with sufficient supply.

- **Foundation in economic regulation orthodoxy** - Any reforms should hold true to the foundational economic regulatory principles of the Hilmer Report, supporting effective competition policy and practices in Australia.
- **Goal to achieve a long gas market** - The goal of Market reform must be to move the market back towards having more supply than demand.
- **Use of market forces** - Market reform must achieve that goal by leveraging market forces to deliver efficient outcomes by returning to long-term contracting of firm gas supply and transportation. This must be done by ensuring those customers managing supply through contracts do not face risk of regulatory intervention in their contractual rights. Customers should also be free to accept supply risk and not enter into long-term contracts.

³ AER, combined reports of Gas Enquiry 2017-2030, available at <https://www.accc.gov.au/inquiries-and-consultations/gas-inquiry-2017-30>

⁴ AER, Wholesale Markets Quarterly, Q4 2021, p43 – Table 2.9, <https://www.aer.gov.au/system/files/Wholesale%20markets%20quarterly%20Q4%202021.pdf>

⁵ Ibid.

- **Economic efficiency** - Market reform must balance the cost impact upon gas customers of reform requirements with the need for gas supply adequacy.
- **Consideration of diversity** - Market reform must achieve its goal recognising that it is the right business decision to not pay to secure gas supply for some, but not all, gas market participants.
- **Fairness across a diverse market** - Market reform must recognise the expense paid by some gas market participants to secure gas supply alongside the choice by other gas market participants to not secure gas supply. This reform must ensure that appropriate incentives exist for efficient management of gas supply risk by Market participants.
- **Protection of retail gas and NEM consumers** - While it may be the right business choice for some Market participants to not secure supply this is not appropriate when retail energy consumers, both gas and electric, are reliant upon a Market participant securing their energy supply.

3 Framing Market intervention via Stage 2 Reforms

APGA provides a series of recommendations for the Stage 2 Reforms to best secure a more secure, resilient and flexible Market.

3.1 Context to the consultation on proposed framework

Some aspects⁶ of the proposed reforms assumed all gas customers have the same needs – but this is not the case. The cost of securing gas supply is not always the right business decision. At the same time, retail gas and electricity customers rely upon some wholesale gas customers for their security of gas supply.

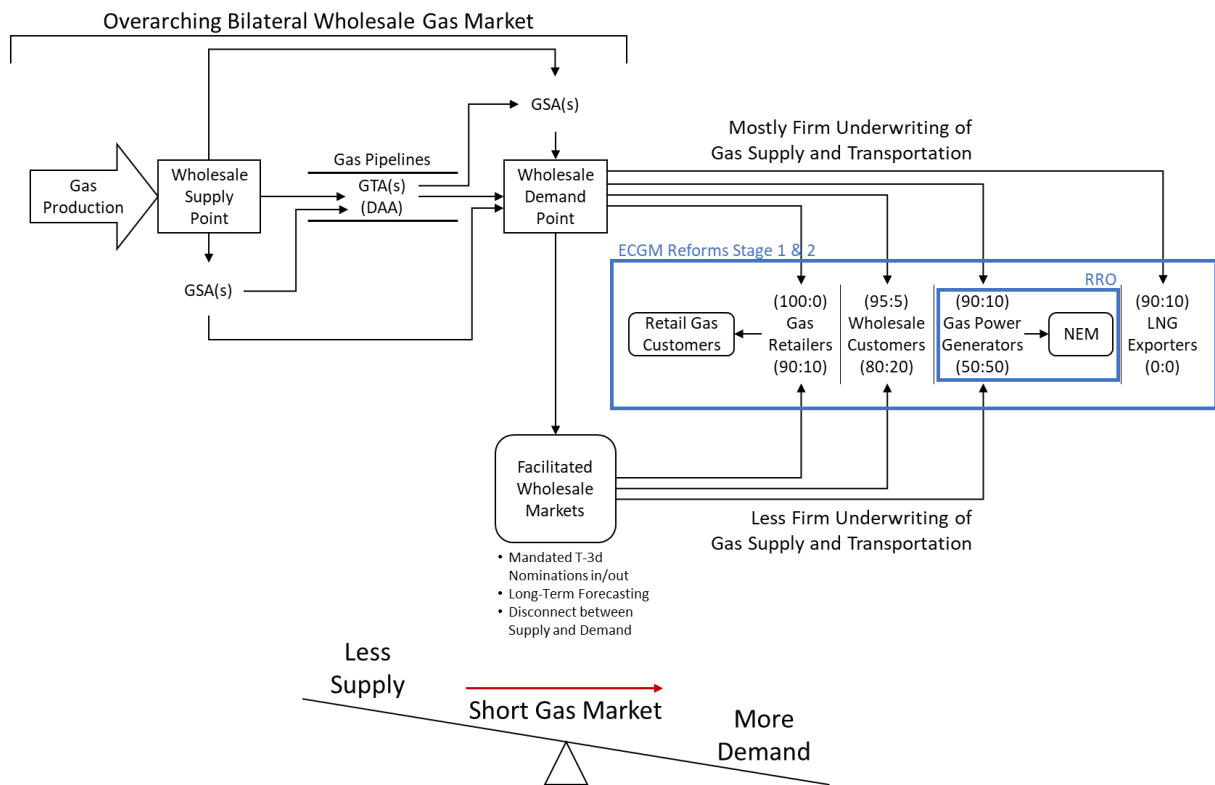
The outcomes of several combinations of proposed reform options risk either negatively impacting wholesale gas customers or further shortening supply. Some reliability standard approaches proposed (i.e., N-1) would substantially increase gas supply cost for customers. Penalties proposed under the RSA Contracting Obligation framing could introduce civil penalties or require gas customers to procure firm supply in the event of a supply adequacy event regardless of whether or not this is the right economic decision for the business.

Gas customers could be further disincentivised to procure long term supply if AEMO powers to direct gas supply during an adequacy event remain unamended through Stage 2 reforms, removing the need to secure firm supply. Reforms which do not influence the market towards having sufficient supply would leave it vulnerable to market failures such as the 2022 gas crisis – with retail electricity and gas customers bearing the brunt of resultant high energy prices.

Figure 3 demonstrates differences between where the Consultation paper considers applying Stage 2 reforms and where APGA recommends reforms are applied.

⁶ APGA appreciates not all the reforms put forward by DCCEEW will be recommended for implementation. We note that the consultation proposes that the Stage 2 reforms extend the Stage 1 reforms, which do apply to the whole of the gas market.

Figure 3: Generalisation of approaches proposed within the Stage 2 Reform consultation



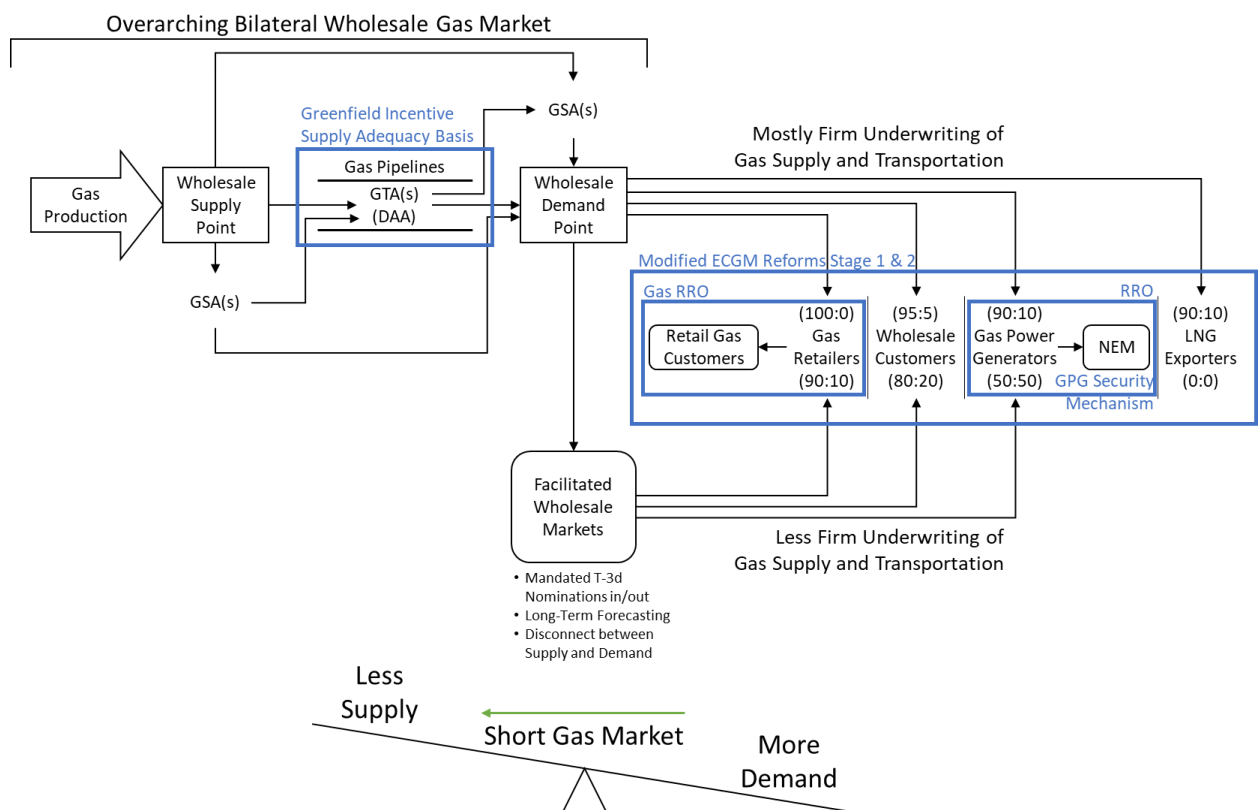
3.2 APGA recommended approaches

Taking the principles identified within Section 2.2 into account, APGA recommends a Stage 2 reform framework (demonstrated in Figure 4) which:

- Centres around an RSA Contracting Mechanism which allows customer choice and market forces to drive efficient market outcomes of increased wholesale gas customer contracting in firm gas supply and transport.
- Protects retail gas customers and the NEM from the potential for the wholesale gas customers they rely on for security of supply choosing to not secure gas supply.
- Bases decision on a multi-horizon monitoring framework including enhanced long-term forecasting, a reliability standard, and a Short Term PASA.

This framework would reduce opacity between gas consumption and gas supply and transport contracting caused by facilitated gas markets and the day-ahead auctions. This in turn would help reverse the direction of gas market supply and demand balance in favour of moving towards a market longer in supply. As the market returns closer to balance it will become more resilient to shocks such as the simultaneous shortening of supply in international LNG and domestic electricity markets, reducing gas consumer exposure to price shocks and supply risk.

Figure 4: APGA recommended approach to Stage 2 Reform Framework



3.2.1 Summary of proposed framework

The below four aspects are seen to combine to appropriately ensure security of supply for those customers which value it; enabling those customers who don't to make this business decision; and protecting retail gas and electricity customers from the choice to not by those who secure their energy supply. Aspects of this recommended framework are considered in more detail relative to Consultation sections in Section 3.3, and relative to consultation questions in Appendix 2.

Reliability Standard framework centred around a modified RSA Contracting Mechanism

A Reliability Standard supported by APGA's modified RSA Contracting Mechanism would require wholesale gas customers to demonstrate adequate contracted gas supply and transport in the event of a supply adequacy event. Instead of the penalty being a mandate to contract adequate supply, we suggest an alternative penalty mechanism:

- Retraction of AEMO Supply Assurance provided under Stage 1 reforms be retracted proportionate to unsecured gas demand.
- Demand response prioritisation.

Framework secures price and supply for retail gas customers and the NEM

Being that general wholesale gas customers have the right to choose to not secure gas supply, the rights of retail gas customers and the NEM must be secured. As retail energy consumer protection is legislated under the NERL and electricity market security of supply is legislated under the NEL, APGA proposes two measures to secure impacts on both markets:

- A Gas Retailer Reliability Obligation (Gas RRO) within the NERL.
- A GPG Security Mechanism within the NEL.

Framework guided by enhanced long-term forecasting, Reliability Standard and ST PASA

The decision to pre-empt and trigger a supply adequacy event which leverages the RSA Contracting Obligation would require substantial uplift in the ability of AEMO to undertake long-term gas demand forecasting, the implementation of a reliability standard, and the implementation of a ST PASA using existing data. APGA has not seen a case made for the implementation of an MT PASA at this stage.

Gas supply adequacy basis for securing Greenfield Incentive plus Price Protection

While not specifically part of this consultation, APGA observes an opportunity to embed supply adequacy through making it a basis of the Greenfield Incentive. Rapid deployment of greenfield or brownfield gas pipeline investment may be required to address gas supply adequacy issues. Where investments are made for this basis, both the Greenfield Incentive and the Price Protection Mechanism should be automatically granted.

3.3 Recommendations as they relate to proposals

The following sections consider how the APGA recommended framework for implementing Market relates to the specific concepts raised within the Stage 2 Reform consultation paper. Responses to consultation questions can be found in Appendix 2.

3.3.1 Reliability standard

APGA and its members are generally not opposed to the concept of an objective, transparent reliability standard framework for AEMO to exercise its directions powers in the event of a gas supply adequacy threat. Where this can become complicated is in considering the differences between supply and infrastructure reliability standard options, and the solutions to failure to meet those standards – some of which have been conflated in the consultation paper. Splitting these concepts apart, an objective, transparent measure of reliability needs to be determined before defining actions to be taken when the standard is not met.

To be clear, and with few exceptions, APGA is of the view that the issue to be solved by a reliability standard is reliability of supply, not reliability of transport of supply. Gas transmission infrastructure has a high level of infrastructure reliability – a less than one per cent failure rate. Further, possibility of maximum transport capacity utilisation on any one day does not preclude supply adequacy. Gas can be transported to and stored near a demand centre prior to any given day, and excess stored gas utilisation replenished in days following – behaviour which can be influenced by a supply adequacy requirement.

While it is unclear exactly what level of infrastructure a reliability standard on gas infrastructure would be imposed on, such measures risk negatively impacting investment certainty in the existing contract carriage market. On this basis we absolutely do not support the option of an N-1 redundancy standard that could apply to supply infrastructure. APGA and its members are open to the concept of additional strategic gas reserves – similar to but separate from Iona – but this is a different conversation than a reliability standard.

It is also worth noting that the proposed reliability standard is modelled on consumer value of reliability (VCR) – which is not necessarily a concept readily transferrable to the gas market, where the vulnerable customer in the event of a supply shortage is GPG.

3.3.1.1 APGA recommended reliability measure

Of the proposed options, APGA would suggest recommending to the ECMC that a design for an objective reliability measure of supply include:

- a combination of probabilistic reliability metrics (USE + peak demand target), with
- separate standards for the supply element of the supply chain, for
- the southern jurisdictions only.

This measure focuses on the ability of supply to meet forecast demand (including GPG demand) on peak days across the east coast and specifically in the southern states where supply can be constrained. As a market-led solution, it offers economically efficiency in

incentivising shippers to contract to secure supply where it makes sense to do so, rather than obligating overbuilding of infrastructure.

3.3.2 Monitoring and communication tools

3.3.2.1 Short Term PASA

A short-term (ST) projected assessment of system adequacy (PASA) is proposed to provide market participants with access to assessments of reliability and adequacy of supply.

There is already adequate existing data being collected by AEMO, the AER and the ACCC, sufficient to supply the necessary data to support a rolling 7-day outlook. This includes new data collected under Stage 1 of the ECGS reforms, and new data collected under the Pipeline Information Disclosure reforms. Therefore, APGA recommends that a ST PASA utilise this existing information only.

The gas industry has long called for greater sharing of data collected from the Market between agencies. It is appreciated that some agencies have stricter requirements to not disclose data. While direct sharing by agencies may be legally untenable, redistribution of collection obligations to agencies more legally able to confidentially share single sources of data between multiple agencies could reduce regulatory burden on market participants.

3.3.2.2 Medium Term PASA

Medium term (MT) PASA are currently used to identify and model power system security for the NEM. DCCEEW has not established or referred to any published evidence to demonstrate the necessity of an MT PASA for the gas supply chain.

As demonstrated by the forecasts of gas shortfalls for the southern jurisdictions from 2027 in the AEMO's Gas Statement of Opportunities (GSOO) 2023 and the ACCC Gas Inquiry 2017-30 June 2023 Interim Report, supply and capacity issues for gas markets can be demonstrated well in advance, supported by data already collected for AEMO's short- and medium-term capacity outlooks and the winter readiness outlooks.

Data collection for the purposes of informing such reports is not a cost-free exercise, and the burden of reporting has been increased substantially in the gas industry without as a result of recent reforms. DCCEEW has not identified a clear need for the additional data collection that would be required to support the creation of an MT PASA, or identified information gaps it is intended to solve. Therefore APGA and its members do not support the proposal for an MT PASA, and suggest instead that AEMO should refine the modelling undertaken for the GSOO to ensure it provides forecasting that is fit for purpose.

AEMO long term forecasting capabilities

It is worth noting that AEMO's modelling and assumptions have consistently under forecast the quantum of GPG and direct gas use required in the medium and long term future. This undermines the ability of gas customers to enter into sufficient firm supply contract necessary to meet demand before they need it, forcing up prices.

APGA commissioned Frontier Economics to develop a robust evidence base on the role of GPG in the transition to a net zero future.⁷ This report also demonstrated that AEMO has consistently underestimated the required GPG capacity in a given period, largely due to its assumptions that rely on levels of electrification that do not match reality. Further, future direct use forecasts showing substantial demand destruction are based on an assumption that gas use will be electrified, rather than decarbonised via renewable gas.⁸

Given the historical inaccuracy with AEMO's forecasting of GPG demand and the inconsistencies in gas forecasting for the GSOO and ISP, APGA does not have confidence that current forecasts of GPG demand are sufficient to provide gas customers with the confidence they need to contract an adequate supply of gas over the long term. As noted in the Frontier Economics report, AEMO's 2021 GSOO "forecast that GPG output during the 2020s will be significantly higher (around 3 times higher) than it forecasts in the 2020 ISP, for reasons that are not made clear." There is no reason to expect that the 2024 ISP will not follow the same trajectory as the 2020 and 2022 ISPs, overestimating the progress of electrification and underestimating demand for gas.

It is very likely that, all things considered, the actual need for GPG is likely to be greater than currently forecast.

This is not a justification for an MT PASA with associated increased data collection from industry. The data already collected is sufficient to provide more accurate forward analysis of expected GPG and other gas demand, be supply from natural gas or renewable gas. This would require significant reorientation of AEMO's forecasting scenarios and assumptions.

3.3.2.3 Threat signalling

Creating a separate threat signalling mechanism is generally not necessary for the Market, which is historically reliable.⁹ However, given that the Stage 1 reforms established threat notices, we are of the view that an objective, transparent signalling framework would be useful to more readily communicate the nature and severity of these threats to Market participants ahead of conferences. Ideally this framework would be based on defined threat levels reported by supply assets.

There may be benefits for increased linkages between this framework and the NEM (as per the example given in the consultation paper, where a supply event in the NEM may trigger increased GPG demand). This benefit does not extend to making these linkages automatic,

⁷ Frontier Economics, 2021, *The role of gas in the transition to net-zero power generation*, https://www.apga.org.au/sites/default/files/uploaded-content/field_f_content_file/frontier-economics-report-stc.pdf

⁸ AEMO, 2023, Figure 15 of the 2023 Gas Statement of Opportunities, available at https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2023/2023-gas-statement-of-opportunities.pdf?la=en#page=32

⁹ Gas transmission pipelines have ten times lower incidence of loss of supply events compared to high voltage transmission powerlines, in terms of loss of supply events per thousand km. See GPA Engineering, 2022, *Pipelines vs Powerlines: A Technoeconomic Analysis in the Australian Context*, available at https://www.apga.org.au/sites/default/files/uploaded-content/field_f_content_file/pipelines_vs_powerlines_-_a_technoeconomic_analysis_in_the_australian_context.pdf

however, as supply issues in the NEM do not always automatically, in every case, mean a corresponding supply issue in the Market.

3.3.2.4 Advance notice of closures

The proposal for a formalised advance notice of closure period is reasonable. While this information is generally published on the Bulletin Board as a factor that may affect medium-term capacity, we appreciate that this is not a requirement, and a formal obligation to publish would support capacity certainty.

An appropriate period would align with current uncontracted capacity outlook reporting for pipelines and production facilities – no more than 36 months.

3.3.3 Reliability and supply adequacy management tools

The introduction of reliability and supply adequacy management tools, in particular an RSA Contracting Mechanism, is the core of APGA approach to the Stage 2 reform framework. Care must be taken to avoid unintended consequences of harsh penalties which force wholesale gas consumers to take uneconomic actions. The proposed administered demand response mechanism also has merit in conjunction with RSA contracting, however the requirement for a supplier of last resort is questionable.

3.3.3.1 RSA contracting obligation

There is considerable merit in introducing an RSA contracting obligation, but the proposed penalty regime risks unintended consequences. The mechanism proposed in the consultation paper carries penalties that are modelled on those that apply under the Retailer Reliability Obligation in the NEM. While meant to influence specific contracting behaviours, when applied to gas market participants, it may not accomplish the desired behaviour. APGA suggests a 'penalty' approach that is more carrot than stick.

For an important proportion of Market participants, the value proposition of security of supply is small compared to the flexibility of accessing gas outside firm contracts. Because securing the additional supply is less feasible for these customers, civil penalties or obligations to purchase to mitigate a loss of supply event under an RSA contracting obligation risks forcing these customer participants out of the Market.

APGA proposes the RSA Contracting Obligation be designed for the gas market along the lines of the Retailer Reliability Obligation in the NEM but with an alternate penalty regime.¹⁰ Gas market participants found to be non-compliant in the event of a supply threat would not be subject to civil penalties or purchasing obligations, but instead be prevented from benefiting from AEMO directions until and unless they enter into sufficient contracts to secure their supply. This model would allow market participants to make business decisions around the security of long-term gas supply contracts that suits their business model and appetite for risk during a loss of supply event.

¹⁰ A T-n days Reliability Instrument trigger would be necessary, we suggest T-4 or T-5 may be appropriate for gas.

Retraction of AEMO support via powers of direction to secure supply

Instead of substantial civil penalties, APGA proposes that participants without secured supply during a supply adequacy event cede rights to supply assurance through AEMO powers of direction provided under Market Stage 1 reforms.

This would act to incentivise wholesale gas customers which do value AEMO supply assurance above the cost of securing supply to procure firm gas supply and transportation services. By respecting the right of businesses to make economically effective business decisions, it would avoid forcing wholesale gas customers which do not value supply assurance above the cost of securing supply to secure that supply.

Positioning at the top of the list of a demand response mechanism

In the event a demand response is activated, any load for which a wholesale gas customer does not secure adequate supply should be positioned at the top of the demand response prioritisation stack as the first demand to be reduced. This would provide further market signals on the value of adequately securing gas supply.

Non-negotiable security of supply

The above approach alone risks gas retailers and GPG operators choosing to not secure supply, leaving their customers open to insecure supply and high prices. APGA proposes that these risks be mitigated more directly via amendments to the NERL and NEL.

Gas Retail Reliability Obligation (Gas RRO)

APGA recommends that security of supply for retail gas customers be assured via a Gas RRO. Such provisions would be implemented under the NERL to be closer to other retail consumer protection law and require gas retailers to always demonstrate security of supply. The original RSA Contracting Obligation penalty regime considered within the Consultation Paper should apply to gas retailers which fail to comply with the Gas RRO.

This obligation could include an option for gas retailers to secure contractual rights to not guarantee supply for lower cost if this is a product that retail gas customers value. If this were to happen, the abovementioned penalties would only apply to gas supplied to retail gas customers alongside a gas retailer contractual security guarantee.

The proposed Gas RRO risks reducing the number of market participants in the gas retailing space, hence reducing gas retail market liquidity. APGA considers it of higher importance to protect security of supply for retail gas customers than to protect the right for gas retailers to risk gas supply for their customers by not securing wholesale gas supply.

GPG Security Mechanism

APGA recommends that the need for the NEM to have guaranteed GPG availability be supported by a GPG Security Mechanism. Such a mechanism would be implemented within the NEL to be closer to other electricity security law, potentially within the Electricity RRO. A GPG Security Mechanism would require AEMO forecasting of GPG security requirements and some way to influence or incentivise GPG operators for securing firm gas supply to meet the security requirement.

3.3.3.2 Administered demand response mechanism

The concept of an administered demand response mechanism is reasonable, assuming the mechanism is designed to avert perverse incentives on some gas customers for whom long periods of administered demand would threaten the viability of those businesses. Therefore we propose such a mechanism works in tandem with a supply reliability standard, and is limited to short term demand responses.

It is proposed that positioning at the top of the list of a demand response mechanism should be part of the penalty for being found to not have secure supply contracts under the RSA Contracting Obligation, alongside retraction of AEMO support via powers of direction to secure supply.

3.3.3.3 Supplier of last resort

Establishing a further supplier of last resort should not be necessary, given AEMO's trading fund established under the Stage 1 reforms meets the definition. As the consultation paper correctly identifies, AEMO's trading function may be distortionary in operation, but realistically any intervention of this kind would be distortionary.

However, if it is the intention of DCCEEW to proceed with establishing a supplier of last resort, a separate body should be identified for this purpose, rather than building on AEMO's trading function. Having AEMO be simultaneously the arbiter of interventions through directions, and the supplier of last resort, may create some perverse incentives and impede efficient market-led solutions, neither of which are easily addressed by further amendments to AEMO's functions.

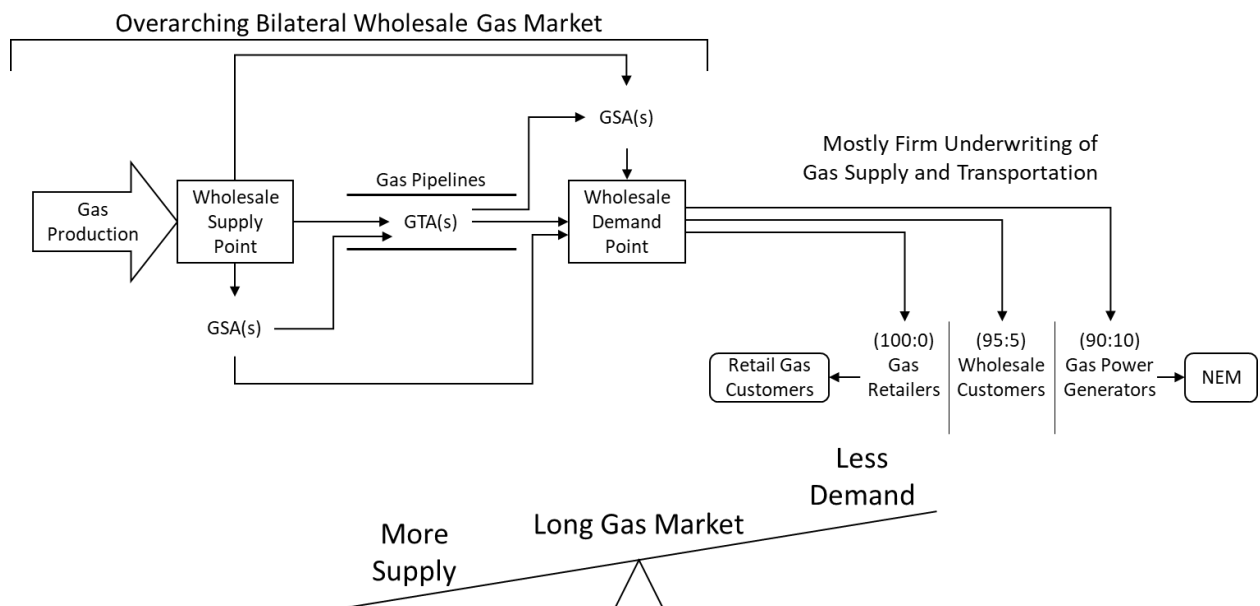
Appendix 1: A brief history of Market intervention

Foundation of the modern Market (late 1990s)

The modern Market arose with the introduction of the National Gas Agreement and the Gas Act which evolved into the National Gas Law (NGL) in later years (Figure A1):

- Exiting a period of privatisation, the market was long in low-cost supply and had ample transport capacity. In a long supply market, prices are set by the highest cost supply.
- Pipeline economic regulation was applied sparingly where necessary.
- Investment in new supply and transport is secured through long-term bilateral contracting which provided security for investors at low rates of return.
- Concern that gas sales and transportation could be sold above efficient price due to a lack of market transparency, with the risk of overpricing being in the order of tens of per cent relative to known past pricing.

Figure A1: Foundation of the modern East Coast Gas Market

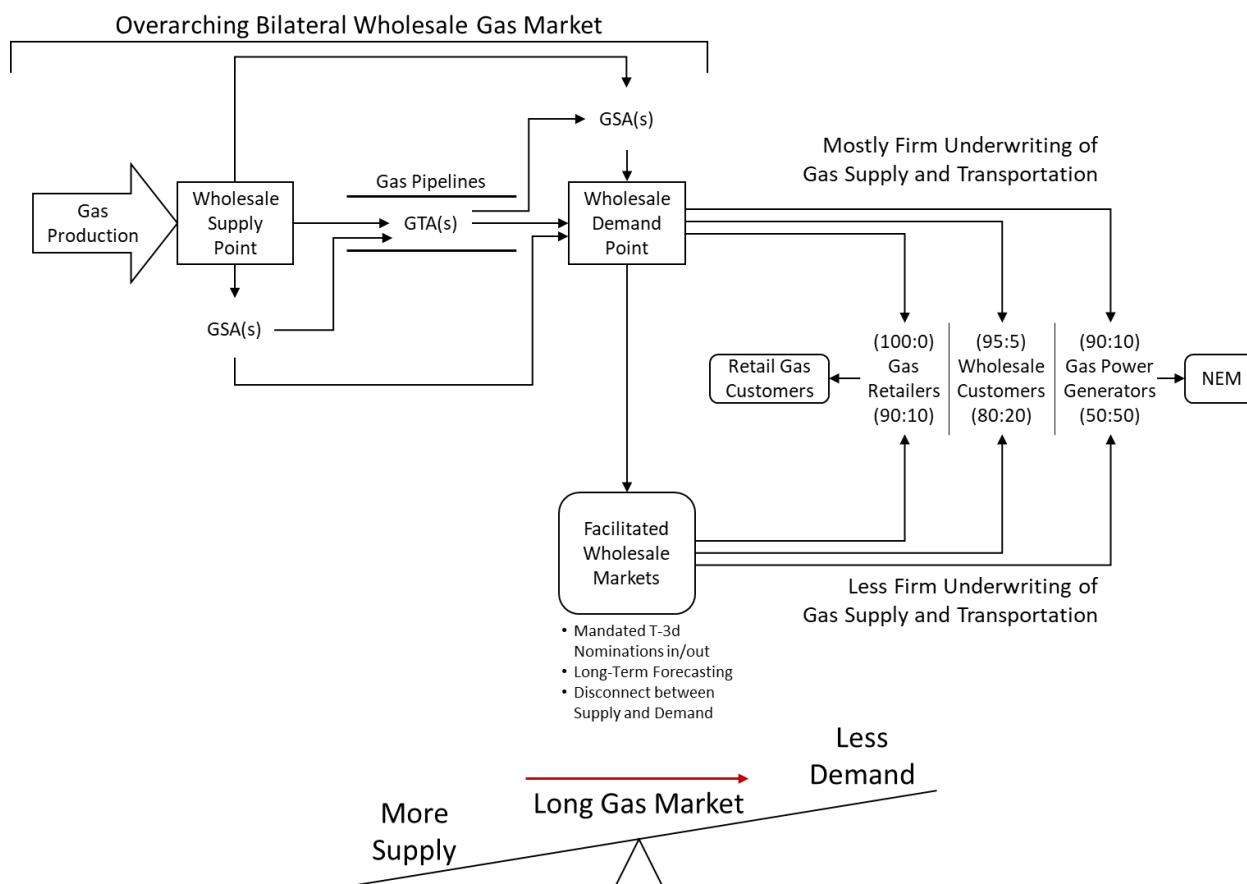


Introduction of facilitated markets (1999 through the early 2010s)

Facilitated markets were introduced to address supply liquidity and price transparency concerns (Figure A2):

- Pipeline industry opposed due to facilitated markets obscuring the link between gas consumption and long-term supply and haulage contracting.
- Gas customers secure short to medium term gains due to an avenue for the long supply market to sell excess gas at marginal prices.
- With less and less customers contracting directly with long-term supply and transport over time, less investment in supply and infrastructure is secured.
- The gas market is still long in supply at this point, but starts the slow shift towards shortening supply.

Figure A2: Introduction of facilitated markets

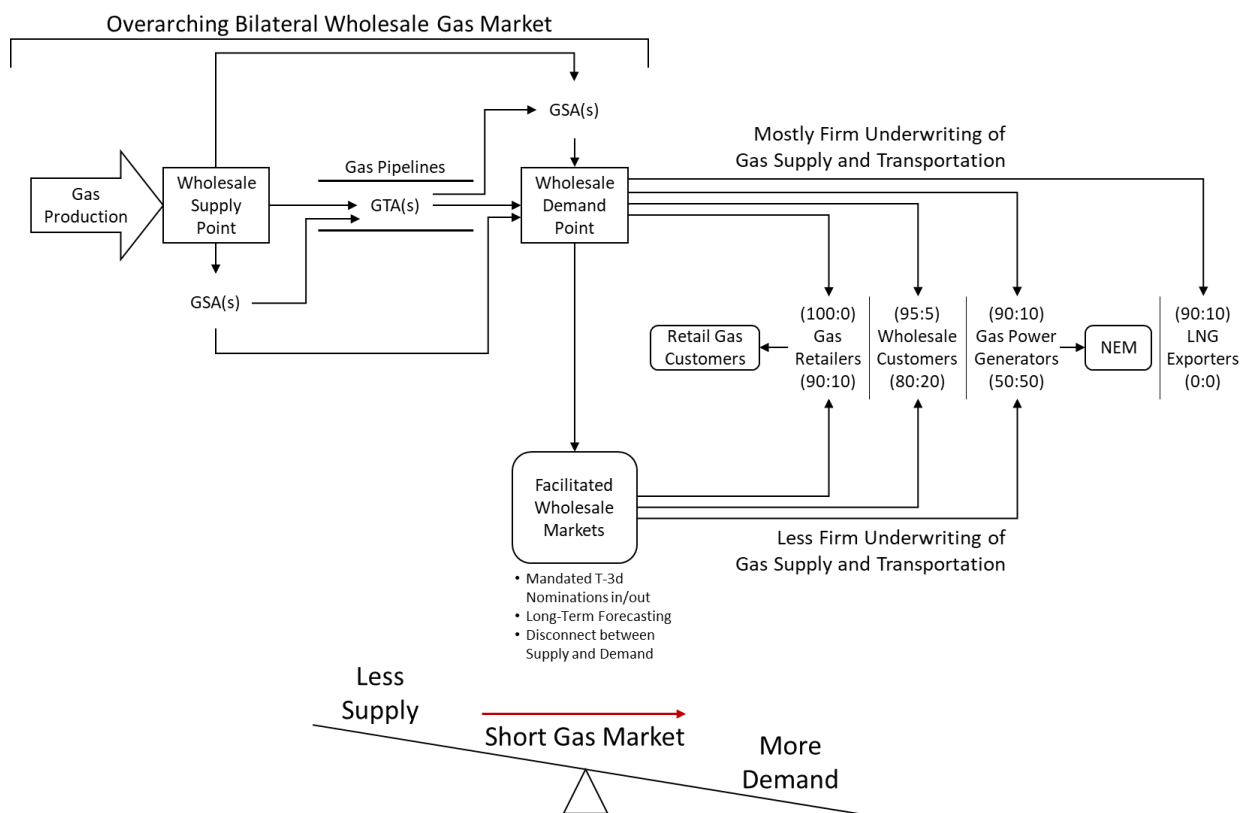


Introduction of LNG exporters (early 2010s)

LNG exporters linked the Market with international markets, introduced higher cost supply, and made the Market short in supply in the early 2010s (Figure A3):

- Introduction of LNG facilities introduced the risk that domestic prices could couple with international prices should the Market become short in supply.
- LNG exporters introduced less new supply than demand into the Market, sending the Market short in supply. In a short supply market, prices are set by the highest paying customer, risking two- to ten-fold gas price increase.
- Gas production introduced by exporters was of greater cost than previous supply, increasing the gas market marginal production floor price.
- The opportunity to proactively introduce regulation to address the above risks was not taken.

Figure A3: Introduction of LNG exporters



Introduction of moratoria and long-term gas forecasting (mid 2010s)

At the same time that short supply starts to increase prices, southern states introduce gas production moratoria and long-term gas forecasting starts to influence the market:

- Moratoria exacerbates the shortening of southern supply making southern states increasingly reliant on gas supply from Queensland and the Northern Territory.
- Long-term gas forecasting via AEMO instruments starts to consistently underestimate direct gas use and GPG gas demand and provides gas producers a tool through which apparent scarcity of supply can be used to negotiate higher gas prices.
- Gas producers start to only announce spare supply around one year ahead of each shortfall, keeping the market constantly near shortfall while not being in shortfall.

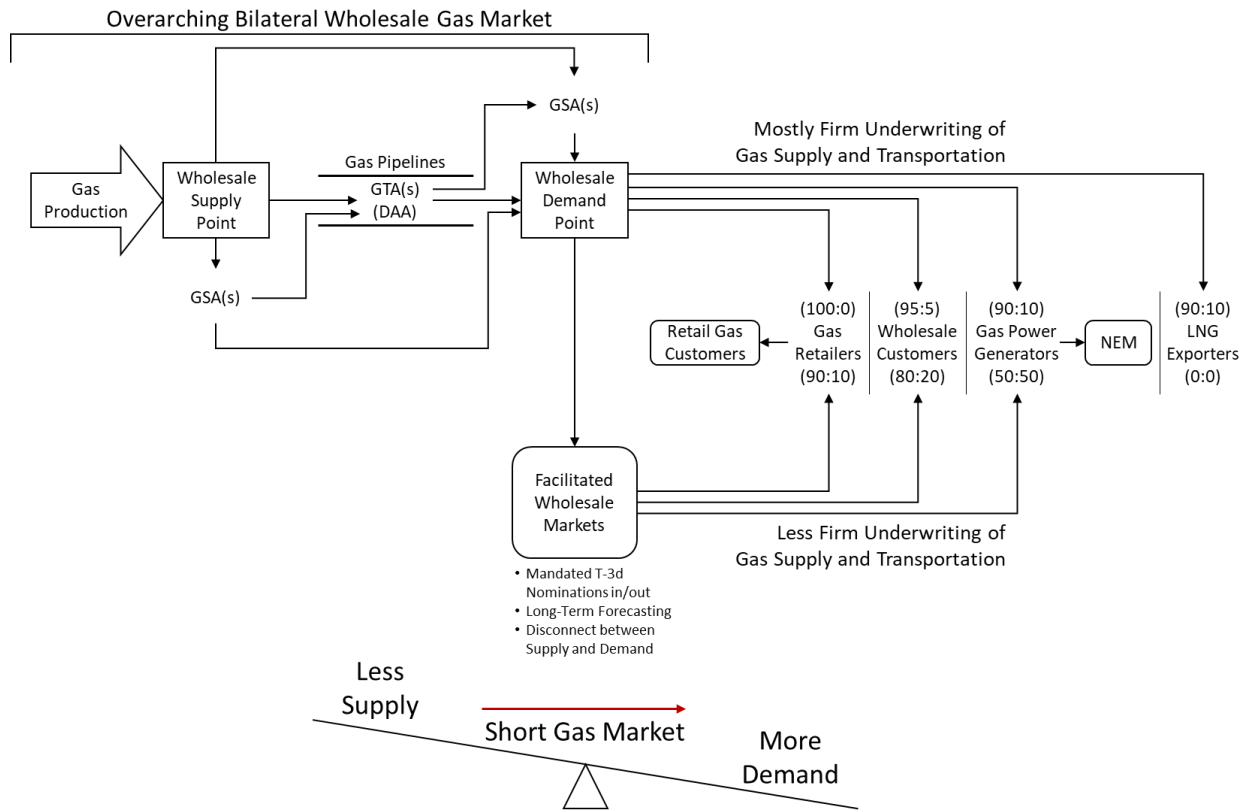
Tightening of gas infrastructure regulation (late 2010s to early 2020s)

Instead of addressing the risk of two- to ten-fold gas price increase through the shortening of the gas supply market, reform focuses on constraining gas infrastructure rate of return (Figure A4):

- Concerns that a lack of transparency in GTA pricing could lead to higher transport prices in the order of tens of percent of transport cost (units of percent of gas cost).
- The NGL is amended to apply economic regulation to all gas pipelines further chilling investment in new and upgraded gas infrastructure.
- The Day Ahead Auction is introduced, taking pipeline capacity paid for by wholesale gas customers as a security of supply measure and selling this to their competitors at a zero-

dollar starting price, reducing incentive for wholesale customers to pay to secure their own gas supply. This further obscured the link between gas consumption and gas transmission contracting, negatively impacting investment in gas infrastructure.

Figure A4: Tightening of gas infrastructure regulation



The 2022 gas crisis

The combination of the above interventions have reduced Market resilience, laying the ground for the 2022 gas crisis. The gas market was short in supply and getting shorter, with:

- LNG exporters creating the short market.
- Reduced investment in new supply in the decade since, due to a lack of government action in support of new supply, supply moratoria, and facilitated markets obscuring the link between consumption and supply contracting.

The short Market only had enough supply to fill either all possible LNG demand or all possible Market demand (including all GPG). This meant Market prices spiked to maximum once both LNG and NEM markets became simultaneously short of supply.

At this point, unaligned facilitated market price limits and unrevised NEM price intervention provisions created a combination of infeasible GPG generation conditions and cross market arbitrage opportunities across gas and electricity markets, constituting market failure.

AEMO was ultimately forced to intervene and eventually suspend markets. At no point was there insufficient gas to continue to generate GPG or supply domestic customers. During this period:

- At least one gas retailer was unable to service its customer base.
- Numerous GPG were unable to generate unless directed by AEMO without making material losses.
- Wholesale gas customers which had secured supply and price certainty through long term contracting continued to operate or chose to on sell their gas and reduce their demand.
- Wholesale gas customers for which it was the right business decision to not secure supply and price certainty through long term contracting, rather opting to reduce gas use in times of high prices, did so.

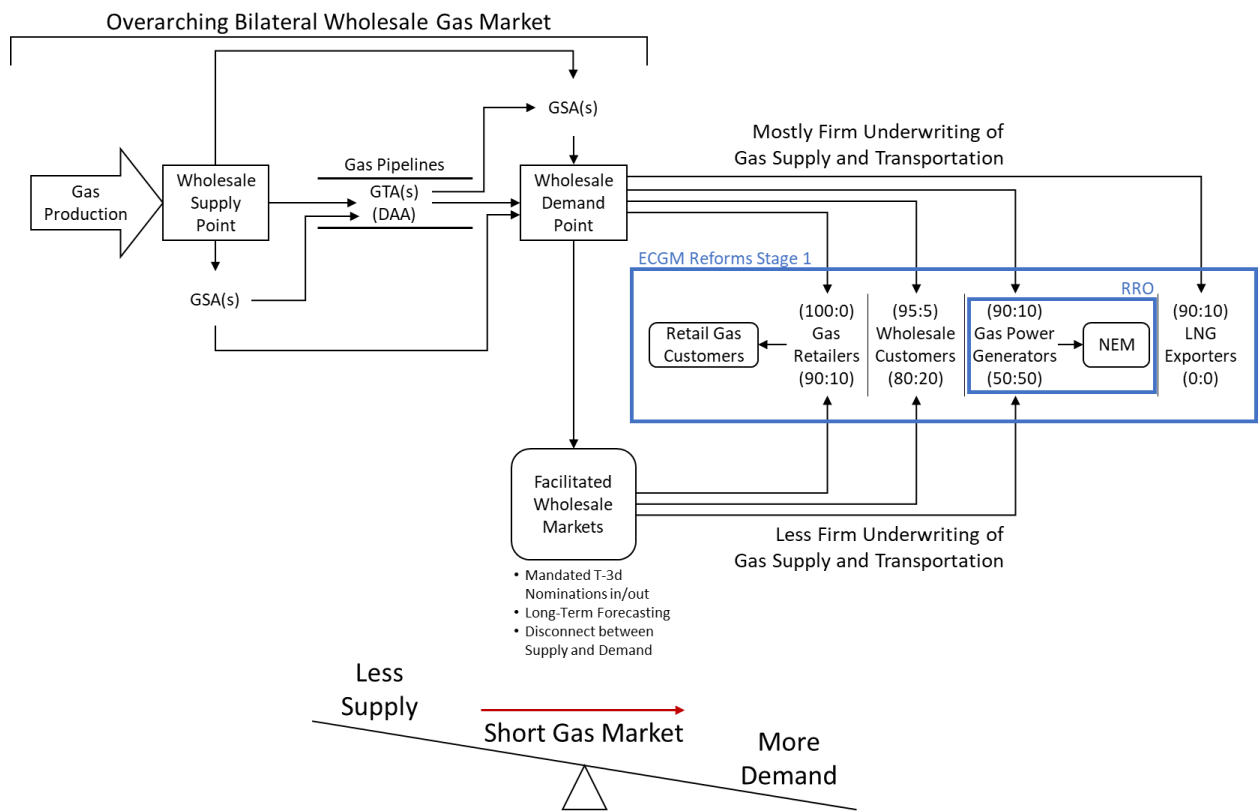
Intervention since the 2022 gas crisis

Since the 2022 gas crisis, several rapid interventions have been put in place to immediate effect which introduce further risk to market resilience (Figure A5).

- A short- and medium-term gas supply price cap has been introduced, further chilling investment in gas supply.
- Stage 1 Market reforms introduced directions powers. This gave AEMO the power to direct gas market participants to ensure supply is guaranteed for customers, further reducing the need for wholesale gas customers to contract in order to ensure supply security and price if left as are.

The Stage 1 reforms are not the intended end state of this reform process, and the commencement of Stage 2 Market reforms are intended to support a more secure, resilient and flexible Market.

Figure A5: Interventions since the 2022 gas crisis



Appendix 2: Responses to Consultation questions

<p>1. Do you think there is value in including a gas market reliability standard in the reliability and supply adequacy framework? Please explain your response.</p>	<p>There is a case to be made for an objective reliability standard for <i>supply</i>, being the basis for AEMO directions decisions around potential supply inadequacy events.</p>
<p>2. What, if any, impact(s) do you think the introduction of a gas market reliability standard could have on market participants and the market more generally?</p>	<p>Assuming our recommendation for a market-led solution is taken, it offers economically efficiency in incentivising shippers to contract to secure supply where it makes sense to do so, rather than obligating overbuilding of infrastructure.</p>
<p>3. Qualitatively, what do you think the main costs, benefits and/or risks would be of implementing a gas market reliability standard?</p>	<p>An objective, transparent reliability standard framework for AEMO to exercise its directions powers in the event of a gas supply adequacy threat would be a useful tool for market participants.</p> <p>It is also worth noting that the proposed reliability standard is modelled on consumer value of reliability – which is not necessarily a concept readily transferrable to the gas market, where the vulnerable customer in the event of a supply shortage is GPG.</p>
<p>4. Do you think a reliability standard is the appropriate solution to address the potential problems set out in section 2.2.1, or are there other alternatives that you think should be considered by Officials? If you think there are other alternatives that should be considered, please outline what they are and explain why you think they are more appropriate.</p>	<p>This is considered in more detail in our submission, but the problems in section 2.2.1 could be averted by pursuing reforms that seek to incentivise increases in supply. In the current context, and considering the Stage 1 reforms that have already been implemented, a reliability standard has merit.</p>
<p>5. If a decision is made to implement a gas market reliability standard, what form do you think it should take?</p>	<p>A <i>supply</i> reliability measure should combine a USG and peak demand standard, with separate standards for the supply element of the supply chain, for the southern jurisdictions only should be explored.</p>
<p>6. If you think a USG standard (Option 1) should be implemented, do you think it will be capable of identifying potential shortfalls in peak day deliverability?</p>	<p>A combination of a USG and a peak demand standard should be explored.</p>
<p>7. If a peak demand standard was to be used under either Options 2 or 3:</p>	<p>Options for a peak demand standard should be developed in further consultation with industry – APGA does not immediately have a view on the length of the standard.</p>

<p>a. do you think a 1-in-2 year, 1-in-10 year or 1-in-20 year standard should be adopted?</p> <p>b. do you think a different peak demand standard should apply to GPG? Please explain your responses to these questions.</p>	
<p>8. If an N-1 redundancy standard was to be used, do you think it should assume an outage of the largest supply infrastructure or sub-components of that infrastructure?</p>	<p>APGA does not support an N-1 standard. However, if it were implemented, it should only apply to sub-componentry.</p>
<p>9. Are there any specific matters you think need to be considered when estimating a gas VCR?</p> <p>a. Do you think widespread and long duration outages likely to be more relevant in gas than they are in electricity and should be factored into the gas VCR?</p> <p>b. Do you think an east coast wide VCR should be estimated, or do you think separate VCRs should be estimated for: i. each region (i.e. for southern jurisdictions and northern jurisdictions)? ii. each jurisdiction?</p>	<p>We consider this in detail above, but in short, the way gas customers value the reliability of supply is not the same as the way NEM participants value supply. Market participants who do not entirely cover themselves with firm contracts do so for business reasons, including GPG, and there is no way for the ultimate customer (i.e. retail gas customers) to 'value' that reliability of supply.</p>
<p>10. Do you think the reliability standard should apply to natural gas only or could it apply to other covered gases that are suitable for consumption as natural gas (e.g. biomethane)? If it were to apply to other covered gases that are suitable for consumption as natural gas, what, if any effect, do you think this could have on the development of renewable gases?</p>	<p>It is likely that market development for renewable gases will take a different path than that of the east coast gas market in the last decade. It is currently unnecessary to apply reliability standards to the renewable gas market and DCCEEW should exercise caution in recommending market mechanisms that would require it.</p>
<p>11. Are there any specific matters that you think need to be considered when determining the level of a gas market reliability standard?</p>	<p>APGA has no view on this.</p>
<p>12. Do you think that the governance arrangements for the reliability standard should be based on the standard NGR governance arrangements with:</p> <p>a. the AER responsible for estimating a gas VCR; and</p> <p>b. the reliability standard specified in the NGR and the AEMC responsible for considering any rule changes related to the reliability standard and facilitated market parameters? If not, please explain why.</p>	<p>This proposal has merit, as long as the AER makes the VCR estimation with a full understanding of the working of the gas market.</p>

<p>13. Do you think there is a need to provide for periodic reviews of the reliability standard and facilitated market parameters? If so, who do you think should undertake these periodic reviews:</p> <p>a. the AEMC in consultation with market participants and market bodies?</p> <p>b. a gas market reliability panel?</p>	<p>APGA does not have a view on this, other than that any review methodology should prioritise consultation with market participants.</p>
<p>14. If you think a gas market reliability panel should undertake the reviews, please set out:</p> <p>a. what you think the benefits would be of establishing such a panel relative to the AEMC undertaking the reviews in consultation with market participants and market bodies; and</p> <p>b. if you think those benefits are likely to outweigh the costs and risks of establishing and maintaining such a panel.</p>	<p>See above.</p>
<p>15. Are there any other governance options that you think should be considered?</p>	<p>APGA has no view on this.</p>
<p>16. Gas PASA:</p> <p>a. Do you think there is value in providing for a gas PASA in the reliability and supply adequacy framework? Please explain your response.</p> <p>b. What, if any, impact(s) do you think the introduction of a gas PASA could have on market participants and the market more generally?</p> <p>c. Do you think a gas PASA is the appropriate solution to address the potential problems set out in section 3.2.1, or are there other alternatives that you think should be considered by Officials? If there are other alternatives you think should be considered, please outline what they are and why you think they are more appropriate.</p>	<p>There is value in a ST PASA to the extent that information is already collected by various authorities sufficient to collate a rolling 7-day ST PASA.</p> <p>APGA does not consider there is sufficient cause for additional PASA, including a MT and seasonal PASA.</p>
<p>17. Objective threat signalling mechanism:</p> <p>a. Do you think there is value in providing for an objective threat signalling mechanism in the reliability and supply adequacy framework? Please explain your response.</p>	<p>APGA sees value of an objective threat signalling mechanism that would provide a 'traffic light' guide to AEMO threat notices for Market participants. Ideally this framework would be based on defined threat levels reported by supply assets.</p>

<p>b. What, if any, impact(s) do you think the introduction of such a signalling mechanism could have on market participants and the market more generally?</p> <p>c. Do you think an objective threat signalling mechanism is the appropriate solution to address the potential problems set out in section 3.2.1, or are there other alternatives that you think should be considered by Officials? If there are other alternatives you think should be considered, please outline what they are and why you think they are more appropriate.</p>	
<p>18. Advance notice of closure for supply infrastructure:</p> <p>a. Do you think there is value in requiring an advance notice of closure for supply infrastructure mechanism in the reliability and supply adequacy framework? Please explain your response.</p> <p>b. What, if any, impact(s) do you think the introduction of such a notice could have on market participants and the market more generally?</p> <p>c. Do you think an advance notice of closure requirement for supply infrastructure is the appropriate solution to address the potential problems set out in section 3.2.1, or are there other alternatives that you think should be considered by Officials? If there are other alternatives you think should be considered, please outline what they are and why you think they are more appropriate.</p>	<p>APGA considers this to be reasonable, as long as it aligned to the timeframe required for uncontracted capacity outlook reporting for pipelines and production facilities – no more than 36 months.</p>
<p>19. If a gas PASA was to be implemented (see section 3.3.1.1):</p> <p>a. What approach to determining regional boundaries do you think would be of greatest use to market participants in terms of effectively conveying information on the nature of any reliability or supply adequacy threats?</p> <p>b. Do you think the regional boundaries should be the same as between an ST and MT gas PASA, or is there value in using smaller regions for an ST PASA? If you think there is value in using smaller regions for the ST gas PASA,</p>	<p>APGA has no view on this other than to note that regional boundaries may have merit (such as specific consideration of the southern jurisdiction).</p>

<p>please set out some examples of what the breakdown could be.</p>	
<p>20. If a decision were made to implement a gas PASA, do you think there would be value in requiring AEMO to publish:</p> <p>a. an ST gas PASA?</p> <p>b. an MT gas PASA? Please explain your response</p>	<p>See Q16.</p>
<p>21. In relation to the information available to AEMO to prepare a gas PASA set out in Table 3.1:</p> <p>a. Is there any additional information that you think AEMO would require to prepare an ST or MT gas PASA that has not been included in this table?</p> <p>b. What approach do you think should be used to forecast GPG demand for the purposes of an MT gas PASA? Please explain what this would involve.</p>	<p>See Q16.</p>
<p>22. If an ST gas PASA was to be implemented:</p> <p>a. Do you think that a rolling 7-day outlook with a daily resolution updated daily (or more frequently if there is a material intra-day change) should be adopted? If not, please explain why and what timeframes you think would be more appropriate.</p> <p>b. Do you think there would be value in providing for intra-day resolution for the DWGM? If so, is it likely to result in any additional reporting obligations?</p> <p>c. Qualitatively, what do you think the main costs, benefits and/or risks would be of implementing an ST gas PASA?</p>	<p>See Q16.</p>
<p>23. If an MT gas PASA was to be implemented:</p> <p>a. What outlook period do you think should be adopted and why:</p> <p>i. a rolling 6 month outlook period?</p> <p>ii. a rolling 12 month outlook period?</p>	<p>See Q16.</p>

<p>iii. a rolling 24 month outlook period?</p> <p>b. What do you think the main costs and benefits to market participants would be of the outlook period you think should be adopted?</p> <p>c. If a 12 or 24 month outlook period was to be adopted, which of the following options do you think should be used to extend the 6 month outlook period currently provided for by the disclosure obligations in Part 27 of the NGR and why:</p> <p>i. Supplement the existing disclosure requirements with AEMO modelling of forecast demand and supply (Option 2)?</p> <p>ii. Amend the existing disclosure obligations in Part 27 of the NGR by either: (1) Extending the disclosure obligations to 12 or 24 months (Option 3A)? (2) Replacing the disclosure obligations with a principles based approach (similar to what the AEMC has implemented for the NEM ST PASA), which would allow AEMO, in consultation with industry, to determine what information should be reported and when it should be reported (Option 3B)?</p> <p>iii. Targeted additional information requirements with regular reporting (Option 4)?</p> <p>iv. Another option not identified in the consultation paper? If you think another option should be considered, please explain what it is and why you think it should be adopted.</p> <p>d. Do you think the MT gas PASA should have a daily resolution and be updated monthly (or more frequently if there is a material change)? If not, please explain why and what timeframes you think would be more appropriate.</p> <p>e. Qualitatively, what do you think the main costs, benefits and/or risks would be of implementing an MT gas PASA?</p>	
<p>24. Do you think there is value in requiring AEMO to publish a quarterly seasonal PASA report that would draw on information from the gas PASA, Bulletin Board, GSOO and VGPR modelling and include an assessment of things such as the adequacy of gas held in storage and emerging</p>	<p>APGA understands that AEMO is effectively already preparing seasonal PASA reports, in the winter readiness outlooks. These data should be sufficient.</p> <p>Also see Q16.</p>

threats help inform the market participants' seasonal readiness plans?	
25. If a quarterly seasonal PASA report was to be developed, what would you like to see included in the report?	See Q24.
26. Qualitatively, what do you think the main costs, benefits and/or risks would be of introducing this report?	See Q16.
27. If a decision was made to implement an objective threat signalling mechanism: a. do you think the threat levels described in section 3.3.2 (i.e. early warning, alert or emergency) should be employed, or are there more appropriate threat levels that you think should be employed? b. do you think there should be an automatic link between the NEM and gas market threat signalling mechanisms? Or are other changes required to these two signalling mechanisms to recognise the increasing interrelationship between the markets?	APGA does not have a view on the threat levels as described – as long as they are transparent and well understood, they should serve the intended purpose. An automatic link between the NEM and gas market threat signalling mechanisms is not always desirable or necessary.
28. Qualitatively, what do you think the benefits, costs and risks would be of implementing a more objective threat signalling mechanism?	Providing an objective threat signalling mechanism would be of benefit to market participants in more easily communicating an accurate, transparent measure of severity of the threat.
29. If a decision was made to implement an advance notice of closure requirement: a. Do you think it should be restricted to supply infrastructure (e.g. production, pipeline, compression and storage facilities), or are there other facilities you think it should apply to? b. What advance notice period do you think would be appropriate? c. Do you think penalties should apply to facility operators that fail to provide sufficient notice in the same way that they do in the NEM?	An advance notice of closure requirement should be implemented on <i>relevant</i> infrastructure, including supply or other infrastructure. A period of no more than 36 months is appropriate. APGA does not have a specific view on penalties.
30. Qualitatively, what do you think the benefits, costs and/or risks would be of implementing an advance notice of closure requirement?	Sufficient data is generally provided on the Bulletin Board, but a formal advance notice of closure requirement has merit. It would need to be sensitive align with current uncontracted

	capacity outlook reporting for pipelines and production facilities.
<p>31. Do you agree with the findings from the:</p> <p>a. MJA study on contracting behaviour set out in section 4.2.3.1? If not, please explain your view.</p> <p>b. ACIL Allen study on demand response set out in section 4.2.3.2? If not, please explain your view.</p>	APGA has no view on this.
<p>32. RSA contracting obligation:</p> <p>a. Do you think there is value in providing for an RSA contracting obligation in the reliability and supply adequacy framework? Please explain your response.</p> <p>b. What, if any, impact(s) do you think the introduction of an RSA contracting obligation could have on market participants and the market more generally?</p> <p>c. Qualitatively, what do you think the main costs, benefits and/or risks would be of implementing an RSA contracting obligation?</p> <p>d. Do you think an RSA contracting obligation is the appropriate solution to address the potential problems identified in sections 4.2.2 and 4.2.3.1, or are there other alternatives that you think should be considered by Officials? If there are other alternatives you think should be considered, please outline what they are and why you think they are more appropriate.</p>	<p>There is merit in introducing an RSA contracting obligation. A suggested approach to this is explained in detail in Section 3.3.3.1 of this submission. In summary, an RSA contracting obligation would have an impact on market participants, but that would not always be a positive one because of the way that gas market participants interact with the market in managing their risk through supply contracts.</p> <p>A variation in the proposed penalties is proposed to more appropriately manage these interactions.</p>
<p>33. Administered demand response mechanism:</p> <p>a. Do you think there is value in providing for an administered demand response mechanism in the reliability and supply adequacy framework? Please explain your response.</p> <p>b. What, if any, impact(s) do you think the introduction of an administered demand response mechanism could have on market participants and the market more generally?</p> <p>c. Qualitatively, what do you think the main costs, benefits and/or risks would be of</p>	APGA does not have a specific view on the design of an administered demand response mechanism, other than to highlight our proposal for an RSA Contracting Mechanism and associated penalties. One such penalty suggested for entities which fail to show contracted supply is that they are placed at the top of the administered demand response stack.

<p>implementing an administered demand response mechanism?</p> <p>d. Do you think an administered demand response mechanism is the appropriate solution to address the potential problems identified in sections 4.2.2 and 4.2.3.2, or are there other alternatives that you think should be considered by Officials? If there are other alternatives you think should be considered, please outline what they are and why you think they are more appropriate.</p>	
<p>34. Supplier of last resort mechanism:</p> <p>a. Do you think there is value in building on the trading function by providing for a supplier of last resort mechanism in the reliability and supply adequacy framework? Please explain your response.</p> <p>b. What, if any, impact(s) do you think building on the trading function by providing for a supplier of last resort mechanism could have on market participants and the market more generally?</p> <p>c. Qualitatively, what do you think the main costs, benefits and/or risks would be of building on the trading function by providing for a supplier of last resort mechanism?</p> <p>d. Do you think a supplier of last resort mechanism is the appropriate solution to address the potential problems identified in sections 4.2.2 and 4.2.3.1, or are there other alternatives that you think should be considered by Officials? If there are other alternatives you think should be considered, please outline what they are and why you think they are more appropriate.</p>	<p>APGA does not consider a supplier of last resort mechanism to be necessary, either as an addition to AEMO's existing trading function or as an additional mechanism, and we are concerned as to the potentially distortionary impacts on the market if AEMO were that supplier of last resort.</p> <p>Having AEMO be simultaneously the arbiter of interventions through directions, and the supplier of last resort, may create some perverse incentives and impede efficient market-led solutions, neither of which are easily addressed by further amendments to AEMO's functions.</p>
<p>35. Are there any other reliability and supply adequacy management tools that you think should be considered by Officials? If so, please explain why you think they are required.</p>	<p>APGA has no view on this.</p>
<p>36. If a decision was made to implement an RSA contracting obligation, which of the following design options do you think should be implemented and why:</p>	<p>APGA has no firm view on this. Applying it to the east coast may be less distortionary, however, where we recommend a reliability obligation for the southern jurisdiction, a</p>

<p>a. A southern jurisdiction winter deliverability contracting obligation (Option 1)?</p> <p>b. An east coast wide firm contracting obligation (Option 2)?</p> <p>c. Another design option? If you think another option should be considered, please explain what it is and why you think it should be adopted.</p>	<p>similarly restricted RSA contracting obligation would follow.</p>
<p>37. If an RSA contracting obligation was to be implemented:</p> <p>a. Do you think the obligations should apply to:</p> <p>i. Retailers and GPGs?</p> <p>ii. GPGs only?</p> <p>iii. Retailers only? Please explain your response.</p> <p>b. In the case of GPGs:</p> <p>i. Do you think it would be financially viable for GPGs to be subject to an RSA contracting obligation? If not, are there any other simpler or more direct ways to address the reliability and supply adequacy threats posed by GPG demand?</p> <p>ii. What, if any effect, a contracting obligation or alternative approach could have on competition in the NEM?</p> <p>c. Do you think a size threshold should be adopted for liable entities? If so, what do you think is an appropriate size threshold?</p> <p>d. Do you think any other reforms would be required to enable liable entities to contract on reasonable terms? If so, please explain what additional reforms you think are necessary.</p> <p>e. How far in advance of a forecast reliability gap do you think the RSA contracting instrument would need to be triggered to provide liable entities sufficient time to contract and for any investment that may be required?</p> <p>f. How should the geological, land access, regulatory, commercial and other investment challenges that may be associated with the development of new supply infrastructure be</p>	<p>An RSA contracting obligation should broadly apply to retailers and GPGs.</p> <p>More detail on the proposed model is in section 3.3.3.1 of our submission.</p> <p>APGA proposes the following protections for customers of those entities:</p> <p>A Gas Retail Reliability Obligation (Gas RRO) under the NERL to require gas retailers to always demonstrate security of supply. The original RSA Contracting Obligation penalty regime considered within the Consultation Paper should apply to gas retailers which fail to comply with the Gas RRO.</p> <p>A GPG Security Mechanism under the NEL to be closer to other electricity security law, potentially within the Electricity RRO. This would require AEMO forecasting of GPG security requirements and some way to influence or incentivise GPG operators for securing firm gas supply to meet the security requirement.</p>

<p>recognised in the contracting obligations and/or penalty regime?</p> <p>g. Do you think the contracting obligation should allow liable entities to procure other covered gases that are suitable for consumption as natural gas (e.g. biomethane and low hydrogen blends)?</p> <p>h. Do you think it would be necessary to provide for:</p> <p>i. A liquidity obligation? If so, please explain how you envisage this obligation would work.</p> <p>ii. A voluntary book build mechanism administered by AEMO to facilitate the development of any new supply and/or capacity that may be required? If so, please explain how you envisage this would work.</p> <p>i. Do you think the contracting obligation would incentivise retailers to help transition customers to alternative fuels (where feasible), or would a separate tool be required to achieve this?</p>	
<p>38. If a southern jurisdiction winter deliverability contracting obligation (Option 1) was to be implemented:</p> <p>a. are there any additional design features that you think need to be considered (see Table 4.2)?</p> <p>b. are there any design features that have been proposed that you think would not work in the east coast gas market (see Table 4.2)?</p> <p>c. are there any material costs, risks or benefits associated with this option that you think should be considered?</p>	<p>See Q36.</p>
<p>39. If an east coast wide firm contracting obligation (Option 2) was to be implemented:</p> <p>a. are there any additional design features that you think need to be considered (see Table 4.2)?</p> <p>b. are there any design features that have been proposed that you think would not work in the east coast gas market (see Table 4.2)?</p>	<p>See Q36.</p>

<p>c. are there any material costs, risks or benefits associated with this option that you think should be considered?</p>	
<p>40. If a decision were made to implement an administered demand response mechanism, do you think the design option described in section 4.3.2 should be implemented, or is there another option that you think could unlock demand response in a more cost effective way?</p>	<p>APGA has no firm view on the design of the administered demand response mechanism, but the proposed design seems reasonable.</p>
<p>41. If the design option described in section 4.3.2 was to be implemented:</p> <p>a. do you think it should only be open to large gas users to participate in, or should retailers and/or demand response aggregators also be able to participate?</p> <p>b. do you think it would be necessary to make availability payments to panel members to encourage them to participate, or could they just be paid a pre-activation or activation payment?</p> <p>c. are there any additional design features that you think need to be considered?</p>	<p>APGA has no view on this.</p>
<p>42. If a decision was made to implement a supplier of last resort mechanism, which of the following design options do you think should be implemented and why:</p> <p>a. a southern jurisdiction winter deliverability supplier of last resort mechanism (Option 1)?</p> <p>b. an east coast wide RERT-style supplier of last resort mechanism (Option 2)?</p> <p>c. another design option? If you think another option should be considered, please explain what it is and why you think it should be adopted.</p>	<p>APGA does not believe a supplier of last resort mechanism is necessary.</p>
<p>43. In relation to the risk of crowding out market participants:</p> <p>a. Do you think it feasible to AEMO to procure 'out of market' gas (i.e. gas that would not otherwise be available to the market) or other services (e.g. transportation and storage services)? If so, how would this occur and are there any risks associated with doing so?</p>	<p>APGA has no view on this.</p>

<p>b. If it is not feasible to procure 'out of market' gas or other services, is there any other way that you think the risk of AEMO crowding out market participants could be addressed?</p>	
<p>44. Do you think:</p> <p>a. the supplier of last resort mechanism should only focus on natural gas, or should it also allow AEMO to procure other covered gases that are suitable for consumption as natural gas (e.g. biomethane and low hydrogen blends)?</p> <p>b. any additional measures (over and above a causer pays approach to cost allocation) are required to counter the impact that AEMO acting as supplier of last resort may have on market participants' incentives to take their own actions to address the threats?</p>	<p>APGA considers it premature to apply a supplier of last resort mechanism to renewable gases – as there is no evidence that such a mechanism will be necessary in the absence of distortions which have been steadily applied to the east coast gas market.</p>
<p>45. If a southern jurisdiction winter deliverability supplier of last resort mechanism (Option 1) was to be implemented:</p> <p>a. do you think AEMO should only be able to contract and/or hold a storage reserve for the winter period, or should it be able to contract for a longer period?</p> <p>b. are there any additional constraints that you think should apply to this mechanism that have not been identified in Table 4.3?</p> <p>c. are there any additional design features that you think need to be considered for this option (see Table 4.3)?</p> <p>d. are there any design features that have been proposed that you think would not work in the east coast gas market (see Table 4.3)?</p> <p>e. are there any material costs, risks or benefits associated with this option that you think should be considered?</p>	<p>See Q42.</p>
<p>46. If an east coast wide RERT-style supplier of last resort mechanism (Option 2) was to be implemented:</p> <p>a. are there any additional constraints that you think should apply to this mechanism that have not been identified in Table 4.3?</p>	<p>See Q42.</p>

<p>b. are there any additional design features that you think need to be considered (see Table 4.3)?</p> <p>c. are there any design features that have been proposed that you think would not work in the east coast gas market (see Table 4.3)?</p> <p>d. are there any material costs, risks or benefits associated with this option that you think should be considered?</p>	
<p>47. Do you think there is value in aligning the GS00 and VGPR with the reliability and supply adequacy framework?</p> <p>– If so, are there any changes contemplated in section 5.1 that you think are unnecessary, or are there other changes that you think should be considered?</p> <p>– If not, please explain why. Are there any material costs, risks or benefits that you think should be considered when deciding whether or not to align the GS00 and VGPR with the framework?</p>	<p>There is benefit in ensuring alignment between forecasting tools. As noted in section 3.3.2.2, even AEMO’s separate forecasting tools (the ISP and the GS00) do not concur on forecasting methodology for gas demand. This makes it challenging for gas market participants, let alone regulators, to make supply contracting decisions.</p> <p>What changes need to be made to align the forecasting tools will depend on the design of the Reliability Standard, RSA Contracting Standard and the other reforms proposed.</p>
<p>48. Do you think there is value in trying to achieve greater alignment between the GS00, VGPR and NEM forecasting tools?</p> <p>– If so, are there any changes contemplated in section 5.2 that you think are unnecessary, or are there other changes that you think should be considered?</p> <p>– If not, please explain why. Are there any material costs, risks or benefits that you think should be considered when deciding whether to align the GS00 and VGPR with the NEM forecasting tools?</p>	<p>Caution should be exercised in aligning the GS00/VGPR with NEM forecasting tools, given the differences in these markets. How this would work is again dependent on the design selected for the Stage 2 reforms.</p>