



2 July 2015

Australian Pipelines
& Gas Association
T 02 6273 0577
F 02 6273 0588
W www.apga.org.au
A 1st Floor,
7 National Circuit
Barton ACT 2600
PO Box 5416,
Kingston ACT 2604

Mr Rod Sims
Chairman
Australian Competition and Consumer Commission
Via email: gas.inquiry@accc.gov.au

SUBMISSION TO THE EAST COAST GAS INQUIRY

Dear Mr Sims

The Australian Pipelines and Gas Association welcomes the opportunity to provide a response to the Commission's East Coast Gas Inquiry. APGA has long advocated an active consideration of policy mechanisms to improve competition in gas supply markets and welcomes the Inquiry's focus on this critical aspect of market viability.

As set out in the submission, competition in the gas transmission sector has increased as the level of interconnectivity in the Eastern Australian gas market, driven by investment in new pipelines and capabilities, has increased. In addition, the access regime set out in the *National Gas Law 2008* complements the contract carriage framework to enable the commercially negotiated outcomes seen in the market for gas transmission services to be consistent with those expected from a competitive market.

APGA's submission focusses on those aspects of the Inquiry most directly relevant to the gas transmission industry and APGA looks forward to working further with the Commission throughout this process.

For more information regarding APGA's submission please contact Steve Davies, APGA's National Policy Manager, on (02) 6273 0577 or sdavies@apga.org.au.

Yours sincerely

A handwritten signature in black ink, appearing to read "Cheryl Cartwright". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

CHERYL CARTWRIGHT
Chief Executive



Submission to the ACCC East Coast Gas Inquiry

2 July 2015



Contents

Key points	3
Introduction	4
Pipeline industry's record of achievement.....	4
Role of gas transmission pipelines	5
Role of contracts in gas transmission	6
Competition in the Eastern Australian gas supply market	8
Competition in the gas transmission sector	8
The role of economic regulation.....	9
International comparisons are not highly relevant	10
Comparisons with electricity markets are not highly relevant	10
In summary	11
Questions on changes affecting the domestic gas industry.....	13
Connectivity.....	14
Distance.....	15
Questions on access to new gas reserves	16
Questions on access to processing facilities	17
Questions on information availability and trading liquidity	18
Questions on joint marketing.....	20
Questions on pipeline ownership and regulation	21
Purpose of economic regulation.....	22
The NGL is delivering outcomes expected from competitive markets.....	25
Contract carriage under the NGL drives competition in initial investment.....	26
Questions on pipeline services	27
Question on terms and conditions for gas transportation.....	33
Receipt and delivery points.....	33
Questions on pipeline capacity trading	34
Requirements of shipper.....	36
Load factor	36



Availability of primary firm capacity	37
Bi-directional capability	37
Shippers tend to seek a suite of services	37
Number of participants	38
Demand for contracted but unutilised capacity	39
Observations	40
Discounts for long-term commitments and sharing of risk	41
Need to preserve long-term revenue stream.....	41
Short-term gains must not occur at the expense of long-term revenue.....	42
Pricing practice in the international air travel market.....	43
The opposite scenario: spot pricing for pipeline services.....	45
Question on co-ordination of gas supply	47
Questions on differing carriage models.....	47

ATTACHMENT A – APGA submission to the Competition Policy Review

ATTACHMENT B – APGA submission to the Energy White Paper

ATTACHMENT C – Excerpt from APGA submission to the AEMC Review of East Coast Wholesale Gas Markets and Pipeline Frameworks



Key points

- The gas transmission industry has delivered the investment that created the interconnected East Coast gas grid and is continuing to respond to market requirements, delivering new investment and services in response to structural changes underway.
- The size and composition of the Eastern Australian gas market is not highly conducive to competition, but the level of competition in the gas transmission market is increasing as the level of interconnectivity increases. Furthermore, the access regime is providing an effective constraint on pipeline owner behaviour and achieving its purpose of replicating outcomes of competitive markets.
- The contract carriage framework allows and encourages competition in greenfield investment.
- Pipeline owners continue to respond and innovate to changing needs of customers, both in investment in physical capacity and transportation capability and in service provision.
- The pricing outcomes seen in the gas transportation market are in line with those expected in competitive markets. Discounts are offered for long-term commitments and behaviour that is profitable in the short-term but destructive in the long-term is avoided.
- Shippers on pipelines continue to exhibit a preference for bespoke contracts providing a suite of firm, flexible and storage services tailored to meet the unique needs of each shipper.



Introduction

The Australian Pipelines and Gas Association (APGA) welcomes the opportunity to comment on the Australian Competition and Consumer Commission's East Coast Gas Inquiry Issues Paper.

APGA's members build, own and operate the gas transmission infrastructure connecting the disparate gas supply basins and demand centres of Australia, offering a wide range of services to gas producers, retailers and users. APGA, as the peak body representing Australia's gas transmission industry and an active participant during the last two decades of gas market reform, has views on many of the issues raised in the Issues Paper

Pipeline industry's record of achievement

Since 2000, APGA's members have invested in and built over \$2.2 billion¹ of infrastructure providing 4,000km of coverage across 10 major new gas transmission pipelines in Australia². These pipelines have been built to meet the demand of Australia's gas markets. There has been a similar amount of investment in expansions of existing pipelines across the country over that time. Pipelines continue to develop and expand to assist shippers in managing the structural change underway in Eastern Australian gas markets.

It is this historical investment that has led to the evolution of a pipeline network across eastern Australia's gas markets, promoting basin-on-basin competition and leading to the emergence of trading hubs in the demand centres of Eastern Australia. It is this network that is facilitating the next evolution in trading and increased flexibility across these markets.

Importantly, this investment has occurred across a mix of regulated and unregulated assets and has been facilitated through bilateral negotiation and contracts, as envisaged under the regime established in the National Gas Law.

It should be noted that the revenue generated by the gas transmission industry is the lowest contributor to the final cost of gas supply to consumers. The Australian Energy Regulator³ has estimated that transmission charges contribute from 3% to 8% to delivered retail gas prices across Australia.

¹ This investment does not include infrastructure built for LNG projects or expansion of existing pipelines.

² AER State of the Energy Market 2013 p108-109

³ AER State of the Energy Market 2014 p117



Role of gas transmission pipelines

While a relatively small contributor to total delivered gas costs, the transmission sector sees itself as a critical part of a successful gas market. Historically, the role of transmission has been to provide shippers with point-to-point access to upstream and downstream markets. In the interconnected and currently rapidly changing gas market conditions, the role of transmission is increasingly not just to invest, but also to provide tailored services to a broad range of parties so that they can effectively participate in gas markets. Bilateral negotiation and flexible contractual arrangements are essential for innovation and bespoke service delivery to occur.

The gas transmission industry has worked with shippers, market participants and policy makers to develop and implement new services to improve transparency and flexibility. A new service, the operational capacity transfer, allows shippers to more easily trade capacity and operational responsibilities. The capacity listing services offered by some pipeline companies provide a transparent market place to reduce search costs of capacity trades and provide clear signals to market participants of the demand for such services.

Pipeline owners benefit from a strong secondary capacity market. It provides increased flexibility for shippers and provides enhanced risk management options. In having enhanced options to manage utilisation risk, shippers are more likely to take up firm capacity services from pipeline owners.

In addition to enhanced trading capacity, shippers are seeking greater flexibility in primary arrangements and pipeline owners are responding. There is increasing demand for storage, park and loan, interruptible and As Available services, all of which improve a shipper's ability to respond to changing market conditions. A new service, ranked priority firm, is being offered on some fully contracted pipelines to provide a firm service on all days outside of peak demand.

Pipeline companies are actively investigating options for further transparency of available capacity and trades, including opportunities for increased tariff transparency, capacity trading platforms and alternative capacity allocation mechanisms. APGA considers that this work should be industry-led and respond to the specific needs of market participants to maximise confidence in pipeline investment. In this manner, it can be expected that initiatives will be timely, appropriate and low-cost.

Each shipper seeks to use a pipeline in different ways to meet the unique requirements of their business. Even those shippers in the same sector, whether it is production, electricity generation, gas retailing, industrial use for power or feedstock or another sector will have unique gas use, storage and transportation requirements specific to a business' size, the



requirement of its own markets, its facilities and other factors. Shippers use a bespoke suite of firm, flexible and storage services that are specifically tailored to their needs by pipeline operators. These services can be supplemented with capacity acquired on secondary markets.

APGA notes that shippers' preference for bespoke arrangements is almost absolute, even on regulated pipelines with reference services and tariffs shippers prefer to enter bespoke, negotiated arrangements.

The gas transmission companies of Australia are all service providers. None have vertically integrated production or retail businesses. Pipeline owners work actively to provide the capacity and services that market participants need. Bi-lateral, negotiated contracts are used globally to reach satisfactory arrangements in gas markets and have been highly successful in securing the terms and conditions of those services across Australia.

Role of contracts in gas transmission

Bilateral, negotiated contracts allow pipeline owners and shippers to reach mutually acceptable, bespoke agreements for the provision of gas transportation and associated services. Contracts effectively allocate responsibility, obligations and risks to the party best placed to manage them.

Historically, gas transmission contracts have tended to be long-term, with durations of more than ten years common. This is particularly true for the foundation contracts that justify investment in new greenfield pipelines and major expansions. The long-term duration of these contracts:

- *Enable a pipeline owner to better manage investment risk.* It is prohibitively costly to move a pipeline, it cannot be redeployed. Pipeline owners have very little visibility of the long-term requirements or plans of producers and shippers. When there is some visibility, there is unlikely to be sufficient certainty to justify an investment. long-term contracts provide some certainty that markets are sufficiently strong and healthy to justify investment.
- *Allocate capacity utilisation risk to those parties best placed to manage it – the shippers.* Shippers have a detailed understanding of internal, long-term gas requirements and are well equipped to make decisions regarding long-term gas transportation needs.
- *Provide revenue security.* This revenue security allows specialist pipeline owners to compete effectively in international capital markets, attracting the capital needed to invest at relatively low costs of debt. In turn, these low costs of debt translate to lower tariffs for shippers, as the servicing and repayment of debt is typically the



greatest contributor to a pipeline's overall cost structure. The ability of specialist gas transmission companies to attract lower costs of debt may be a contributing factor to the absence of vertically integrated transmission service providers in Australia.

There are two fundamental issues that APGA would like to address with regard to contracts in the gas transmission industry.

Firstly, contrary to perception, pipeline investments always retain some risk for the investor. It is unusual⁴ that a pipeline investment's foundation contracts will cover the full cost of capital expenditure and debt servicing. Pipeline investors must make decisions regarding the long-term viability of gas markets being served by new investments and the likelihood they will remain in place over the 80-year design life of an asset. This level of risk is increasing under the prevailing market conditions of the Eastern Australian Gas Market which are seeing a decrease in the duration of gas supply and transportation contracts.

Secondly, in almost all circumstances gas transportation arrangements follow gas supply arrangements. It is highly unusual that a market participant, whether gas seller or buyer, would secure gas transportation before decisions regarding gas supply have been made. The duration of foundation contracts that justify pipeline investment are typically of the same duration as the gas supply contracts that will supply the gas to be transported. Historically, producers have preferred long-term contracts to justify investing in field development. This trend appears to continue, with investment in the LNG projects requiring contracts reportedly of 20-years plus duration. Users need secure gas supply to justify investment in new plant and facilities that will use gas as an energy source or feedstock.

It is reasonable to expect that if gas supply arrangements decrease in duration and increase in flexibility, gas transportation arrangements will follow. There is some evidence this is already occurring, in both the duration of foundation contracts for expansion investment and the suite of services being sought by shippers.

For example, recent announcements by APA Group indicate it will spend over \$160 million to increase the capacity for gas transportation between Victoria and New South Wales for three different shippers for contracts spanning between four and six years. Historically, such an investment would have been made on the basis of contracts well in excess of 10 years.

⁴ The exceptions tend to be single user pipelines or laterals built to serve one facility or mine site.



Competition in the Eastern Australian gas supply market

APGA has long advocated an active consideration of policy mechanisms to improve competition in gas supply markets and welcomes the ACCC's Inquiry focussing on this critical aspect of market viability.

APGA considers the link between market size and competition has been overlooked. Whilst reform has focussed on improving competition, there is not an explicit goal in Government policy to increase the size and breadth of Australia's gas markets. The goals of increasing gas supply and improved competition are likely to best be met if there is confidence that there is a strong and growing demand for gas.

A gas market that has more producers; more basins and fields; more connections between supply and demand; more users; and, most importantly, more gas usage, will be deeper, more liquid and drive more transparency. There will be more transactions for market participants to observe; more parties to transact with; more marginal gas to transact under shorter-term arrangements; and more demand for services that promote transparency. All of this will contribute to increased competition.

When assessing the competitiveness of the gas supply market in Eastern Australia, APGA encourages the ACCC to consider the relationship between competition, liquidity and transparency and the size of Eastern Australia's gas market, both in terms of demand and participants.

Competition in the gas transmission sector

APGA acknowledges that the market for gas transmission services in Eastern Australia has a number of characteristics which create the perception that it is not a competitive market:

- It is small; almost always a single pipeline is sufficient to meet transportation demand on any given route.
- It is geographically dispersed; centres of supply and demand are usually many hundreds of kilometres apart.
- It is capital intensive, requiring large, sunk investments that are not recoverable. Once built, a pipeline cannot be relocated to serve new a market.

These characteristics mean it is typically uneconomic to duplicate any single piece of infrastructure, providing pipeline owners with a perceived degree of market power.



Importantly, however, this perceived market power is tempered by a number of factors:

- Gas transportation tariffs form part of the cost consideration for any gas user seeking to secure gas supply. As interconnection has increased and continues to increase, pipelines have an increased driver to remain competitive.
- In most applications natural gas competes with other energy sources – primarily electricity but also diesel, coal, biomass and other boiler fuels. Transportation tariffs must be sufficiently competitive to ensure natural gas is the fuel chosen by large energy users.
- Transactions between gas transmission pipeline owners and gas shippers are transactions between large, sophisticated entities.
- Gas transmission infrastructure owners are specialist service providers in Australian markets. Lacking vertical integration, there is no incentive to limit competition in upstream or downstream markets.

The role of economic regulation

APGA agrees with the statement of the ACCC on page 131 of its submission to the 2014 Competition Policy Review:

Economic regulation focuses on replicating, as far as possible, the outcomes of a competitive market where competition is not feasible. Economic regulation thus creates a system of incentives to drive economically efficient conduct. Through economic regulation, competition in related markets is promoted and the long term interests of users are protected where the supplier has market power.

The National Gas Law (NGL) sets out an access regime for gas transmission infrastructure that allows assets to be subject to full regulation, light regulation or no regulation. The coverage criteria for transmission pipelines as set out in the National Gas Law assesses not only the effects of coverage on competition, but also the efficiency of regulating an asset and whether regulation would result in materially improved outcomes for consumers.

The facts that:

- requests for coverage determinations are infrequent;
- there has been a gradual move away from full regulation on several previously covered pipelines, including regional distribution networks;
- negotiated, commercial agreements for transportation services are regularly achieved even on regulated pipelines; and
- there is significant transparency on the cost inputs for determining tariffs for regulated pipelines,



are indications that:

- the level of competition in the gas transmission market is increasing as the level of interconnectivity increases; and
- the access regime is providing an effective constraint on pipeline owner behaviour and achieving its purpose of replicating outcomes of competitive markets.

APGA considers that:

- the cost of having an effective access regime ready and available to be imposed in the case of market failures is low; and
- the threat of the imposition of this access regime is effective in delivering outcomes that reflect a competitive market.

It is clear that all shippers in Eastern Australia are willing and able to enter bi-lateral, negotiated outcomes with pipeline owners, even on regulated pipelines. It is clear that pipeline owners are responsive to the needs of shippers and are innovative in investment decisions and service provision. These outcomes are entirely in line with those to be expected in a competitive market.

These matters are covered in more detail in APGA's response to Q41.

International comparisons are not highly relevant

During consideration of gas market reform options, Australia's gas markets are commonly compared to the gas markets of North America and Europe. It is important not to draw the conclusion that these approaches can simply be implemented in the current Australian environment without first giving consideration to Australia's market structure and size. Australian gas markets are tiny by comparison with the major markets of Europe and North America, both in terms of volume and the number of participants. Australian markets are also spread over a thinly populated continent. This means that mechanisms that are successful overseas may not transfer to Australian market conditions. Also, those mechanisms may not fit with Australia's established and mature third party access regime - in some European and North American cases the market mechanisms were introduced to provide third party access where previously none existed. It is therefore important to consider Australia's existing arrangements for open access to transmission infrastructure and available gas and capacity trading mechanisms before moving to adopt highly interventionist overseas regulatory models.

Comparisons with electricity markets are not highly relevant

Occasionally comparisons are drawn between the transparency and competitiveness of Eastern Australia's gas and electricity markets. Such a comparison is of concern.



Whilst the two are interchangeable in some applications for the residential customer, they are vastly different commodities at the production end of the supply chain.

Electricity is generated in a highly controlled market to ensure supply and demand remains in constant balance. Electricity generation is a capital intensive undertaking with a market in which sophisticated participants operate with a high degree of certainty.

Gas is found. Gas exploration is a highly capital intensive, risky enterprise with no guarantee of success.

Electricity moves at the speed of light. The location of any generator connected to the National Electricity Market (NEM) is largely irrelevant; electricity generated by any generator can be instantly used anywhere.

Gas moves at around 30km/hr.

Electricity cannot be stored at a generation level. The entire NEM must be constantly managed to ensure supply and demand are balanced.

Gas is stored in the underground reservoirs or coal seams it has been trapped in for millions of years until it is produced and processed. It is highly compressible and can be stored in a pipeline. Both reinjection into suitable underground structures or conversion to LNG are also storage options.

Gas can be exported.

Gas is both an input to electricity generation and a competitor with electricity; as are a number of other fuels in Australia. In particular, diesel fuel is an input to electricity generation and competes with electricity in many remote applications. Comparisons between diesel markets and electricity markets are not considered relevant to discussions on diesel market reform.

Competition in the gas supply market should be judged on its own merits, not in comparison to the electricity market.

In summary

APGA notes the ACCC's focus on evidence, and power to mandate it, to support claims and looks forward to the contribution this will make to the current debate on gas market reform.

APGA acknowledges the ACCC's ability to review the extensive documentation provided to recent reviews of Eastern Australian gas markets and has made an effort not to repeat positions already in the public domain. On questions where APGA has previously expressed



views on matters not directly related to pipelines, our comments in this submission provide reference to prior submissions.

APGA looks forward to participating further in this inquiry.



Questions on changes affecting the domestic gas industry

Q2. Are gas suppliers in Eastern Australia likely to meet both LNG export commitments and domestic gas demand over the life of the LNG projects, given the gas reserves base and the expected gas production schedule? Explain why or why not.

There is insufficient information available for many gas market participants and observers to be able to reach informed conclusions on the ability of gas suppliers to meet both LNG export commitments and domestic gas demand over the life of the LNG projects. APGA's views on information transparency regarding production capacity are provided in response to Q26.

Q3. Are there currently any factors that are significantly restricting or limiting the ability or incentive for gas producers to explore for, or develop, new gas reserves? If so, explain.

APGA believes there are a number of factors restricting or limiting incentives for gas producers to explore for, or develop new gas reserves. These include, in no particular order:

- The moratoria on CSG exploration and development in NSW and all onshore gas activity in Victoria.
- The opaque decision-making process around retention lease title decisions.
- The Exploration Development Incentive (EDI) offered by the Federal Government is likely to be incentivising mineral exploration at the expense of energy exploration.

APGA's views on this matter have been presented in public submissions to the Competition Policy Review (Attachment A, pages 2-6) and the Energy White Paper (Attachment B, pages 8-13).

Q6. What factors affect the scope for inter-basin competition between gas producers in Eastern Australia? What are the circumstances in which such competition is viable and in which it is not viable? Provide examples.

The development of the Eastern Australian gas market over the past 20 years is closely linked to the increasing level of inter-basin completion that has been achieved. This increasing level of inter-basin competition has been assisted by investment in new pipelines providing new markets for gas basins and new sources of supply for gas markets. Investments in pipelines such as the Victoria-NSW Interconnect (VNI) in 1999, the SEA Gas Pipeline and the Eastern Gas Pipeline (EGP) in the early 2000s and the QSN Link in 2008 have enabled transportation between most points in Eastern Australia. Current plans to develop bi-directional flow on pipelines such as the Moomba-Adelaide Pipeline (MAP) and Moomba-Sydney Pipeline will further enhance the competition in services to transport gas across Eastern Australia.



The investment in these pipelines that has enabled inter-basin competition has been facilitated by negotiated, long-term, bi-lateral contracts between pipeline owners and shippers. By committing to these investments, shippers - both users and producers - have enhanced capabilities to source and sell gas across multiple basins and markets. Whilst all market participants benefit from increased interconnectivity and inter-basin competition, it should not be expected that all market participants have equivalent capability to participate in all markets at all times.

The two primary factors affecting inter-basin competition are the level of connectivity between basins and markets and the distance between each basin and its market.

Connectivity

In Eastern Australia there are 12 major pipelines (as defined by the National Gas Bulletin Board) linking six capital cities, two industrial demand centres (one of which has all three export facilities) with three supply regions dispersed over roughly four million square kilometres.

APGA considers the level of connectivity in Eastern Australia is high given the current limiting factors:

- The geography. The five states and one territory that comprise the Eastern Australian gas market cover an area of 3,813,110 square kilometres. APGA notes the 'centre' of the Eastern Australian gas market - the Cooper Basin - is 800km from the closest capital city.
- Population density and concentration. Eastern Australia has approximately 20 million people, the majority of whom live in one of five capital cities. More than 50 per cent live in either the Sydney or Melbourne regions.
- The relatively low domestic gas demand. At around 700PJ the Eastern Australian gas market is extremely small by international standards. Contributing factors include mild to very mild winters and a relatively small manufacturing base. This means that a single pipeline is capable of meeting the needs of most demand centres.

The increased demand driven by the LNG export facilities may lead to an increase in connectivity. To date, expansion of existing pipelines has been sufficient to meet changing gas flows.

Further information on the Eastern Australian gas market is included at Attachment C.

Despite these limiting factors, it is apparent, that gas from most major basins in Eastern



Australia has been used in every market in Eastern Australia. With developments underway, it is apparent that in the future gas from any basin will be able to be used in any market.

Distance

Whilst there is a sufficient level of pipeline connectivity across the Eastern Australian gas market for gas to be transported between almost any two points, costs increase as distance increases. This can affect the viability of competition between two basins to supply the same market.

Presumably, competition is most viable when transportation costs are equivalent. The Cooper Basin and Gippsland Basin compete to supply both Sydney and Adelaide over roughly equivalent distances. It is likely that these roughly equivalent distances enabled the initial competition that supported the decisions to build the Eastern Gas Pipeline between the Gippsland Basin and Sydney and the SEA Gas Pipeline between the Otway Basin and Adelaide.

Nevertheless, pipeline transmission costs are sufficiently low so that inter-basin competition does not appear to be materially affected by distance. Current investment activity and historical flows indicate that gas from Victoria is likely to flow into Queensland and the LNG export facilities and that gas from Queensland has made its way south to all markets including Victoria.

By way of example, natural gas from the Cooper basin has been competing with gas from the Bass Basin to supply users in Victoria since the construction of the VNI in 1999, despite the transportation distance (from Moomba to the Victorian border) being around 1,200km. Whilst distance to markets may be a contributing factor to the viability of initial competition, once connectivity has been achieved it does not appear to have an undue impact on the viability of inter-basin competition across the Eastern Australian gas market.

Q8. What opportunities are available to gas users for switching to alternative types of energy sources in response to rising gas pricing? What factors affect the ability of gas users to do so? How likely is this outcome? To what extent is any response from gas users likely to affect the broader dynamics of the domestic gas industry?

Gas is, and always has been, a fuel of choice. Most gas users have a number of energy options available to them. These options come at a cost, whether at the residential user level where new appliances must be purchased or at the industrial level where costly plant must be replaced.



As gas prices increase, switching is more likely to occur. As supply certainty decreases, switching is more likely to occur. An exception to this will be gas users utilising gas as feedstock. Such gas users will not be faced with a switching option, they will be faced with the option of continuing and/or expanding operations in Australia or relocating elsewhere.

Government policy also plays a role. The Renewable Energy Target and removal of a price on carbon have contributed to generation investment moving away from gas. Households are often incentivised to choose non-gas options that achieve similar outcomes in emission reduction.

This switching can impact on competition. The number of participants in a market and its potential for competition is well understood. If switching leads to the loss of major participants or a decrease in the size and volume of transactions, this can reduce the liquidity and competitiveness of the gas market.

Questions on access to new gas reserves

Q11. Are there any other regulatory barriers which create significant difficulties in accessing new gas reserves?

The most obvious regulatory barrier creating significant difficulties in accessing new gas reserves are the moratoria on activity in NSW and Victoria. These are now long-standing issues that are well understood and a political issue rather than technical or administrative issue. The gas industry has begun to address the issue by seeking to improve its credibility on and social license for the development of unconventional gas. However, without the political will to move forward with exploration and development little to no activity can occur.

Regulatory barriers relating to title administration that could be limiting access to new gas reserves include:

- Retention lease award and renewal. The role of retention leases is to allow explorers to retain rights to discoveries that are not currently commercial. It would be fair to assume that, in the current supply environment, most new and existing discoveries are commercial. Despite this, retention leases continue to be awarded and renewed.
- The amount of acreage locked into retention leases or production licenses when exploration titles are converted. Once conversion has occurred there can be little requirement to continue to explore.



APGA's views on other regulatory barriers have been presented in public submissions to the Competition Policy Review (Attachment A, pages 2-6) and the Energy White Paper (Attachment B, pages 8-13).

Questions on access to processing facilities

Q14. Do owners of processing facilities have an incentive to provide third party access to spare processing capacity? Explain why or why not.

APGA considers the theoretical incentives regarding the provision of third party access to infrastructure by vertically integrated infrastructure owners to be well understood and there is a question as to whether the vertical integration of major Eastern Australian gas processing facilities with producers and/or retailers is impacting the provision of third party access to those facilities.

APGA's views on this matter, including the application of the production process exemption under the National Access Regime, have been presented in public submissions to the Competition Policy Review (Attachment A, pages 3, 6-9) and the Energy White Paper (Attachment B, pages 12).

Q17. Do gas specification requirements materially affect the supply of gas for different uses? Is any divergence of gas specifications between Queensland LNG and other uses a barrier to trading gas within Eastern Australia (e.g. due to processing cost differences)? If so, explain how.

From a gas transportation perspective, the gas specification set out in the Australian Standard, AS 4565 -Specification of general purpose natural gas – applies to all gas transmission pipelines and covers the full range of gas requirements in Eastern Australia. The 'lean' gas requirements of Queensland CSG facilities meet this specification, as does conventional gas processed through gas processing facilities across Eastern Australia.

Pipeline owners have put in place arrangements to manage capacity issues relating to the comingling of 'lean' gas and conventional gas. Clearly, once gas from different sources is comingled in a pipeline it forms an effectively homogenous gas that requires processing in order to be separated.

The divergence of gas requirements between Queensland LNG facilities and other gas users may create an issue for the facilities but does not limit the transportation of any gas that meets AS 4565.



Questions on information availability and trading liquidity

Q30. Is there adequate information publicly available about production capacity to supply LNG and domestic users? If not, what key sources of information are missing and what kind of issues does this create for market participants?

It is widely anticipated that one of the results of the structural change underway in Eastern Australia's gas markets will be increasing utilisation of shorter-term arrangements for gas supply and transportation. Given the history and ongoing use of long-term contracts in the global markets, including Australian LNG, shorter-term arrangements for the gas industry are likely to include a greater utilisation of contracts with a term of around 5 years, as opposed to 10 or more. In this context, gas transmission pipelines will need a higher level of supply and demand transparency to adequately manage investment risk.

Given the very high level of sunk costs associated with a pipeline investment, the inability to relocate pipelines and the uncertainty of future gas flow patterns and demand, a pipeline owner can be faced with high levels of risk. One of the few tools available to a pipeline owner to address this is to seek long-term commitments from shippers. As noted in the introduction, long-term commitments reduce risk to pipeline owners but do not remove it. Although long-term contracts are likely to remain key to underpinning market development, addressing information asymmetry challenges for all market participants may improve their ability to effectively manage the risks they face under shorter-term contracts.

In considering increased transparency regarding production capacity, there is a need to distinguish between the types of information required for short- and long-term decision making as a result of the current rapid changes in the market. There is a real risk that current uncertainty over gas availability and price could lead to inefficient short-term decisions, in particular on the demand side. This could manifest through the permanent closure of manufacturing plant in response to short-term gas supply shortages and high prices, where in the longer term, gas supply and prices could be expected to normalise at a level that would have allowed the gas users to remain in operation.

APGA's views on information around production capacity to supply LNG and domestic users is covered in our submission to the Energy White Paper (Attachment B, page 14)

APGA notes that information relating to contracted capacity, availability of forward capacity and contracted shippers on gas transmission pipelines are all the subject of a current rule change proposal before the Australian Energy Market Commission (AEMC).



Q34. Do facilitated trading markets currently provide a sufficient level of flexibility to market participants to manage risks and uncertainty in the changing market circumstances? To what extent are they likely to do so in the future?

Submissions to the AEMC's Review of Facilitated Markets and Pipelines Frameworks Review suggest that facilitated trading markets currently provide flexibility for some market participants.

As more market participants seek to utilise facilitated markets, the small volumes of gas available through their balancing mechanisms will rapidly escalate in price and reduce in utility. This cannot be addressed by policy; it can only be addressed by increasing the size of the market.

Q35. To what extent are the pricing outcomes observed in facilitated trading markets likely to be relevant to the future negotiation of long-term gas supply contracts?

It appears that the pricing outcomes observed in facilitated markets are not relevant to long-term supply contracts. As APGA noted in our submission to the AEMC's Review of Facilitated Markets, the prices established in facilitated markets, except in the Wallumbilla Supply Hub, reflect the demand for on-the-day balancing services, not commodity quantities of gas. This was always accepted as the role of these markets, given the size of the overall Australian gas market.

Q36. Is the further development of existing or additional facilitated trading markets likely to result in better outcomes for market participants? If so, how?

Improvements and additions to facilitated trading markets can result in better outcomes for market participants in terms of enhanced participation in those markets, lower costs and more efficient markets.

Nevertheless, APGA considers that further development of existing or additional facilitated markets alone has little prospect of delivering increased flexibility or liquidity. The Eastern Australian gas market is too small in terms of volumes and number of participants, as demonstrated below, to foster a fully liquid gas market.

APGA also questions the value of facilitated markets to gas markets, as detailed in our response to the AEMC's Issues Paper and Draft Stage 1 Report. All participants in a market must contribute to the costs of the balancing markets, yet very few appear to be benefiting from them.



Q37. To what extent are international comparisons relevant to the supply of gas and associated services in Eastern Australia? Are there any lessons from reforms in the US, the EU or elsewhere that may be relevant for Australia? What reforms or measures adopted in the US or the EU are not likely to work in Eastern Australia, and why? Are there any intermediate trading models between the US/EU trading markets and bilateral contracting that could improve information flow and increase trading liquidity in Eastern Australia?

APGA has given this question detailed analysis in our response to the AEMC's Review of Facilitated Markets and Pipeline Frameworks, which has been included at Attachment C. In short, the unique circumstances of the Eastern Australian Gas Market are such that it is unlike the markets in Europe and the US. Eastern Australia's size, population, gas demand, demand profile and market structure are so different to the much larger and diverse markets of Europe and the US that comparing reform options is not useful.

APGA considers the primary reason for this is the small number of participants in Eastern Australian Gas Markets and the relatively low gas demand. There are far fewer transactions, of much lower volume, than in Europe or the US. This limits the opportunity to introduce sophisticated trading platforms.

Further, reforms that have been introduced in Europe and the US can only be compared if such reforms were introduced to address similar market failures. Before any reforms can be compared, market failures in Australia need to be clearly identified and the reasons for international reforms must be understood.

Finally, APGA notes that bilateral contracting is the dominant international gas exchange model. Whilst Europe and the US have more short-term options, long-term bilateral contracts remain the primary means of securing gas supply and transportation services.

Questions on joint marketing

Q38. Are gas trading markets in Eastern Australia sufficiently well developed to enable the separate marketing of gas by producers in joint ventures? If not, what would the preconditions be for removing joint marketing?

Q39. What regulatory costs or savings arise from joint marketing of gas by producers? What are the costs and benefits that would flow from separate marketing of gas that is currently supplied under joint marketing arrangements? How significant would these be?
The trading of gas in facilitated markets should not be linked to the separate marketing of gas by producers in joint ventures. As has been noted in multiple reviews, bilateral contracting dominates the wholesale gas market.



With exposure to international markets through the development of LNG export facilities it would appear that the original reasons for the establishment of joint marketing might have changed. It appears that gas producers are now in a position of market power in the domestic market. It is possible that there may no longer be justification for joint marketing.

APGA's views on this matter have been presented in public submissions to the Competition Policy Review (Attachment A, page 3) and the Energy White Paper (Attachment B, page 12).

Questions on pipeline ownership and regulation

Q40. Have users observed an increase in the price of pipeline services or deterioration in the terms on which pipeline services are provided? If so, to what extent is this due to increased concentration in ownership of transmission pipelines, decreased economic regulation or other factors? Provide specific examples of changes to prices/terms over the relevant period.

Gas users will provide their own observations regarding pricing and terms of pipeline services. APGA would like to bring to the ACCC's attention the sources through which pipeline tariffs in Eastern Australia can be observed.

There is a range of information available to market participants on pipeline tariffs for pipelines both covered and uncovered under the NGL. This information can be used to infer other transportation costs and secondary capacity pricing.

The list of pipelines that have publically available tariff information includes:

Pipeline	Owner	Covered	Information location
MSP	APA Group	Light regulation - Marsden-Wilton section	APA website
MSP	APA Group	No regulation – Moomba-Marsden section	APA website
RBP	APA Group	Full regulation	APA website
VTS	APA Group	Full regulation	APA website
AGP	APA Group	Full regulation	APA website
CRP	APA Group	Full regulation	APA website
CGP	APA Group	Light regulation	APA website
CWP	APA Group	Light regulation	APA website
EGP	Jemena	No regulation	Jemena Website
QGP	Jemena	No regulation	Jemena Website



APA Group has also published a number of short-term firm transportation offers (duration of one week) on its capacity trading website with posted tariffs. These offers cover both regulated and unregulated pipelines.

From APGA's observations of the market and issues raised publicly during gas market reform processes:

- Transmission tariffs between regulated and unregulated pipelines are comparable.
- There is no suggestion transmission tariffs have risen as a result of decreased economic regulation or changes in ownership.
- Transmission tariffs have not risen unduly on those pipelines experiencing greater demand for services, specifically those pipelines transporting gas from Victoria to other markets.

Q41. With so few transmission pipelines now covered by economic regulation, does the threat of coverage still place a constraint on pipeline owners' behaviour?

Purpose of economic regulation

The effectiveness of the access regime for gas transmission infrastructure should not be measured by how many transmission pipelines are covered by economic regulation. It can be measured by its ability to reproduce the outcomes of a competitive market, which it does.

As the ACCC has stated on page 131 of its submission to the 2014 Competition Policy Review:

Economic regulation focuses on replicating, as far as possible, the outcomes of a competitive market where competition is not feasible. Economic regulation thus creates a system of incentives to drive economically efficient conduct. Through economic regulation, competition in related markets is promoted and the long term interests of users are protected where the supplier has market power.

Discussion of economic and access regulation often focuses on the costs and benefits of regulation on a particular asset, the total number of regulated assets (or lack of regulated assets) and whether further regulation is warranted. There is little analysis of the benefits effective access regimes bring from their implementation and presence contributing to the replication of outcomes of a competitive market.

The National Gas Law (NGL) sets out an access regime for gas transmission infrastructure that allows assets to be subject to full regulation, light regulation or no regulation. The coverage criteria for transmission pipelines as set out in the National Gas Law assess not only the effects of coverage on competition, they also assess the efficiency of regulating an asset and whether regulation would result in materially improved outcomes for consumers.



Assets that are deemed to be subject to no regulation have been through an extensive process that established that there are no net benefits of extending regulatory coverage to them.

If asset owners were considered to be abusing any positions of market power it is inevitable that this would change, with the coverage determination process far more likely to reach a conclusion that coverage would deliver materially improved outcomes for consumers.

In a competitive market for services, an observer should expect to see parties entering into negotiated contracts for services detailing the prices, duration, terms and conditions, responsibilities and obligations of each party.

The market for gas transmission services in Eastern Australia has a number of characteristics that mean it is not often highly competitive:

- It is small, almost always a single pipeline is sufficient to meet transportation demand on any given route.
- It is geographically dispersed; centres of supply and demand are usually many hundreds of kilometres apart.
- It is capital intensive, requiring large, sunk investments that are not recoverable. Once built, a pipeline cannot be relocated to serve a new market.

These characteristics mean it is typically uneconomic to duplicate any single piece of infrastructure, providing pipeline owners with a perceived degree of market power.

However, this perceived market power is tempered by a number of factors:

- Gas transportation tariffs form part of the cost consideration for any gas user seeking to secure gas supply. The ability of gas users in any market in Eastern Australia to source gas from multiple basins places competitive tension on the owners of transmission pipelines to provide services at tariffs that encourage utilisation of their asset. As interconnection has increased and continues to increase, pipelines have an increased driver to remain competitive. They are seeing alternative sources of supply and transportation become available.
- In most applications natural gas competes with other energy sources – primarily electricity but also diesel, coal, biomass and other boiler fuels. Unlike the cost of electricity transmission, which is apportioned across all electricity users, the costs of gas transmission for large gas users are borne directly by the large gas users. Transportation tariffs must be sufficiently competitive to ensure natural gas is the fuel chosen by large energy users.



- Transactions between gas transmission pipeline owners and gas shippers are transactions between large, sophisticated entities. Gas users that are large enough to participate directly in gas supply and transportation markets are sufficiently sophisticated and resourced to deal with gas transmission companies and utilise the dispute resolution mechanisms in the NGL should they be required.
- Gas transmission infrastructure owners tend to be specialist service providers in Australian markets. With the exception of the pipelines built to directly transport gas to LNG facilities in Gladstone⁵, no major gas transmission pipelines are vertically integrated with producers, retailers or users of gas⁶. There is no incentive for gas transmission pipeline owners to use market power to limit competition in upstream or downstream markets.

As evidenced by the number of expansions currently underway on pipelines in Eastern Australia (detailed in our response to Q42), market participants are willing and able to enter into negotiated contracts for gas transportation services, which is the outcome an observer would expect to see in a competitive market. This clearly indicates any market power held by pipeline owners is not being abused.

In a competitive market, any failure to negotiate a mutually acceptable agreement will be offset by the presence of numerous counterparties with which to negotiate. Under the access regime of the NGL, failures to reach mutually acceptable agreements are offset by the ability of an access seeker to seek a coverage determination. This is the constraint that the NGL places on pipeline owner behaviour.

The fact that the more high-profile, costly elements of the NGL's access regime, coverage determinations and price setting determinations are not highly utilised should be taken as a sign that the NGL is effective in replicating the outcomes of competitive markets. APGA considers the costs associated with coverage of a pipeline are:

- Participation in a coverage determination is a costly exercise for an asset owner.
- The process of an access arrangement determination is expensive, primarily for the pipeline owner but also the AER and interested participants.
- There are costs associated with the regulated decision-making process to approve investments. These costs primarily manifest through the damage to the market of delayed investment. This has been extensively covered by the Productivity Commission in its Research Paper: Examining Barriers To More Effective Gas Markets. There are further costs associated with inappropriate regulation of assets, which the PC also recognised in that paper.

⁵ One of these pipelines has already been sold to a specialist transmission company and media reports indicate the other two pipelines are in active consideration of sale potential.

⁶ Some laterals of major pipelines are owned by the single user they have been built to serve.



Pipeline owners actively seek to avoid the first two costs through achieving acceptable negotiated outcomes. In reaching outcomes that do this, there are benefits to the market:

- The negotiated outcomes replicate those expected in competitive markets; and
- Investment is not delayed.

The NGL is delivering outcomes expected from competitive markets

The facts that:

- requests for coverage determinations are infrequent;
- there has been a gradual move away from full regulation on several previously covered pipelines, including regional distribution networks; and
- negotiated, commercial agreements for transportation services are regularly achieved;

are indications that:

- the level of competition in the gas transmission market is increasing as the level of interconnectivity increases; and
- the access regime is providing an effective constraint on pipeline owner behaviour and achieving its purpose of replicating outcomes of competitive markets.

APGA considers that:

- the cost of having an effective access regime ready and available to be imposed in the case of market failures is low; and
- the threat of the imposition of this access regime is effective in delivering outcomes that reflect a competitive market.

Negotiated market outcomes are given every opportunity to work prior to a resort to regulatory intervention. When negotiated market outcomes are efficient, the more costly and blunt elements of the access regime, coverage determinations and price setting determinations, are not required. The access regime has contributed to the efficient outcome nonetheless; by providing the potential for recourse for any parties that feel market power has been abused during the negotiation process.

The move away from fully regulated pipelines to lightly or unregulated pipelines should be seen as both a sign of increasing competition in the transportation market and the ability of the market to achieve efficient outcomes without costly regulatory intervention.



As further evidence of this, APGA offers:

- The fact that none of the pipelines subject to light regulation have experienced an access dispute. This was noted by the National Competition Council in its Final Decision on light regulation for the Allgas Distribution Network at paragraph 3.6:

3.6 Although the Council has now made light regulation determinations for four pipelines (including the recent QGDN determination), to date no access disputes concerning a light regulation pipeline have been notified to the AER.⁷

- It is apparent that negotiated services and tariffs are sought by most, if not all, shippers on regulated pipelines. This indicates shippers' preference for bespoke arrangements and the ability of pipelines and shippers to reach mutually acceptable negotiated outcomes. On regulated pipelines the reference service and tariff provide a benchmark for negotiation.

Contract carriage under the NGL drives competition in initial investment

It is apparent there is a highly competitive environment for greenfield gas transmission investment.

The first example of this competitive environment is the race to construct the first (and only) pipeline connecting Queensland to markets of South Australia and New South Wales. Three project proponents competed to secure the contracts to support this investment:

- Epic Energy's successful QSN Link project;
- APA Group's proposal to connect the Southwest Queensland Pipeline to the Moomba to Sydney Pipeline; and
- The QHGP consortium's proposal to build a pipeline from the NSW Hunter Valley to Wallumbilla.

In this instance, when the Epic Energy proposal was successful in securing contracts, the other projects were shelved.

The second example is the level of interest shown in the NT Government's process to identify the preferred project proponent for a pipeline connecting the NT to the Eastern Australian gas markets. From an original field of eleven proponents, the NT Government has selected four to deliver final proposals.

This competition is made possible through the prevalence of commercially negotiated outcomes achieved through the contract carriage framework allowed under the NGL. In an environment of full regulation or market carriage such competition would not be possible and such a pipeline would not be constructed without substantial government funding or underwriting.

⁷ <http://ncc.gov.au/images/uploads/LRAGDNFD-001.pdf>



This competition, to be the successful proponent of a greenfield investment, provides market outcomes that are in line with what would be expected from a competitive market. The competition to deliver the best priced project is intense and delivers efficient outcomes for market participants

Questions on pipeline services

Q42. Are pipelines being developed or enhanced to meet producer and shipper needs?

Please provide examples of experiences in securing changes to pipelines to meet changes in supply and demand for gas.

APGA questions the distinguishing between producers and shippers in this question.

Pipeline owners do not discriminate between market participants, all are able to become shippers on a pipeline. Pipelines are not developed or enhanced to meet needs of the market, producers or users. Pipelines are developed or expanded to meet market participant needs when market participants indicate those needs and engage in contracts for pipeline services. This is entirely in line with the outcomes to be expected in a competitive market.

As noted above in the response to Q32, pipeline owners do not have sufficient information to speculate on the needs of the market. The nature of pipeline investments, with large sunk costs and inability to redeploy assets, further leads to an investment environment where pipeline owners are reluctant to take on merchant risk.

Since 2000, APGA's members have invested in and built over \$2.2 billion⁸ of infrastructure providing 4,000km of coverage across 10 major new gas transmission pipelines in Australia⁹. These pipelines have been built to meet the demand of Australia's gas markets. APGA estimates there has been a similar amount of investment in expansions of existing pipelines across the country over that time.

There is ample evidence that pipelines are being further developed and enhanced to meet shipper needs. A number of expansions and developments are provided in the following table.

⁸ This investment does not include infrastructure built for LNG projects or expansion of existing pipelines.

⁹ AER State of the Energy Market 2013 p108-109



Year	Pipeline	Proponent	Project	Purpose
2008	EGP	Jemena	Expansion	Meet shipper demand
2008-14	MSP	APA	Capacity expansion	Meet shipper demand
2009	QSN Link	Epic Energy	New pipeline	Transport CSG from Queensland to Southern markets
2010	EGP	Jemena	Expansion	Meet shipper demand
2010	QGP	Jemena	Expansion	Meet shipper demand
2012	RBP	APA Group	Capacity expansion	Meet shipper demand
2012	RBP/SWQP	APA Group	Expand compression capacity at Wallumbilla Hub	Allow gas from several pipelines to access Wallumbilla hub
2013	QSN Link	APA Group	Bi-directional	Capability to transport from Moomba to QLD
2014	QGP	Jemena	Expansion	Meet shipper demand
2014	SWQ	APA Group	Expansion	Meet shipper demand
2015	VNI	APA Group	Expansion	Meet shipper demand
2015	MAPS	Epic Energy SA	Bi-directional	Capability to transport from Adelaide to Moomba
2015	MSP	APA Group	Bi-directional	Capability to transport gas from NVI to Moomba
2015	EGP/MSP	Jemena	Interconnection	Capability to transport EGP gas to Moomba
2015	RBP	APA Group	Bi-directional	Capability to transport gas westward to Wallumbilla
2015	BWP	APA Group	Bi-directional	Allow bi-directional flow between Wallumbilla to Berwyndale
2015	EGP	Jemena	Expansion	Meet shipper demand

Pipeline owners are limited in their ability to announce contracts that support this investment due to confidentiality clauses in contracts. For the most part, these confidentiality requirements are imposed by shippers.

Despite this, investment opportunities are visible to attentive market participants. Pipeline owners have an interest in maximising the number of shippers of any project as it maximises the throughput and revenue potential of any investment. To this end, prospective shippers are actively engaged to evaluate interest in future opportunities.



Q43. Are pipeline services (including emerging hub facility service requirements in Wallumbilla) adequately evolving to meet user requirements? If not, explain which services are lacking on which pipelines and the effect of that on users.

Pipeline services are evolving to meet user requirements. It is a feature of the contract carriage framework for pipeline access that gas transmission companies have been able to respond rapidly to changing user demand for services. New services offered under a contract-carriage regime allow market participants to exercise their preference for bespoke arrangements that reflect their specific business needs while increasing flexibility and opportunities for trade.

In response to the ongoing focus on capacity trading, gas transmission companies have worked with customers to develop a consistent framework for the provision of operational capacity transfers. Operational capacity transfers are superior to bare capacity transfers for a number of reasons. They:

- are an incentive to offer capacity, as it reduces the administrative burden for shippers;
- create anonymity as the seller has no visibility of the buyer's nominations;
- provide a more appropriate allocation of risk as the obligations of the seller are transferred to buyer;
- increase operational efficiency as it preserves the relationship between pipeline operator and shippers, both new and existing;
- allow a buyer of traded capacity to easily aggregate capacity from multiple sellers;
- improve transparency through publication of bids and offers, information on trades, available and contracted capacity; and
- support new entrants as it allows new shippers to access short-term capacity.

APGA has developed and published a guideline for the offering of operational capacity transfer services to ensure that gas transmission companies offer this new service to shippers in a consistent manner.

In support of this new service, APA Group and Jemena have developed capacity listing services to lower the search costs of capacity trades and provide clearer signals to market participants of the demand for such services.

Pipeline owners benefit from a strong secondary capacity market. It provides increased flexibility for shippers and provides enhanced risk management options. In having more management options to manage utilisation risk, shippers are more likely to take up firm capacity services from pipeline owners.



Pipeline companies are also offering and developing other new services. The suite of services being taken up by market participants is changing. As noted above in the response to Q42, the take up of services is not highly visible to the market. However, a case has not been made that such contracts need to be highly visible. In addition, it must be noted that the rule change proposal for enhanced information that is currently before the AEMC proposes pipeline owners report capacity available for contracting on a three year forward looking basis.

There is increasing demand for storage, park and loan, interruptible and As Available services, all of which improve a shipper's ability to respond flexibly to changing market conditions. A new service, ranked priority firm, is being offered on some fully contracted pipelines to provide a firm service on all days outside of peak demand.

Pipeline companies are actively investigating options for further transparency of available capacity and trades, including opportunities for increased tariff transparency, capacity trading platforms and alternative capacity allocation mechanisms. APGA considers that this work should be industry-led and respond to the specific needs of market participants to maximise confidence in pipeline investment. In this manner, it can be expected that initiatives will be timely, appropriate and low-cost.

Q44. Are there any restrictions or limitations on the supply of specific ancillary pipeline services that are affecting competition in the supply or acquisition of gas? Do restrictions or limitations vary by location or by pipeline owner?

APGA is not aware of any concerns being raised publicly about specific ancillary pipeline services.

Q45. Is the level of available information on gas flows sufficient to support competition across pipeline services? Provide any examples where timely availability of information on gas pipeline conditions would have influenced which pipeline was used to transport gas. What are the costs/barriers to providing more disaggregated information?

APGA considers the level of available information of gas flows is sufficient to support competition across pipelines. Any contention that this is not the case should be subject to public scrutiny.

Given that the gas flows on any pipeline in Eastern Australia are dwarfed by the daily demand of a single operational LNG facility, APGA questions the claims of some LNG proponents that more real time gas data is required to manage their portfolios. APGA also



notes that LNG proponents have long advocated the LNG facilities in Gladstone, and pipelines that serve them, should report flows and demand in aggregate.

Generally, pipeline data systems have been developed to the level shippers have been willing to pay and the current metering systems in pipelines have been built to the requirements and standards of shippers. Pipeline owners do not generally produce billing quality data at a granularity of less than one day, which is typically compiled on a monthly basis. Generally, pipeline owners do not produce real time data on an intra-day basis. Metering equipment and Supervisory Control and Data Acquisition (SCADA) upgrades would be required in order to provide such data. This would be a major engineering project that would be costly, disruptive to operations and require substantial resources for little gain.

As APGA has commented in previous reviews, the costs of providing more disaggregated information cannot be estimated in the absence of a detailed proposal. Factors influencing costs of implementation for individual pipeline operators include:

- Existing data collection and transfer capabilities;
- Current data system configuration and areas of flexibility;
- The frequency of the information reporting requirement (hourly/daily/monthly/standing);
- Data accuracy requirements and degree of estimation allowed;
- Data granularity; how many data points must be collected, validated and published; and
- The proposed compliance regime.

In the absence of this type of information, it is only possible for pipeline operators to make high level estimates of costs, which would be specific to the business and to the systems in place.

For example, there is a significant difference between the collection of hourly data for daily collation, and the collection of hourly data for the purpose of commercial reporting. Generally, the hourly data currently collected by many operators is not collected in real time and is not of billable quality, and significant changes to systems would need to be made to upgrade the quality of this data. Furthermore, some pipeline operators do not collect hourly data at all, and some meters are installed and maintained by other market participants. An hourly data collection and reporting requirement would therefore have different cost implications for different operators, depending on their current systems.



Q46. To what extent is the 15 year no-coverage determination (the so-called Greenfields Incentive), a useful driver of pipeline investment? To what extent is it a restriction on access to pipelines?

APGA considers the 15-year no-coverage determination is a useful driver of pipeline investment. However, it has two characteristics that limit its utility in encouraging speculative investment in pipeline capacity

Firstly, the process under which an application for the 15-year no-coverage determination is protracted and intrusive, requiring the provision and publication of documents that may be commercially sensitive. As demonstrated in APGA's response to Q41, the level of interest in greenfield investment for transmission pipelines is such that the competition between competing proponents for each project is high. This level of competition requires rapid decision making and the protracted application process for the greenfields incentive is not conducive to this process. In circumstances of such competition, it is undesirable for key characteristics of a project to be published and available for competitor scrutiny. In the case of the competing proponents planning to connect Queensland to the southern gas markets circa 2007 the process to apply for the incentive did not fit with decision-making requirements. APGA notes this issue does not arise when the project in question is vertically integrated pipeline intended for sole use by the owner, such as the case with the pipelines associated with the LNG export projects.

Secondly, the 15-year no-coverage determination, as implied in its common name 'the Greenfields Incentive' only applies to new pipelines. The majority of development in Australia's gas transmission infrastructure is brownfield, expansions and improvements of existing pipelines. This is due to a number of factors, including:

- The expandability of pipelines. All pipelines can increase capacity through a combination of compression and looping.
- The relative ease of an expansion project over a greenfield project in acquiring environmental approvals, landholder agreements and other requirements.
- The size of Australian gas markets are such that a single pipeline is sufficient to serve current and, with expansion, future demand.

Brownfield development adds to the transportation capability of the East Coast gas market in important ways. As demonstrated in APGA's response to Q42, pipelines are developing to enable bi-directional flow at critical points in the network and adding capacity to allow gas flows to respond to changing dynamics. The current criteria for eligibility of the Greenfields Incentive exclude the vast majority of pipeline developments that have occurred and are likely to occur in the future. This limits the potential for pipeline owners to consider speculative investment in future expansions and enhancements of infrastructure.



Question on terms and conditions for gas transportation

Q47. Are there contractual terms and conditions in gas transportation contracts that are limiting competition in the supply of pipeline services (including secondary trading of capacity)? If so, explain what those terms are, the rationale for them and their effect on pipeline users.

APGA does not consider there are contractual terms and conditions in gas transportation contracts that are limiting competition in the supply of pipeline services. The reasons:

- Entering into a gas transportation agreement (GTA) with one pipeline owner does not prevent a shipper from entering into a GTA with another pipeline owner. The largest and most geographically diverse retailers and users have arrangements with most, and in some cases all, major East Coast pipelines.
- Clearly there is strong competition between pipelines serving the same market, such as the pipelines serving the Sydney market and the Adelaide market. Having a position on one pipeline does not prevent a shipper adopting a position on the second pipeline.
- Shippers with contractual rights to firm capacity effectively own that capacity – they are free to use, sell or trade that capacity as they wish to any participant. In the case of bare transfers, there is no requirement to inform the pipeline owner of the trade.

APGA is aware of two issues that have been raised as barriers to trade and/or competition for pipeline services.

Receipt and delivery points

There have been recent claims made to other reviews that the requirement to specify receipt and delivery points in gas transportation contracts is restricting the ability of shippers to trade capacity amongst themselves. APGA is not aware of any shipper publicly raising concerns regarding receipt and delivery points having made any attempt to address this issue with pipeline owners.

There are clear reasons for specifying receipt and delivery points in gas transportation contracts:

- Capability to deliver at one point on a pipeline does not translate to an exact capability to deliver to another point on a pipeline. This is most relevant when a capacity trade seeks to transfer capacity downstream, to a delivery point closer to the endpoint of the pipeline.
- There is limited receipt and delivery capacity at each receipt and delivery point. Any receipt or delivery point where a party wishes to use traded capacity may already be fully utilised.



- Each receipt and delivery point on the pipeline has nomination and allocation rules determining the utilisation rights of contracted parties. Rights at one receipt or delivery point can be traded between parties, but rights cannot automatically be transferred across receipt and delivery points.

The specification of receipt and delivery points does not limit a shipper's right to trade capacity. All of these issues can be managed, but require engagement with pipeline owners to develop solutions. Some of the solutions may be able to be expressed in formal processes that can be applied in all circumstances. Others may require unique solutions for each capacity trade.

APGA notes that the Authorised Maximum Daily Quantity (AMDQ) credit certificates utilised by AEMO to allocate a semblance of firm capacity rights in the Victorian Declared Transmission System also specify receipt and delivery points. This demonstrates that the importance of specified receipt and delivery points is not limited to contract carriage pipelines.

Questions on pipeline capacity trading

Q48. Are you aware of any instances where pipeline capacity was sought but not made available or alternatively not able to be procured in time? Provide details, including whether that capacity was sought from pipeline operators or shippers.

As covered in the response to Q43, pipeline owners have been working extensively to simplify, facilitate and increase the transparency of capacity trading,

It is likely there is a level of capacity trading that is opaque to the market and to pipeline owners. APGA has not seen any compelling reasons as to why there needs to be complete transparency around these capacity trades. APGA anticipates that the powers available to the ACCC under this Inquiry will enable it to assess the level of trade that is occurring and what, if any, meaningful barriers there are to further trade occurring.

Q49. To what extent are the new capacity listing platforms offered by APA and Jemena, or the current rule change proposal to the AEMC to enhance capacity information, likely to assist in the development of efficient capacity trading? If so, how?

The new capacity listing services and the current rule change proposal all serve to lower the search and transaction costs associated with capacity trading. These costs are further lowered through the pipeline industry's development of the operational capacity transfer service and AEMO's development of standard terms and conditions for bare capacity transfers.



APGA commends to the ACCC for consideration the work undertaken by the CoAG Energy Council, including a cost benefit analysis conducted by NERA, in 2013. The capacity listing platforms offered by APA and Jemena, the capacity listing service now on the National Gas Bulletin Board, the pipeline industry's development of the operational capacity transfer service, AEMO's development of standard terms and conditions for bare capacity transfers and the current rule change proposal effectively combine to deliver Option 2 and 3 canvassed in the CoAG Energy RIS and assessed by NERA.

There is little APGA can add to the findings of the extensive and thorough process that led to the development of the rule change proposal and the other activity mentioned above. APGA offers the following quotes from the NERA CBA for the ACCC's consideration.

That said our discussions with stakeholders provided little evidence to suggest that there was currently large unmet demand for pipeline capacity during periods where capacity was currently available.¹⁰

In the context of the Australian market we have not found any evidence that would support a conclusion that shippers are withholding pipeline capacity for the purpose of achieving a competitive advantage in a related market.¹¹

Pipeline operators have strong incentives to sell unutilised capacity that has been already contracted to other parties so as to earn additional revenue on a non-firm basis. That said, shippers generally prefer firm capacity more than non-firm capacity, because non-firm capacity is subject to the utilisation of other shippers contracted capacity. As a result, the demand for non-firm capacity will likely be limited.¹²

We have not received any information from stakeholders, nor identified any unusual characteristics in historical patterns of pipeline usage that would support a conclusion that capacity is being withheld from the market in an anti-competitive manner¹³

Q50. To what extent, or under what conditions, are the 'as available services' offered by pipeline operators a substitute for capacity trade entered into with a shipper? If not, provide reasons.

Whilst the term 'shipper' usually means a party with access to capacity on a pipeline, in the following discussion it also means a market participant that is seeking access.

¹⁰ 2013 NERA CBA, piv

¹¹ 2013 NERA CBA, pvi

¹² 2013 NERA CBA, p9

¹³ 2013 NERA CBA, p46



The simplest answer to this question is 'it depends'. It should be noted that capacity trades can vary in duration, they offer shippers the opportunity to acquire firm capacity on a very short-term basis through to a very-long term basis. By contrast, flexible services typically only offer capacity on a day-ahead or on-the-day basis.

There are multiple inter-linked factors determining the level of substitutability between flexible services in the primary market and the secondary capacity market.

Requirements of shipper

First and foremost, the requirements of the shipper seeking capacity dictate the level of substitutability of flexible services available from pipeline owners and the secondary capacity market.

If a shipper is seeking long-term firm capacity:

1. there is no substitutability between flexible services and capacity trades. Firm capacity from the pipeline owners is by definition not a flexible service.
2. Where a pipeline is not fully contracted or a pipeline is fully contracted but not fully utilised, a flexible service may be reliably available and so may be a substitute for firm capacity. However, the attractiveness will depend on the duration of capacity access the shipper is seeking, price and other factors.

If a shipper is seeking short-term firm access (flexible), on a day-ahead or on-the-day basis, then the level of substitutability is likely to be high. It will be influenced by the current load factor of the pipeline.

If a shipper is seeking medium-term firm access, on a weekly or monthly basis, the substitutability will be somewhere between that of those seeking long-term and short-term firm access.

Load factor

In times of high utilisation, the flexible services offered by a pipeline operator are much less likely to provide access to a pipeline. In these circumstances, the secondary capacity market is likely to offer a greater prospect for securing extra capacity for those market participants that seek it.

In time of low utilisation, flexible services offered by pipeline operators and the secondary capacity market both offer market participants every opportunity to secure shorter-term access to a pipeline.



Availability of primary firm capacity

The level of primary firm capacity available has a direct influence on the substitutability between flexible services in the primary market and the secondary capacity market. If there is no primary firm capacity available, the pipeline is fully contracted.

On pipelines that are fully contracted, the substitutability of the products varies as utilisation changes and depending on the requirements of the shipper. If a shipper is seeking firm access on a fully contracted pipeline, a capacity trade offers the best chance of acquiring it. If the shipper is seeking short-term access in a period of non-utilisation, the services are more substitutable.

Bi-directional capability

The capability of a pipeline to provide services transporting gas in both directions influences substitutability between flexible services in the primary market and the secondary capacity market. Pipelines with such capability are able to offer flexible services that are more substitutable with the secondary capacity market due to their ability to substitute receipts and deliveries of gas in each direction.

Shippers tend to seek a suite of services

The above factors demonstrate the changing circumstances that can affect the suitability of one product over another. It is likely shippers will raise other factors APGA has not considered. It is also likely that each market participant will have a different view of the level of substitutability of flexible service and capacity available in the secondary market.

Typically, different shippers seek to use a pipeline in different ways to meet the unique requirements of their business. Shippers use a bespoke suite of firm, flexible and storage services that are specifically tailored to their needs by pipeline owners. This suite of services can be further supplemented with traded capacity.

APGA anticipates the ACCC has sufficient power through this inquiry to assess the current level of trade and how it is used by each shipper.

Q51. How effective is competition between shippers and pipeline owners for the provision of contracted but unutilised capacity? If it is not effective, what factors are impeding competition?

As APGA has set out in the answer to Q50, flexible services and capacity trades are not always, or even often, substitutable. Where there is substitutability between products



offered by pipeline owners and shippers, they are offered in different markets and for different reasons. Shippers and pipeline owners do not compete in the same market sector.

Both shippers and pipeline owners have an interest in providing, respectively, secondary capacity and flexible services. The provision of such services presents an opportunity for additional revenue. However, in the case of pipeline owners, flexible services can be, and for pipelines with available firm capacity are always, offered in competition with firm services. In both circumstances flexible services are also offered as complements to firm services. The market for firm services is a pipeline owner's primary market and considerations regarding this market will influence its behaviour when offering flexible services.

The scope for competition between shippers for the provision of contracted but unutilised capacity must also be considered.

In considering competition in the provision of contracted but unutilised capacity it is necessary to consider the fundamental market characteristics of the number of participants and level of demand.

As noted in APGA's response to Q43, pipeline owners are supportive of a strong secondary capacity market as it can provide a useful risk management tool for shippers and encourage shippers to commit to primary firm capacity services.

Number of participants

With respect to the number of participants, APGA considers:

- The number of shippers on a pipeline is not large, ranging from 4 to 12 across major pipelines in Eastern Australia. Typically, there are 5 to 8 shippers.
- Many shippers are large, industrial users of gas with flat loads that allow near full utilisation of capacity.
- Other shippers, such as retailers, have variable loads and place a value on retaining capacity in the event of unanticipated spikes.
- In any given circumstance, influenced by the factors set out in Q50 and the unique requirements of each shipper, there may not be a 'large' number of shippers interested in making capacity available through trade.
- Shippers on a pipeline represent those parties most likely to require access to that pipeline for that market.
- As such, shippers are as likely to utilise flexible services from pipeline owners as complements to their firm capacity services as they are to acquire capacity in the secondary capacity market. There should be some competition between the two options. APGA considers the ACCC well placed to assess the level of capacity



trading across shippers and the provision of flexible services to shippers on each pipeline.

- New entrants of sufficient size and sophistication to manage gas supply and transportation arrangements are rare. Information at Attachment C covers the number of participants observable in Eastern Australian gas markets.

In summary, the number of participants in the market for contracted but unutilised capacity on any given pipeline is small and formed largely from the low number of existing shippers on that pipeline. This is not a large pool in which to drive competition.

The ACCC, with its information gathering powers, will be able to perform a detailed assessment of the number of participants in Eastern Australian gas markets.

Demand for contracted but unutilised capacity.

A major influence in the level of competition an observer would see in the provision of contracted but unutilised capacity is the level of demand for that capacity. It is not apparent that there is strong demand for pipeline capacity in periods where it is available.

Pipelines, and most forms of infrastructure, experience periods of high and low utilisation based on the demand profile of the markets they serve. In times of low utilisation, when capacity is available for acquisition through flexible services or the secondary market, there is low demand driving the low utilisation. As NERA noted in its 2013 Cost Benefit Analysis for the CoAG Energy Council's Regulation Impact Statement investigating options for enhanced capacity trading:

That said our discussions with stakeholders provided little evidence to suggest that there was currently large unmet demand for pipeline capacity during periods where capacity was currently available.¹⁴

Whilst some time has passed since NERA's analysis, the participants in the Eastern Australian gas market have not changed materially. Nor have the unsubstantiated claims regarding demand for secondary capacity changed.

As further evidence of low unmet demand for contracted but unutilised capacity, APGA notes that the capacity listing services provided by APA Group, Jemena and AEMO have not been meaningfully utilised since their commencement. If there was a high level of unmet demand for contracted but unutilised capacity, it seems reasonable that seekers of this capacity would be using these new tools to provide clear market signals to holders of such

¹⁴ 2013 NERA CBA, piv



capacity, and policy makers, of that demand and the terms (price, duration, quantity) under which that demand exists.

It is unreasonable to expect the limited number of shippers with an interest in capacity trading on any particular pipeline to generate competition between themselves for a product lacking demonstrated demand.

Observations

It is expected that the level of demand for flexible services and secondary capacity will increase as the market responds and adapts to the structural changes underway in Eastern Australian gas markets. Increased demand for these services is yet to materialise.

Pipeline owners are entering relatively shorter-term arrangements with many market participants. These shorter-term arrangements can be expected to influence demand for flexible services and secondary capacity.

Also, it is apparent that some producers, particularly those with interests in LNG export projects, claim to need more flexibility to manage portfolios. But while there are comments and submissions to reviews regarding supposed barriers, there appears to be no active engagement with pipeline owners in order to acquire flexible services or secondary capacity.

In cases where participants are seeking to access the Wallumbilla Supply Hub (WSH) or other markets and claim barriers to acquiring pipeline access, it is appropriate to consider:

- The arrangements some market participants have put in place to facilitate access to the WSH and the risks incurred in doing so. The use of foresight and willingness to accept risk in securing market capabilities should not be considered a barrier to participation.
- The frequency of occasions, if any, where significant volumes of gas have been offered on the WSH and not purchased.

Finally, APGA notes that it is usual industry practice for gas transmission arrangements to follow, not lead, gas supply arrangements. In the interconnected Eastern Australian gas market, participants do not secure access to pipelines before securing gas supply. The source of gas supply must be known before gas transportation is acquired. APGA would welcome ACCC investigation into circumstances where a market participant has a supply of gas, yet claims unavailability of gas transportation services.



Q52. Are the prices charged for capacity trades and 'as available services' what you would expect to observe in a workably competitive market?

APGA has no visibility on the prices charged for capacity trades. However, the prices charged for as available services on some pipelines are transparent and it is apparent that the pricing trend is largely consistent across most, if not all, pipelines.

As available and interruptible (flexible) services offered by pipeline owners are more expensive than firm capacity services. It is often presented by market participants that these services 'attract a premium', with the premise being this 'premium' is unreasonable and an indicator of a pipeline owner exercising market power. This is not the case.

The contract carriage framework for gas transmission access in Australia delivers pricing outcomes that are in line with workably competitive markets.

Discounts for long-term commitments and sharing of risk

Primary firm capacity services are offered under long-term arrangements that provide a pipeline owner, and its financiers, revenue certainty and provide shippers with secure access to transportation services. The revenue certainty provided by long-term arrangements reduces rather than removes investment risk and allows pipeline owners to offer primary firm capacity at a discount compared to flexible services. The discounts are also offered in recognition of the risk the shipper is taking, which is the risk of 'take-or-pay'.

Provision of discounted tariffs and other incentives for long-term arrangements is a common feature of workably competitive markets, examples of which include:

- Energy retailers offering retail customers discounts when entering two-year contracts.
- Mobile phone service providers offering discounted handsets and greater data and call allowances to incentivise contracts compared to month-to-month arrangements.
- Airlines offering discounts to wholesale purchasers of airline tickets, or early purchase by casual consumers.

The three markets mentioned above are not merely workably competitive markets, they are highly competitive markets.

Need to preserve long-term revenue stream

A further consideration for a pipeline owner is the long-term commitment that must be made to the investment. In the Australian economic environment, individual pipelines are



linear infrastructure built and expanded to service a single transportation route. Once built, there are very limited options to serve new markets and these tend to be out of a pipeline owner's control. New, gas-intensive investment along or beyond the pipeline route is required in order to provide a new market for a pipeline. The initial investment decision must be based solely on the initial market's ability to provide sufficient demand to justify the investment.

It is important to note that, contrary to perception, pipeline investments almost always retain some risk for the investor. It is very rare that a pipeline investment's foundation contracts will cover the full cost of capital expenditure and debt servicing. Pipeline investors have to make decisions as to the long-term viability of gas markets being served by new investments and the likelihood they will remain in place over the 80-year design life of an asset. This level of risk is increasing under the prevailing market conditions of the Eastern Australian Gas Market which are seeing a decrease in the duration of gas supply and transportation contracts.

Pipeline owners must be cognisant of long-term revenues. Shippers are offered incentives through discounts and secure rights to enter into long-term contracts that benefit both parties. Flexible services are offered at prices that:

- Preserve the discount provided to long-term commitments; and
- Maintain the long-term market for revenue to ensure profitability of a long-term asset.

Short-term gains must not occur at the expense of long-term revenue

In theory, pipeline owners could increase short-term revenue by offering flexible services at low tariffs to increase utilisation of a pipeline¹⁵. However, such offering would undermine the long-term market for firm capacity. If market participants observed significant discounts available to flexible arrangements there would be a 'flight from firm' and the long-term revenue prospects of a pipeline would be undermined. It would not be rational for pipeline owners to create such a situation. If regulatory intervention was to force it, private capital, which has been highly successful in creating the East Coast Gas Grid, would exit pipeline investment and no further investment would take place.

Recognition of the need to preserve long-term revenue streams, and the behaviour to do so, is also observable in workably competitive markets.

¹⁵ If demand exists. As APGA has noted, unutilised capacity on a pipeline is driven by a lack of gas demand. Pipeline utilisation cannot be increased without an increase in gas demand.



Pricing practice in the international air travel market

The highly competitive market of international air travel is comparable to the gas transmission market in many regards. It:

- Is a market for transportation services.
- Has very high capital costs. (A single A380 costs US\$428 million in 2015¹⁶).
- Has relatively low marginal operating costs. The cost of a single additional passenger on a flight is limited to minor administration, meals and the additional fuel required.

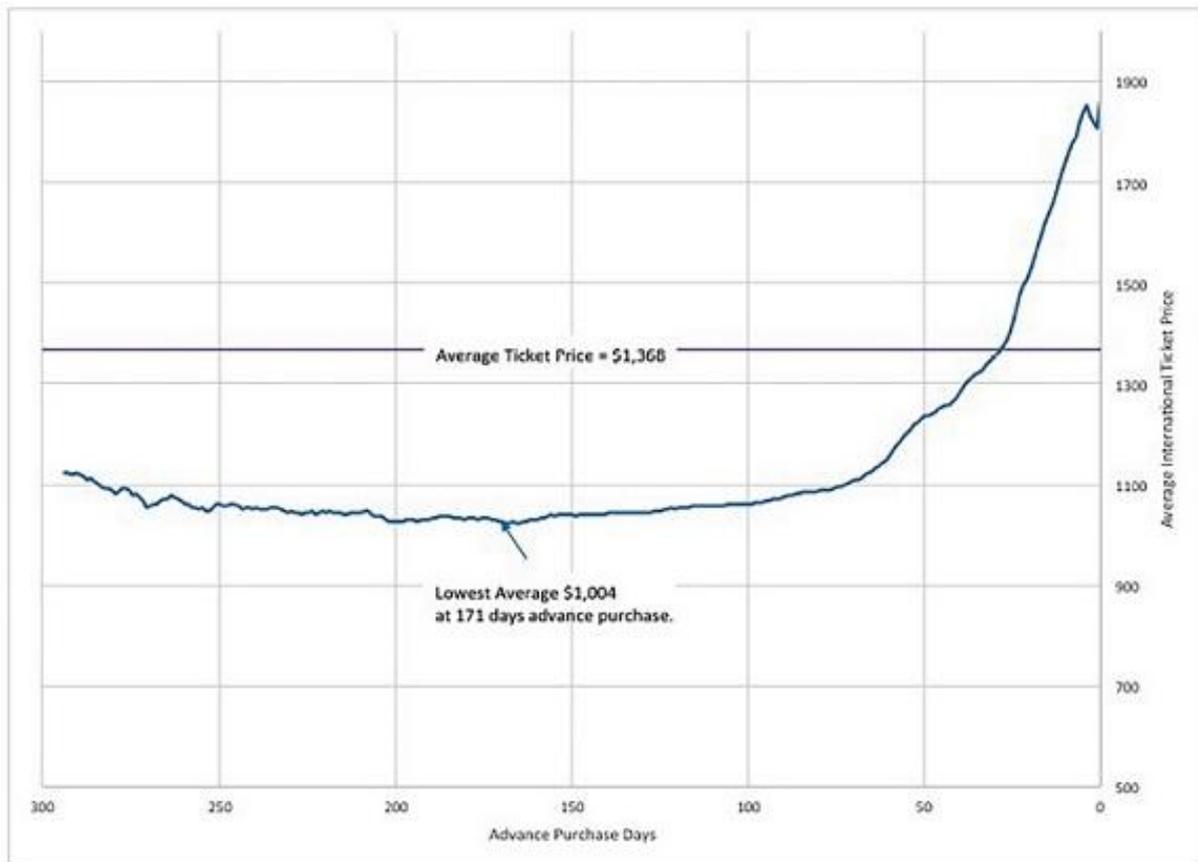
Unlike Australian gas transmission markets:

- There is intense competition on major international routes.
- The assets are highly flexible. A single aircraft (asset) is not fixed to a single route or market. It can be redeployed to meet the business requirements of the owner.

The price outcomes in this highly competitive transport market are remarkably similar to those observed in the pricing of firm and flexible services in Australia's gas transmission markets.

¹⁶ <http://www.airbus.com/presscentre/pressreleases/press-release-detail/detail/new-airbus-aircraft-list-prices-for-2015/>

US Average International Ticket Prices Jan 2013 – Jul 2014



Source: Airline Reporting Corporation, October 22 2014¹⁷

Customers willing to make relatively long-term commitments to the airline, paying for tickets six months or more in advance, receive a discount. It is standard practice in airline ticketing that customers receiving discounted prices also attract cancellation fees and charges, analogous to the 'take or pay' arrangements of gas transmission pipelines.

Customers retaining flexibility by not committing to a ticket in advance of departure do not attract a discount; they pay substantially more than those who did commit.

Importantly, the highly competitive international air travel market does not lead to any airline choosing to maximise short-term revenue by attempting to fill extra seats at prices offering small returns above the short-run marginal cost of a seat. Whilst the first airline to do so in a competitive market would benefit, potentially greatly, in the short-term, it would have long-term consequences. Customers would not commit to advance purchase of

¹⁷ <http://www.arccorp.com/news/pr20141022.jsp>



tickets on that airline (and possibly others), certainty of revenue and cash flow would decrease and fixed costs could not be met. Flexible prices on the first mover airline would have to rise rapidly in response, removing the short-term competitive advantage that had been achieved at the expense of losing longer-term commitments from customers. It is not a viable long-term strategy for a single actor in a highly competitive, capital intensive market, even when assets can be redeployed, and APGA contends it is not a viable strategy for an actor in any capital intensive market.

The opposite scenario: spot pricing for pipeline services

APGA considers it a useful exercise to consider the counter-factual scenario – a market where there is no firm capacity and a spot market works to set the price for pipeline capacity.

Some participants in previous reviews have suggested that spot markets for capacity should have a price floor of the short run marginal cost (SRMC) of a pipeline.

The National Gas Bulletin Board provides an indication of historical pipeline utilisation. Without addressing each pipeline individually, it is apparent that most pipelines experience a few days of peak utilisation a year, which does not always reach nameplate capacity.

This indicates that shipper on a pipeline could be highly confident that on any given day of the year, including peak season, at the current level of demand in any market it could gain access to a pipeline. This would allow an SRMC bid to have a high level of securing capacity.

Every shipper would have an incentive to bid low all the time. Any losses on the (maximum) very few days it may miss out each year on capacity would be offset by the gains of access at SRMC for 98 per cent of the year,

Pipeline revenue would collapse. Even if shippers feared being denied access on days approaching full utilisation and therefore bid sufficiently high to meaningfully increase access prices on those days, it is virtually impossible to conceive a circumstance where it would be high enough to offset the major part of the year where the pipeline was being accessed at the SRMC.

Such a process would discourage private investment in pipeline infrastructure.

If gas demand were to grow, it would be impossible to finance an expansion.

Comparisons to the electricity spot market are not appropriate; the electricity spot market is used to allocate generation of electricity across a distributed set of generators in the appropriate manner to ensure supply matches demand. The instantaneous nature of electricity also impacts on the system of provision. Further, even in the highly regarded



electricity market, the majority of electricity is bought and sold under 'contracts for difference'.

Q53. How should available pipeline capacity be measured?

Available capacity should be measured by pipeline operators and reported to AEMO.

It is not as simple as taking the difference between nameplate capacity and nominated flows. Pipeline operators are best placed to understand the likelihood of renominations or changes, the impact of short-term maintenance and the interplay between current and projected forward receipts and deliveries, weather conditions, linepack and other factors.

Importantly, there is no 'one true number' for available pipeline capacity. In addition to the above factors, the receipt and delivery points associated with any short-term capacity demand must be a factor. A pipeline may well have available capacity when comparing aggregate nominations and nameplate capacity, but may not have any available capacity at certain delivery points.

Q54. Are there any provisions in gas transportation agreements which limit or impede effective capacity trading? What are those provisions and how do they work to limit or impede capacity trading?

All holders of firm capacity have the right and ability to trade that capacity as a bare transfer with any interested party. If they wish to utilise the operational capacity transfer service, the trade must occur between parties that have contracts with the pipeline owner. Pipeline owners make available specific contracts for those parties that wish to acquire capacity through operational capacity transfers but do not have a contract already in place with the pipeline.

With the development of the operational capacity transfer service and its introduction on all pipelines where demand has been indicated, gas transportation agreements are now sufficiently 'harmonised' for the purpose of capacity trading. Utilising the operational capacity transfer service means that counterparties to a capacity trade need to agree only on volume, price and duration; the pre-existing terms and conditions allocate responsibility and obligations for matters such as nominations, gas quality and payments.

As acknowledged above in APGA's response to Q47, a recently raised issue is that of delivery and receipt points. GTAs typically specify delivery and receipt points for the gas associated with a capacity contract. Pipeline operators and shippers will have to work together to increase flexibility in contractual arrangements in order to facilitate increased



capacity trading. The gas transmission industry is committed to working with shippers to make these changes as efficiently and effectively as possible. If shippers are finding the explicit detailing of delivery and receipt points an impediment to capacity trading, pipeline owners welcome the opportunity to address the issue and strengthen the secondary market.

Question on co-ordination of gas supply

Q59. Are there particular upstream activities which are more difficult to co-ordinate than others? Provide details of any difficulties experienced in achieving co-ordination and explain whether, and how, these difficulties affect the level of upstream and / or downstream competition in the supply of gas or other ancillary services.

With regard to the co-ordination of upstream activity, APGA considers it general industry practice for gas transmission agreements (GTAs) to follow gas supply agreements (GSAs). It is highly unlikely that a company would secure a contract for gas transportation before decisions regarding gas supply have been made. APGA is not aware of any public statements indicating any party has had difficulty achieving a GTA once a GSA is in place. Equally, it is not apparent that there are any gas users in Australia that have been unable to achieve GTAs to meet current and forward requirements.

Questions on differing carriage models

Q60. Does the contract carriage model affect the level of upstream and/or downstream competition in the supply or acquisition of gas or other ancillary services (besides transportation services)? If so, how?

Yes, the contract carriage model does affect the level of upstream and downstream competition in the supply or acquisition of gas and other ancillary services.

The contract carriage model allows competitive tension to exist between pipelines serving the same basin and/or market. This encourages service innovation and applies downward pressure on tariffs as pipeline operators seek to maximise the utilisation of an asset.

For example, consider the Sydney gas market; served by the MSP from the Cooper Basin and the EGP from the Gippsland Basin. Under the contract carriage model, these pipeline operators are incentivised to deliver competitive transportation tariffs in order to maximise the prospect that the gas to be supplied is selected from the basin the pipeline services. If these pipelines operated under the market carriage model, each pipeline operator would have its tariff determined on the LRMC by the regulator and there would be little opportunity to contribute to gas supply competition through lower tariffs



The contract carriage model also offers the opportunity for significant competition in greenfields projects. Pipeline projects are attractive for long-term investors and recent projects have seen competing proposals actively vying to secure the long-term contracts necessary for the project to proceed. This is evidenced in the competitive race to construct the first pipeline connection to Queensland around a decade ago and the current tender process to build the first pipeline connection to the Northern Territory.

By driving competition between pipelines and in greenfields projects, the contract carriage model delivers lower tariffs that:

- Improves competition in upstream markets by making the fixed costs of acquiring gas from a particular basin lower; and
- Improves competition in downstream markets by lowering the delivered cost of gas, allowing retailers to pass on greater savings to consumers and improving the attractiveness of gas compared to other energy sources, particularly electricity.

Finally, APGA notes that the contract carriage framework provides the correct incentives to ensure transportation capacity is delivered to the market in a timely manner. Bilateral negotiations enable new capacity to be built as it is required, by allocating firm access rights to those parties willing to pay for it. This is something the market carriage framework is unable to achieve, with the regulatory process being required to approve new capacity. This results in delays to investment. The costs to the market of delayed investment have been extensively covered by the Productivity Commission in its Research Paper: Examining Barriers To More Effective Gas Markets.

Q61. Does the need to co-ordinate between the different carriage models affect decisions made by market participants as to whether to engage in the transportation of gas in and out of Victoria? If so, how?

APGA notes that a significant portion of Victorian gas production is transported out of Victoria. APGA considers the AEMC's analysis of and future work program for this issue in its Review of Facilitated Markets and Pipeline Frameworks is accurate and appropriate.

ATTACHMENT A – APGA Submission to the Competition Policy Review

10 June 2014

Competition Policy Review Secretariat
The Treasury
Langton Crescent
PARKES ACT 2600

COMPETITION POLICY REVIEW ISSUES PAPER

Dear Panel Members

Please find attached the Australia Pipeline Industry Association's (APIA) submission to the Panel in response to its Issues Paper. APIA welcomes this comprehensive review of Australia's competition policy. APIA would like to highlight:

- The ongoing competition issues in wholesale gas markets, which are exacerbating the challenges facing Australia's gas markets caused by the major structural shift towards an export focus.
- The findings of a number of reviews, including the 2002 CoAG Energy Market Review (the Parer Review) and the 2014 Eastern Australian Domestic Gas Market Study, which show competition shortcomings have been recognised for many years, but are yet to be adequately addressed.
- The recommendations of the Productivity Commission's Review of the National Access Regime, the Commission's deliberations on the production process exemption and the uncertainty that exists around its application to infrastructure that is part of a production process.

AUSTRALIAN PIPELINE INDUSTRY ASSOCIATION LTD

ABN: 29 098 754 324 • ACN: 098 754 324

REGISTERED OFFICE: 1ST FLOOR, 7 NATIONAL CIRCUIT, BARTON ACT 2600

MAILING ADDRESS: PO Box 5416, KINGSTON ACT 2604

T: 02 6273 0577 • F: 02 6273 0588

E: apia@apia.asn.au • W: www.apia.net.au

APIA makes three recommendations to the Review Panel:

1. The Competition Policy Review should recognise the ongoing competition issues in wholesale gas markets and recommend policy action to address them.
2. The Productivity Commission's recommendations regarding the coverage criteria for the National Access Regime should be adopted and the production process exemption should be clarified in light of the amendments.
3. The Competition Review should recognise the value of certifying industry-specific access regimes and the importance of undertaking to certify the electricity and gas access regimes in the Australian Energy Market Agreement 2006.

APIA looks forward to discussing these issues further with the Panel. Please contact APIA's Policy Manager, Steve Davies, on (02) 6273 0577 or at sdavies@apia.asn.au for further information.

Yours sincerely



CHERYL CARTWRIGHT
Chief Executive



AUSTRALIAN PIPELINE INDUSTRY ASSOCIATION

RESPONSE TO THE COMPETITION POLICY REVIEW

ISSUES PAPER

10 JUNE, 2014

Contents

INTRODUCTION.....	1
COMPETITION IN WHOLESALE GAS MARKETS.....	2
Joint Marketing	3
Third party access to upstream infrastructure	3
Title administration.....	4
Ongoing competition concerns.....	4
INFRASTRUCTURE ACCESS – THE NATIONAL ACCESS REGIME	6
CERTIFICATION OF THE ENERGY ACCESS REGIMES	9
STATE AND TERRITORY REGULATORS.....	10
ATTACHMENT A – Excerpt from the NCC	11
ATTACHMENT B – Improvements in transmission capacity trading.....	13



INTRODUCTION

The Australian Pipeline Industry Association (APIA) welcomes the opportunity to provide comment to the Competition Policy Review Panel's Issues Paper. APIA is the peak body representing Australia's gas transmission industry. APIA's members build, own and operate the gas transmission infrastructure connecting the disparate gas supply basins and demand centres of Australia, offering a wide range of services to gas producers, retailers and users.

Since 2000, APIA's members have invested in and built more than \$2.2 billion¹ of infrastructure providing 4000km of coverage across 10 major new gas transmission pipelines in eastern and northern Australia². These pipelines have been built to meet the demand of Eastern Australia's gas markets. In Western Australia, a similar level of investment expanding the State's major pipelines has occurred over the same period.

It is this investment that has led to the evolution of pipeline networks across Australia's gas markets, promoting basin-on-basin competition and underpinning the emergence of trading hubs in the demand centres. It is these networks that will facilitate the next evolution in trading and increased flexibility across these markets. Importantly, this investment has occurred across a mix of regulated and unregulated assets and has been facilitated through bilateral negotiation and contracts, as envisaged under the access regime established in the *National Gas Law 2008*.

Australian domestic gas markets are undergoing a once-in-a-lifetime structural change. The development of an LNG export industry in Queensland is driving a surge in production activity and will increase gas demand fourfold on the East Coast, creating an environment of gas supply tightness. In Western Australia, new export projects and the expiry of long-term domestic gas supply arrangements are leading to domestic supply uncertainty. Both circumstances are placing substantial upward pressure on domestic gas prices, with a doubling of prices in both Eastern and Western markets, in some cases tripling, in comparison to the historical price. Without an increase in supply and suppliers, there is little prospect of these prices reducing.

In this environment, it is appropriate to encourage renewed focus on competition in Australia's gas supply arrangements and any issues that may be arising from the current policy settings.

¹ This investment does not include infrastructure built for LNG projects or expansion of existing pipelines.

² AER State of the Energy Market 2013 p108-109



COMPETITION IN WHOLESALE GAS MARKETS

There are three long-standing issues affecting competition in the upstream gas sector, the first two of which are of direct relevance to this review:

- Access to upstream gas infrastructure;
- The continuing practice of joint marketing in the wholesale gas market; and
- Barriers to competition arising from petroleum tenement management.

These issues are not new to Australia’s gas markets. As the National Competition Council (NCC) noted in 2000³, the Council of Australian Governments (CoAG) Upstream Industry Working Group delivered a report on gas reform issues in 1998 that focussed on three key issues:

- *barriers to competition arising from acreage management systems;*
- *third-party access to upstream facilities; and*
- *contractual and marketing arrangements.*

The NCC’s summary of the Report is included at Attachment A. Despite this report being finalised over 15 years ago, the issues are largely unchanged.

In 2002 the final report of the CoAG Energy Market Review, commonly called the Parer Review, included at Exhibit 7 its assessment of gas industry issues:

Key findings	Proposed solutions
There is insufficient upstream gas competition on the East Coast to promote a healthy market.	The separate marketing of gas should be actively facilitated as current contracts expire. Governments should give more consideration to promoting competition in gas markets when awarding exploration leases.
Too much regulatory uncertainty exists around new pipeline development.	Allow project developers to seek an upfront binding ruling on coverage, and the choice of either an up-front and longer term binding ruling on the regulatory conditions that will apply or, for a new transmission pipeline, a 15-year economic regulation holiday.
There is a lack of tradeable capacity on some pipelines, and other market supporting mechanisms.	Introduce tradeable capacity and other mechanisms on new and unregulated pipelines.
Both industry and users have concerns with the Gas Code.	Review the Gas Code to judge its effectiveness from both a gas industry and user perspective.

³ Multi-User Infrastructure Access: Implications of Third Party Access for Infrastructure Access, Ed Willett, NCC, July 2000



Access by independent producers to upstream facilities will become more important.	Review the industry's principles for access to upstream facilities.
--	---

The second, third and fourth points have been addressed since the Parer Review. Points two and four were addressed during the development of the current access regime for gas pipelines, the *National Gas Law 2008*. The third point has been the subject of recent review and is being progressed through:

- the industry-led development of a new service facilitating capacity trading, the operational capacity transfer; and
- information enhancements for the National Gas Bulletin Board to facilitate further capacity trading are currently under development.

Further information on capacity trading is available at Attachment B.

The first and last points have not been substantially addressed.

Joint Marketing

Joint marketing continues to be an issue of concern to domestic gas markets. Most recently, in November 2013, the Victorian Gas Market Taskforce (VGMT) recommended:

*The Victorian Government, with the objective of moving away from joint marketing arrangements, request the Australian Competition and Consumer Commission (ACCC) review the existing joint marketing arrangements for gas producers, assessing their relevance in light of the rapidly evolving eastern gas market.*⁴

Third party access to upstream infrastructure

In regard to third-party access to upstream infrastructure, the Commonwealth Department of Industry's January 2014 Eastern Australian Domestic Gas Market Study (EADMG) stated:

The implication of current arrangements is that, in practice, the sharing of processing facilities is largely a matter of whether the technical and commercial objectives of asset owners can be satisfied. These may include strategic objectives, for example to exclude competitors from access. To the extent to which this is a barrier to entry over time may be limited by competitors building smaller or alternative plant (the economies of scale for building new processing may not be as large as with transmission pipelines). However, it is also the case that more ready access to processing in the proximity of reserves could accelerate supply response. It is therefore not surprising that a number of

⁴ Victorian Gas Market Taskforce Final Report, Recommendation 11



*parties have raised concerns over the difficulties with negotiating access to processing infrastructure in the current environment.*⁵

Despite this statement, the EADGMS did not identify access to this infrastructure as an option for future reform. This may be due to an apparent misinterpretation of the Productivity Commission's findings in its Review of the National Access Regime. This issue will be discussed in more detail below.

Title administration

The EADGMS also identified title administration and management as a potential area of further reform, noting the role that effective administration plays in limiting stockpiling and strategic management of reserves:

*In addition to efficient and effective administration of petroleum titles, an important objective of acreage management regimes is to provide explorers and producers with the discipline and incentive to commercialise resources at the time where the value to society is highest. To that end, a key task of title management regimes is to ensure 'land banking' does not occur and that the commercialisation of gas resources is not unnecessarily delayed — bearing in mind risk, technical, market and regulatory factors.*⁶

Ongoing competition concerns

Overall, it is clear competition remains a concern in Australia's gas markets. The EADGMS stated:

*A common and consistent complaint made by major users is that the current eastern gas market lacks sufficient competition. This is essentially a reflection of the level of confidence in the price discovery process — where once several offers of supply might have been expected, it appears some users are receiving only one or two 'serious' offers. While those claims are subjective and anecdotal, there appears to be a need to improve confidence in the price discovery process.*⁷

and

Competition in the wholesale market has complex and interdependent drivers. Outcomes are the result of regulatory and commercial decisions ranging from acreage allocation through to mergers and acquisition activity and supply decisions. Upstream supply — that is, gas exploration and production — is a necessary but not sufficient driver of competition in the wholesale market. In particular, competition may also be influenced by infrastructure, as the efficiency of commercially

⁵ EADGMS, p54

⁶ EADGMS, p97

⁷ EADGMS, p87



*determined or regulated access to pipelines, processing and storage, influence pricing and investment decisions in upstream and downstream markets.*⁸

Both the EADGMS and the VGMT identify the need for further review. From the EADGMS, the policy option identified was to:

*Consider commissioning a review of gas market competition to focus on matters driving wholesale market outcomes.*⁹

From the VGMT, the recommendation was:

Eastern market governments request that:

- a. The Productivity Commission (PC) conduct a comprehensive review and cost benefit analysis of potential reform options relating to the eastern gas market, taking into account the rapid change in market dynamics and with the aim of increasing efficiency, transparency and **competitiveness**¹⁰ of the eastern gas market; and*
- b. Eastern market State Premiers jointly write to the Commonwealth Treasurer, incorporating the proposed terms of reference, to seek approval for the PC review.*¹¹

Matters of infrastructure access under the National Access Regime and joint marketing are already being considered in the Competition Review Panel. APIA considers the current arrangements are not producing ideal, competitive outcomes in the wholesale gas market and the issues manifesting in that market may be indicative of the issues that can arise in other markets, particularly those undergoing structural change.

RECOMMENDATION 1

The Competition Policy Review should recognise the ongoing competition issues in wholesale gas markets and recommend policy action to address them.

⁸ EADGMS, p88

⁹ EADGMS, p90

¹⁰ Emphasis added by APIA

¹¹ Victorian Gas Market Taskforce Final Report, Recommendation 15



INFRASTRUCTURE ACCESS – THE NATIONAL ACCESS REGIME

The Issues Paper provides a good summary of the purpose of the National Access Regime at section 5.15 and recognises the Competition Policy Review is considering the recommendations of the Productivity Commission's (PC) Review of the National Access Regime.

A matter specifically covered in the Commission's review was the production process exemption. The Commission considered the implications of the High Court's Pilbara Rail Decision and submissions on the subject and stated in its Final Report¹²:

The production process exception as interpreted by the High Court is suitable for Part IIIA, as Part IIIA is a generic access regime. Amending the production process exception to suit a particular industry, for example the iron ore export industry, would be likely to result in a provision that is ill-suited to other industries. The Commission considers that in many cases it will be appropriate to assess the potential coordination costs of access on a case-by-case basis. This can be achieved through an assessment against the declaration criteria — the Commission has recommended that greater consideration be given to coordination costs to assist in preventing declaration from inefficiently breaking up highly integrated supply chains.

It appears from the High Court's ruling on the Pilbara Rail matter and the Commission's statement that the production process exemption should be considered as an additional reasonableness test for infrastructure that is part of a production process, to ensure the benefits of competition outweigh the costs of coordination, rather than an absolute exclusion of such infrastructure from declaration.

The Issues Paper has highlighted the recommendations of the Commission to improve the NAR:

amending the 'competition test', the 'uneconomical to develop another facility test' and the 'public interest test' under the regime, to ensure declaration occurs where the benefits arising from increased competition in a dependent market are likely to outweigh the costs of regulated access

But it has not recognised the link the Commission made between these recommendations and the production process exemption. This link is of high consequence; it is clear from the submissions to the Commission that there is some uncertainty about the application of the exemption following the High Court's ruling in the Pilbara Rail case.

The treatment of the production process exemption is of high consequence to the issue of third-party access to upstream gas infrastructure, particularly processing facilities. The applicability of the exemption to gas processing facilities has not been tested. It is generally considered to apply, as evidenced from the statement in the EADGMS:

¹² Productivity Commission, Review of the National Access Regime, p150



*The Competition and Consumer Act 2010 excludes declaration of a service which amounts to the use of a production process. This is likely to exclude upstream production facilities from third-party access requests under the Act.*¹³

This stands in contrast to the position of the Australian Petroleum Producers and Explorers Association (APPEA), which seems to be that the provisions of the CCA 2010 can provide access to upstream infrastructure:

*APPEA considers that commercial negotiation is the least cost and more effective method for achieving third party access to upstream facilities. Commercial negotiation has led to a number of access arrangements being achieved without threat of government intervention. There is no reason to expect that commercial negotiation will not continue to deliver these outcomes. In the event of some failure of negotiation, the provisions of the Competition and Consumer Law 2010 are available, should a party seek to invoke them*¹⁴.

APIA fully supports APPEA's position that commercial negotiation is the most effective method for achieving third-party access to infrastructure. However, in the case where an infrastructure asset owner wields significant market power or may wish to act strategically, it is necessary to have a regulatory mechanism to ensure competitive outcomes can be achieved. Such a mechanism is provided through the NGL for transmission and distribution pipelines. The NGL allows for pipelines to be uncovered, with coverage being considered on application from market participants when commercial negotiations have not succeeded in providing satisfactory outcomes.

It is not clear that the National Access Regime provides such a regulatory mechanism for upstream gas infrastructure, or any infrastructure that may be considered part of a production process. It is likely that any future application of the production process exemption will need to be tested in the courts, a process in which well-resourced, incumbent infrastructure owners can more readily participate than the parties seeking access to infrastructure, which are often much smaller, emerging companies.

Adding to the confusion in the specific case of upstream gas infrastructure, the EADGMS stated:

The Productivity Commission released a draft report on 28 May 2013 on third party access arrangements in Part IIIA of the Competition and Consumer Act. While the Productivity Commission did not consider the National Gas Law, the two regimes are similar and the Commission concluded that processing facilities should not be included as facilities covered in the National Access Regime.

¹³ EADGMS, p54

¹⁴ APPEA submission to the EADGMS, p20



The Commission made no such statement in either the draft or final report. As noted above, the Commission's view is that the production process exemption should be considered an additional test, to be reflected in changes to the declaration criteria. Neither report made any mention of gas processing facilities.

RECOMMENDATION 2

The Productivity Commission's recommendations regarding the coverage criteria for the National Access Regime should be adopted and the production process exemption should be clarified in light of the amendments.



CERTIFICATION OF THE ENERGY ACCESS REGIMES

There is one recommendation in the Productivity Commission's final report on the Review of the NAR that APIA does not support. The Commission considers that certification of the electricity and gas access regimes is unnecessary:

On balance, the costs of certifying the electricity and gas regimes may outweigh the benefits. Therefore, the Commission considers that COAG should release the state and territory governments from the existing requirement to submit their electricity and gas regimes for certification (although the state and territory governments would be free to seek certification of their regimes if they considered that there would be net benefits from doing so).¹⁵

The primary reason for this position appears to be a concern about the cost of certification. There is little regard given the commitment made by State and Federal Governments in the *Australian Energy Market Agreement 2006* to certify the, then under development, National Electricity Law and National Gas Law. Without subsequent advice or statements on the matter, it is reasonable to conclude that investments in energy network infrastructure since 2006 have occurred under the assumption the regimes have been certified.

APIA considers certification of the electricity and gas regimes is essential for two reasons:

- It removes any possibility that infrastructure under the electricity or gas regimes can be declared under the NAR. The Commission states that the removal of this possibility is:

To improve investment and regulatory certainty, and reduce administrative costs.¹⁶

- It would deliver greater consistency as it ensures the overarching framework of the National Access Regime protects against drift to objectives, principles and practices that are not directed to the efficiency of the national economy. Jurisdictional changes to State and Territory access regimes, including cooperative schemes such as the Gas Access Regime are open to adjustment to respond to policy and/or political objectives that diverge from the overarching objective of national economic efficiency. These adjustments can create distortions in investment decisions that are not contribute to the efficiency of the national economy.

RECOMMENDATION 3

The Competition Review Panel recognise the value of certifying industry-specific access regimes and the importance of undertaking to certify the electricity and gas access regimes in the Australian Energy Market Agreement 2006.

¹⁵ Productivity Commission Review of the National Access Regime, 2013, p23

¹⁶ Productivity Commission Review of the National Access Regime, 2013, p31



STATE AND TERRITORY REGULATORS

The National Gas Law is one of the access regimes administered by multiple regulators:

- the Economic Regulatory Authority (ERA) in Western Australia;
- the Utilities Commission of the Northern Territory in the NT; and
- the Australian Energy Regulator (AER) in all other states and territories.

During 2011-12, the Australian Energy Market Commission oversaw an extensive rule change process for the economic regulation of network service providers, resulting in the requirement for regulators to produce Guidelines outlining preferred processes to determine the rate of return. The AER and the ERA have published Guidelines that differ on many inputs:

- The AER favours ten, rather than five years for risk free rates, which translates at present to around 70 basis points in the Weighted Average Cost of Capital.
- The AER favours a principled approach to imputation credits whilst the ERA favours an empirical valuation approach; the practical upshot is a difference of 20 basis points in gamma.
- The AER favours a trailing average approach for debt which effectively updates the cost of one-tenth of the debt every year, whilst the ERA proposes to update the debt risk premium every year. The practical upshot is that the ERA approach introduces new risk not present in the AER's approach.
- The ERA has maintained its bond-yield approach which essentially involves it creating its own debt cost index, whilst the AER has opted for a Bloomberg or RBA index to estimate the cost of debt.

The outcomes of application of these Guidelines to the regulatory process remain to be seen. If there are materially different outcomes, the potential for these differences to create distortions in investment incentives across Australia must be considered. Moreover, the degree to which any such distortions might impact the efficiency of the economy, and therefore the national interest, must also be considered by policymakers.

In APIA's view, whilst it can be argued that competition in ideas between regulators might result in better regulation over the longer term, this needs to be balanced against the impacts on economic efficiency and investment incentives created when different regulators interpret the same law in different ways.



ATTACHMENT A – Excerpt from the NCC

An excerpt from Multi-User Infrastructure Access: Implications of Third Party Access for Infrastructure Access, a presentation by Ed Willett, Executive Director of the NCC, July 2000.

<http://ncc.gov.au/images/uploads/CISp00-008.pdf>

Reforming regulatory barriers to free and fair trade in gas

The COAG 1994 agreement called on governments to remove all remaining regulatory and legislative barriers to free and fair trade in gas. While the access reforms have focussed on the downstream area, a major focus of the legislation review program has been to review upstream issues. The access reforms alone are unlikely to benefit consumers unless there is competition between gas producers.

Australian gas markets were traditionally – and to a large extent, still are – characterised by highly integrated supply chains in each State supported by long-term exclusive contracts between producers, pipeliners and retailers. It is difficult to assess the extent to which this structure has impacted on gas prices due to the lack of price transparency in the Australian market. It is frequently argued that well-head prices in Australia are very competitive by international standards. But the same used to be said about electricity prices prior to reform, while gas prices reportedly fell by two thirds in Canada after upstream gas monopolies in that country were disaggregated.

The Upstream Issues Working Group (UIWG), an intergovernmental group on which the Council was an observer, examined upstream gas reform issues in 1998. The Groups' final report focussed on three key upstream issues:

- barriers to competition arising from acreage management systems;
- third party access to upstream facilities; and
- contractual and marketing arrangements.

Acreage management issues

One of the best ways to promote upstream reform is through new discoveries of gas. The broad issue for the Council here is whether the legislative framework – under the various State, Territory and Commonwealth Petroleum Acts – creates conditions for the issue of exploration permits that are conducive to competition. The kind of issues here include the size and duration of permits, relinquishment and retention arrangements, the allocation criteria used when issuing permits, and publication of exploration data.

The Council accepts that there are issues of balance here. For example, if the size of permits is too small, especially for highly speculative sites, explorers may be reluctant to commit resources to exploration. But the danger of issuing large permits is that dominance may be conferred upon the successful permit holder in the event of a discovery.

The UIWG report highlights a number of critical issues in this area, including the need for greater transparency in acreage bidding processes. The Group identified one necessary condition as being to ensure that the details of winning acreage bids are published or made readily available to interested parties. Jurisdictions appear, on the whole, to have accepted this recommendation and are making the necessary changes to legislation.



Third party access to upstream facilities

Another potential barrier to competition is the monopoly ownership and control of upstream production facilities like gas processing plants and gathering lines. Bottlenecks can arise in the gas supply chain where these facilities are uneconomic to duplicate – that is where there are significant economies of scale and/or scope.

The UIWG identified a need for progress on access to upstream facilities, but was unable to reach agreement on an industry code. However it remains open to individual jurisdictions to introduce legislation providing a basic right for third party access and binding dispute resolution. There are indications that some jurisdictions are considering this option.

Marketing issues

The UIWG report found that the present immaturity of Australia’s gas markets would make mandatory separate marketing by partners in joint ventures premature at this stage. However, the UIWG also found that separate marketing would enhance intrabasin competition, and targeted this as the longer-term goal. In the meantime, it argued that the ACCC should continue to assess the actions of gas joint ventures on the basis of the public interest test, and that the ACCC should be mindful in its ongoing reviews of authorisations of the desirability of requiring separate marketing as soon as this becomes feasible.



ATTACHMENT B – Improvements in transmission capacity trading

The gas capacity trading reforms formed a major piece of the Standing Council on Energy and Resource's (now the CoAG Energy Council) 2013 gas market reform agenda and it has led to a number of commitments that will have an impact on the environment for capacity trading.

In response to the SCER consideration of transmission capacity trading, gas transmission companies, working with customers, developed a consistent framework for the provision of operational capacity transfers. Operational capacity transfers are superior to the traditional bare capacity transfers for a number of reasons. They:

- are an incentive to offer capacity, as it reduces the administrative burden for shippers;
- provide a more appropriate allocation of risk as the obligations of the seller are transferred to buyer;
- increase operational efficiency as it preserves the relationship between pipeline operator and shippers, both new and existing;
- allow a buyer of traded capacity to easily aggregate capacity from multiple sellers;
- improve transparency through publication of bids and offers, information on trades, available and contracted capacity; and
- support new entrants as it allows new shippers to access short-term capacity.

Engagement with market participants has shown a clear preference for operational transfers and it is expected that this service will be utilised where there is a market need.

This initiative, initially advocated by APA Group, has been endorsed by the gas transmission industry and can be readily applied to any pipeline in response to market need. Operational capacity transfers will be available on Wallumbilla hub pipelines operated by APA Group and Jemena at the commencement of that market. Both companies, and other pipeline service providers, are investigating its utility in other markets and on other pipelines. APIA has developed and published a guideline for operational capacity transfer services to ensure a consistent approach is used across all pipelines as this service expands.

In December 2013 SCER produced a capacity trading Decision Regulatory Impact Statement recommending the development of further information initiatives and standardised trading contracts to support capacity trading. This development of this mechanisms will continue throughout 2014.

A further advantage of the industry-led response is its speed, the new service was conceived, developed and approved in the space of four months. This stands in contrast to SCER's information process, the RIS consultation ran over a period of nine months and the information proposal is still to be further developed following its recommendation in December 2013.

ATTACHMENT B – APGA Submission to the Energy White Paper



Energy White Paper

GREEN PAPER 2014

Response from the Australian Pipeline
Industry Association

November 2014

the **australian**
PIPELINE industry
association Ltd





Executive Summary

The Australian Pipeline Industry Australia (APIA) welcomes the analysis of Australia's gas markets and supports the actions outlined in the Federal Government's Green Paper to build gas supply and improve market operation.

In particular, APIA considers competition in gas supply essential to produce a rapid, effective supply response. A review of competition in Eastern Australia's wholesale gas markets, as suggested in the Green Paper, will identify priorities and appropriate responses to maximise the ability of gas supply to respond to the changing market conditions covered in the Green Paper.

Transparency and liquidity have been an ongoing aim of gas market reform and APIA proposes these market characteristics are best supported through initiatives that focus on competition, efficiency gains and refinements and growing the gas market. Policy that focuses solely on efficiency improvements will not deliver the best outcomes for expanding, efficient gas markets.

Recent transparency reforms have concentrated on transmission capacity availability and utilisation. As a result, industry-led capacity trading initiatives have been introduced, and there are also government processes underway to further support capacity trading with the aim of developing low cost solutions to improve transparency and liquidity in the gas transmission sector.

The next tranche of transparency improvements in the gas market need to focus on addressing information asymmetries in the capacity of supply to meet export and domestic demand. This will allow market participants to better judge price and supply risks when securing gas supply.

The gas transmission industry is responding to the changes underway in Australian gas markets with tailored gas market services and significant investments in new capacity. A number of these investments are underpinned by contracts of relatively short timeframes. Pipeliners are also investigating further industry led initiatives that can leverage the reformed Gas Bulletin Board and improve efficiency, transparency and liquidity.



Key points

- The gas transmission industry is responding to changing gas markets through:
 - offering new services to facilitate trades;
 - participating in information reforms;
 - investigating further opportunities for industry-led reform; and
 - adapting investment opportunities to meet market needs, particularly the current trend of shorter contract terms.
- The immediate focus of policy reform needs to be improving regulatory and market conditions to facilitate increased gas supply.
- Increased competition should improve the market's ability to respond to changing conditions and provide additional supply at competitive prices.
- APIA supports a review of competition in Eastern Australian wholesale gas markets.
- Encouraging new entrants to gas markets will support improved competition, transparency and liquidity.
- The next tranche of transparency reforms should focus on addressing information asymmetries in supply capacity.
- Further reforms to improve market function should:
 - be based on a consistent strategic goal;
 - be guided by an agreed set of over-arching principles; and
 - focus on putting frameworks in place to encourage efficient market growth, providing sufficient time for markets to grow and adopt new practices leveraging improved frameworks before triggering further development.



Contents

Executive Summary	1
Introduction.....	4
Gas transmission industry is responding to changing market conditions.....	6
Bringing on new gas supply.....	8
Environmental and social concerns about unconventional gas projects.....	8
Competition and its relationship to supply in wholesale gas markets.....	8
Improving competition to increase supply and apply downward price pressure.....	9
Joint Marketing	12
Third party access to upstream infrastructure	12
Title administration.....	13
Encouraging new entrants.....	13
Improving transparency.....	14
Wholesale gas price	15
Pipeline tariffs.....	16
Improving gas market function	17
Other issues.....	19
Energy Market Governance.....	19



Introduction

The Australian Pipeline Industry Association (APIA) welcomes the opportunity to comment on the issues for energy markets posed by the Federal Government in the Energy Green Paper.

APIA's members build, own and operate the gas transmission infrastructure connecting the disparate gas supply basins and demand centres of Australia, offering a wide range of services to gas producers, retailers and users. APIA, as the peak body representing Australia's gas transmission industry, has views on many of the issues raised in the Green Paper. This submission will concentrate on those issues concerning the future development of Australia's gas markets.

Since 2000, APIA's members have invested in and built over \$2.2 billion¹ of infrastructure providing 4,000km of coverage across 10 major new gas transmission pipelines in Australia². These pipelines have been built to meet the demand of Australia's gas markets. There has been a similar amount of investment in expansions of existing pipelines across the country over that time.

It is this investment that has led to the evolution of a pipeline network across eastern Australia's gas markets, promoting basin-on-basin competition and underpinning the emergence of trading hubs in the demand centres of Eastern Australia. It is this network that will facilitate the next evolution in trading and increased flexibility across these markets.

The revenue from this infrastructure is derived entirely from providing services to gas market participants and the interests of the gas transmission industry are best met when the needs of gas market participants are met. Importantly, this investment has occurred across a mix of regulated and unregulated assets and has been facilitated through bilateral negotiation and contracts, as envisaged under the regime established in the National Gas Law.

While a relatively small contributor to total delivered gas costs, the transmission sector sees itself as a critical part of a successful gas market. Historically, the role of transmission has been to provide shippers with point-to-point access to upstream and downstream markets. In the interconnected and currently rapidly changing gas market conditions, the role of transmission is increasingly also to provide tailored services to a broad range of parties so that they can effectively participate in gas markets. Bilateral negotiation and flexible contractual arrangements are essential for innovation and bespoke service delivery to occur.

¹ This investment does not include infrastructure built for LNG projects or expansion of existing pipelines.

² AER State of the Energy Market 2013 p108-109



A further aspect of effective gas markets is efficient gas supply. APiA welcomes the goals set out in the Green Paper for building gas supply and improving market operation. The focus on addressing near-term east coast gas supply issues is timely and urgent.

In particular, the role competition plays in improving the critical market characteristics of transparency and liquidity is recognised and APiA supports an active consideration of policy mechanisms to improve competition in gas supply markets.

A gas market that has more producers; more basins and fields; more connections between supply and demand; more users; and, most importantly, more gas usage, will be deeper, more liquid and drive more transparency. There will be more transactions for market participants to observe; more parties to transact with; more marginal gas to transact under shorter-term arrangements; and more demand for services that promote transparency.

There is not an explicit goal in the Green Paper to increase the size and breadth of Australia's gas markets. There are no options presented in the Green Paper to increase or support gas demand. The goals of increasing gas supply and improved competition will be best met if there is confidence that there is a strong and growing demand for gas. The future reform agenda should consciously consider the balance between reform that encourages liquidity and transparency and reform that encourages growth. Increased liquidity and transparency can provide an improved framework for more optimal growth but are unlikely to drive it. An agenda that encourages both improved market function and market growth is likely to achieve the greatest outcomes for gas markets.

During consideration of gas market reform options, Australia's gas markets are commonly compared to the gas markets of North America and Europe. It is important not to draw the conclusion that these approaches can simply be implemented in the current Australian environment without first giving consideration to Australia's market structure and size.

Australian gas markets are tiny by comparison with the major markets of Europe and North America, both in terms of volume and the number of participants. Australian markets are also spread over a thinly populated continent. This means that mechanisms that are successful overseas may not transfer to Australian market conditions. Those mechanisms may not also fit with Australia's established and mature third party access regime - in some European and North American cases the market mechanisms were introduced to provide third party access where previously none existed. It is therefore important to consider Australia's existing arrangements for open access to transmission infrastructure and available gas and capacity trading mechanisms before moving to adopt highly interventionist overseas regulatory models.



Gas transmission industry is responding to changing market conditions

The Australian gas transmission industry is changing rapidly in response to changing market conditions and the needs of shippers. Tailored contractual arrangements, both long and short term, are providing increased flexibility for shippers to respond, adapt and take advantage of the changing market dynamics. At the same time, pipeliners have recognised the need for new and innovative services that respond to the structural changes underway in gas markets, and provide a platform for potential future market development.

Capacity Trading

The gas transmission industry has responded to the concerns around capacity utilisation and trading documented in the Green paper by:

- working with Government and other stakeholders to develop viable, low-cost proposals for enhanced capacity trading, such as the publishing of forward spare capacity; and
- implementing industry-led solutions to facilitate increased trading and reduce the transaction costs of trading. The operational capacity transfer service was developed in co-operation across pipeline companies to ensure consistency. It has been available on pipelines around Wallumbilla since commencement of the Gas Supply Hub and is being implemented on the majority of other transmission pipelines by the first half of 2015.

Market development

The pipeline industry is investigating further mechanisms to improve transparency and capacity allocation. APIA has recently presented proposals for the publication of forward spare capacity and is considering other information options that could be published by individual pipeline businesses on their website. Pipeline businesses are also working with AEMO on the redevelopment of the Gas Market Bulletin Board to make information presented on the Bulletin Board more relevant, accurate and easier to understand.

Pipeline companies are actively investigating options for further transparency of available capacity and trades, including opportunities for increased tariff transparency and alternative capacity allocation mechanisms. APIA considers that, in order not to undermine confidence in pipeline investment, this work should be industry-led and respond to the individual circumstances of each transaction.



Investment

Pipeline businesses must be responsive to customer needs. Customers seek a range of pipeline services: some long-term to support matching long-term customer investments in plant or infrastructure (such as a gas-fired generator or a chemical plant); and some shorter term to fill gaps in a gas portfolio or to take advantage of market opportunities. The costs and risks involved in long- and short-term projects differ, and this has a direct impact on project financing costs (and therefore ultimate tariffs charged). We have recently seen a number of contracts signed that involve significant infrastructure investment that have relatively short tenure (for the sector). These include recent announcements by APA Group to spend over \$160 million to increase the capacity for gas transportation between Victoria and New South Wales for three different shippers for contracts spanning between 4.5 and 6 years.

Importantly, the prevalence of shorter term contracting is a function of both shipper demand and the costs and risk of the particular project. Single customer laterals carry greater recontracting risk than capacity expansions in an interconnected pipeline grid. At the same time, shippers seeking to connect new facilities to the pipeline through laterals are usually seeking longer term capacity commitments to provide security of gas supply and satisfy their own project financing needs.

The market framework for Australia's transmission pipelines (except for the Declared Wholesale Gas Market), commonly called the contract carriage framework, has successfully provided timely investment and is demonstrating its capacity to respond to customer needs whilst effectively managing project and financing risk.

The risks inherent in infrastructure investment will decline with the maturity of the market, and this will in turn drive changes in contracting approach for both shippers and infrastructure investors. From a policy perspective, it is therefore important to focus on the basic drivers of contracting behaviour such as the depth and liquidity of the market, in order to facilitate change.



Bringing on new gas supply

The Green Paper sets out the critical goal of bringing on new gas supply as quickly as possible. The recommendations posed in response to this goal are focussed on removing the existing regulatory and social barriers to increased supply and APIA supports these recommendations.

As highlighted in APIA's 2013 *Gas Supply for Australia*, the policy response to the structural change underway in Australia's gas markets must be to encourage and facilitate an increase in gas supply. The larger the supply response, the greater the downward pressure on gas prices and the greater the availability of gas for all gas users.

Environmental and social concerns about unconventional gas projects

APIA supports the involvement of national science institutions in improving the independent evidence base for assessing the impact of projects. It is important this is undertaken in conjunction with increased community and stakeholder engagement by producers, in order for projects to develop the necessary social licence.

The Green Paper recognises the need for further consideration of competition in gas supply but does not make a direct link between competition and the ability of the market to bring on new gas supply.

Competition and its relationship to supply in wholesale gas markets

The gas supply sector's ability to respond to the current high price environment is directly linked to its level of competition.

APIA considers there are a number of indicators that competition could be improved in the gas production sector. These include:

- Reserves holdings – 82% of east coast reserves³ are held by companies with an exposure to export markets. This exposure to export markets may be limiting the incentive to respond to increases in domestic price.
- Export demand – export demand will be somewhere around 75% of total east coast demand⁴. The same companies that control the vast majority of reserves will control $\frac{3}{4}$ of demand, concentrating market power in the hands of major producers.
- Australia's reserves-to-production ratio is the highest in the OECD at 86 years. In contrast, the US has a reserves-to-production ratio of 13 years. This ratio will fall as production ramps up for new exports but will still remain above 40 years. This

³ Eastern Australian Domestic Gas Market Study, p34

⁴ AEMO 2013 Gas Statement of Opportunities, p7



suggests Australia's reserves could be utilised more efficiently. The concentration of reserves amongst a few major producers, many with export exposure, may be limiting efficient utilisation.

- Ownership of processing facilities – Australia's processing facilities are almost entirely owned and operated in a vertically integrated model. In markets such as the US they are usually owned by service providers deriving revenue from service provision.

These indicators suggest that the gas production sector may not be sufficiently competitive to encourage a rapid supply response to the prevailing high wholesale gas prices in the domestic market.

APIA believes there is insufficient evidence to warrant highly interventionist policy responses in the upstream sector. However, incremental but significant policy reforms can be introduced to improve the competitive environment, encourage new entrants and improve transparency.

APIA notes the draft report of the Competition Policy Review Panel strongly supports a review of competition in the gas sector. The Green Paper flags such a review is under consideration. As the Green Paper notes on page 45:

There may be market structures that prevent effective competition among existing participants, including the pricing and contracting practices of producers, statutory exemptions for joint marketing arrangements, and the LNG interests of some gas producers.

APIA supports a review to identify and prioritise policy for reforms for aspects of the wholesale gas market that would benefit from increased competition.

Improving competition to increase supply and apply downward price pressure

There are three long-standing issues potentially affecting competition in the upstream gas sector:

- Access to upstream gas infrastructure;
- The continuing practice of joint marketing in the wholesale gas market; and
- Barriers to competition arising from petroleum tenement management.

These issues are not new to Australia's gas markets. As the National Competition Council (NCC) noted in 2000⁵, the Council of Australian Governments (CoAG) Upstream Industry Working Group delivered a report on gas reform issues in 1998 that focussed on three key issues:

⁵ Multi-User Infrastructure Access: Implications of Third Party Access for Infrastructure Access, Ed Willett, NCC, July 2000



- *barriers to competition arising from acreage management systems;*
- *third-party access to upstream facilities; and*
- *contractual and marketing arrangements.*

Despite this report being finalised over 15 years ago, the issues are largely unchanged.

In 2002 the final report of the CoAG Energy Market Review, commonly called the Parer Review, included at Exhibit 7 its assessment of gas industry issues:

Key Findings	Proposed solutions	Subsequent action
There is insufficient upstream gas competition on the East Coast to promote a healthy market.	<p>The separate marketing of gas should be actively facilitated as current contracts expire.</p> <p>Governments should give more consideration to promoting competition in gas markets when awarding exploration leases.</p>	<p>None – joint marketing continues.</p> <p>None – promotion of competition is not a criteria used to rank exploration lease applications in any jurisdiction.</p>
Too much regulatory uncertainty exists around new pipeline development.	Allow project developers to seek an upfront binding ruling on coverage, and the choice of either an up-front and longer term binding ruling on the regulatory conditions that will apply or, for a new transmission pipeline, a 15-year economic regulation holiday.	Addressed – the greenfields incentive included in the introduction of the <i>National Gas Law 2008</i> provides a 15-year economic regulation holiday for new pipelines.
There is a lack of tradeable capacity on some pipelines, and other market supporting mechanisms.	Introduce tradeable capacity and other mechanisms on new and unregulated pipelines.	In progress - the pipeline industry has introduced a new service to facilitate trading, the operational capacity transfer service and the CoAG Energy Council has completed a Transmission Capacity Trading Decision RIS and is developing a rule change proposal to the National Gas Rules.





Both industry and users have concerns with the Gas Code.	Review the Gas Code to judge its effectiveness from both a gas industry and user perspective.	Addressed – the Gas Code was replaced with the <i>National Gas Law 2008</i> .
Access by independent producers to upstream facilities will become more important.	Review the industry's principles for access to upstream facilities.	None – the industry's principles for access to upstream facilities were not reviewed and no longer appear to be publically available.

It is likely that these issues would be considered in depth by a review of competition in the gas market, as proposed by the Green Paper, rather than the Green Paper itself. APIA covers them at a high level below to demonstrate their importance in facilitating increased competition.

Joint Marketing

Joint marketing continues to be raised as an issue of concern to domestic gas markets, as seen in the findings of the Reith Review and the Eastern Australian Domestic Gas Market Study and noted in the Green Paper. These reports suggested that a phasing out of existing joint marketing arrangements may increase competition amongst existing producers in a market experiencing constrained gas supply by requiring existing joint-venture partners to individually market and contract gas supply.

Third party access to upstream infrastructure

Effective third-party access to upstream gas production and processing infrastructure that satisfy relevant coverage or declaration criteria could provide new entrants and existing smaller explorers alternative paths to access the gas supply market. Whilst the *National Gas Law 2008* provides an industry-specific access regime for gas transmission and distribution infrastructure, no such industry-specific access regime applies to upstream gas infrastructure.

Part IIIA of the *Competition and Consumer Act 2010* provides a generic access regime that ostensibly applies to upstream gas infrastructure. However, the production process exemption is widely held to apply to upstream gas pipelines and processing facilities, rendering the application of the coverage criteria to individual facilities unlikely and the prospect of access regulation sufficiently low that it is not apparent it is influencing the behaviour of infrastructure owners.



Title administration

There are a number of ways title administration can be used to improve competition in gas production:

- Consideration of competition as a criterion in awarding exploration licenses.
- Greater turnover of exploration licenses through stricter policing of work program commitments.
- Greater transparency around the commerciality of retention lease renewal applications.
- Use of third-party infrastructure access provisions as conditions in production licenses. The prospect of such conditions is likely to foster increased consideration of joint-use facilities and improved outcomes in accessing existing infrastructure.

Encouraging new entrants

Specific policies that encourage new entrants, as both suppliers and buyers of wholesale gas, should also be considered to improve competition in wholesale gas markets.

On the supplier side, the use of flow through share schemes for small gas explorers should be actively considered. APIA is aware that a pilot scheme, the Exploration Development Initiative (EDI), has been announced by the Government for the minerals sector. Ironically, in the short-term this may skew speculative investment towards the mineral sector and away from the gas exploration sector, where it is urgently needed. This negative consequence, and the potential for positive outcomes in the gas sector, should be recognised and the EDI extended to petroleum exploration as soon as possible.

It is also appropriate for the Government to consider facilitating new gas buyers to the wholesale gas market. As noted above, APIA considers it vital that the Government consider mechanisms to grow gas demand and encourage new gas users to the market. In the first instance, it is necessary that Governments focus on technology-neutral policies, allowing markets to determine the most effective energy sources to meet economic and environmental goals.



Improving transparency

Transparency is a fundamental characteristic of efficient markets. Transparency has been an ongoing focus of gas market reform and APIA supports its inclusion as a goal in ongoing reform. Importantly, the Green Paper explicitly makes the link between transparency and competition and identifies the particular need to improve transparency around gas price and supply.

Recent gas market transparency initiatives have focussed on gas transmission and there is a well advanced process to introduce increased transparency to facilitate capacity trading. It is vital that further transparency initiatives focus on delivering the greatest benefit to gas markets.

In considering increased transparency in the gas market, there is a need to distinguish between the types of information required for short- and long-term decision making as a result of the current rapid changes in the market. There is a strong risk that current uncertainty over gas availability and price leads to inefficient short-term decisions, in particular on the demand side. This could manifest through the permanent closure of manufacturing plant in response to short term gas supply shortages and prices, where longer term, gas supply and prices could be expected to normalise at a level that would have allowed the plant to stay in operation.

To address these short-term market inefficiencies, APIA considers that is important for the following information to be available to the market:

- Aggregate LNG processing facility ramp-up rate;
- Aggregate LNG CSG production ramp rate against contractual commitments; and
- Aggregate LNG commercially committed ramp rates.

This information would allow the market to assess to what extent there can be expected to be short term gas availability issues, and their likely duration.

The following information is more relevant and useful for long-term planning and gas market transparency:

- 1P, 2P and 3P reserves of each field;
- Production plant capacity associated with each field;
- Committed (Contracted) reserves;
- Aggregated production forecasts and performance against these forecasts;
- Contracted and available processing capacity; and
- A list of contracted gas users and relevant contact details for trades.

This data would provide important information about the availability of gas across the medium and long-term, yet are currently unknown to gas market participants that are trying to make efficient decisions about gas supply options and long term plant investments.



However, the relevant data is known to each gas producer and in particular each LNG development on the east coast of Australia. Given that each LNG development has a gas demand roughly equivalent to the entire Eastern Gas Market, a shortfall in supply of any development has major implications for the Eastern Gas Market and its participants.

Wholesale gas price

Measures to directly improve the transparency of wholesale gas prices are more difficult. Data sets such as those mentioned above provide increased information on supply capacity over the short-, medium- and long-term, better enabling the market to make informed estimations of gas prices.

Increased gas price transparency is best achieved through increasing competition amongst gas suppliers and facilitating increased trading of gas. Current markets (in particular the Short Term Trading Markets) reflect the cost of balancing gas in illiquid markets, rather than the longer-term contract price of gas. Whilst there is a distinction between the value of gas in a short-term trade and a long-term contract, the short-term trading that is occurring through the Short Term Trading Markets and the Wallumbilla Gas Supply Hub is a point of reference that may become more useful over time, and may facilitate the development of more sophisticated price indices that reflect longer term contractual arrangements.



Pipeline tariffs

There is a range of information available to market participants on pipeline tariffs for pipelines both covered and uncovered under the NGL. This information can be used to infer other transportation costs and secondary capacity pricing.

The list of pipelines that have publically available tariff information includes:

Pipeline	Owner	Covered	Information location
MSP	APA Group	Light regulation - Marsden-Wilton section	APA website
MSP	APA Group	No regulation – Moomba-Marsden section	APA website
RBP	APA Group	Full regulation	APA website
VTS	APA Group	Full regulation	APA website
AGP	APA Group	Full regulation	APA website
GGP	Goldfields Joint Venture	Full regulation	APA website
CRP	APA Group	Full regulation	APA website
CGP	APA Group	Light regulation	APA website
CWP	APA Group	Light regulation	APA website
DBNGP	DBP	Full regulation	DBP Website
EGP	Jemena	No regulation	Jemena Website
QGP	Jemena	No regulation	Jemena Website

APA Group has also published a number of short-term firm transportation offers (duration on 1 week) on its capacity trading website with posted tariffs. These offers cover both regulated and unregulated pipelines.



Improving gas market function

Continuous improvement and refinement of Australia's gas markets has been ongoing and should continue.

It has been noted in a number of forums, including the Australian Energy Market Commission's 2013 Gas Market Scoping Study, reforms of recent years have focussed on specific issues without an overarching set of principles or clear long-term direction. As the Study states:

...market development over the last two to three years appears to have been occurring in a relatively fragmented manner and without a clear strategy for how the market can make the transition from its current, relatively immature state, to a more mature, well-functioning market (comprising commodity, transportation and financial markets).⁶

APIA supports the work currently being undertaken by the Council of Australian Governments Energy Council's Gas Market Working Group to develop a set of principles to underpin future market development.

A fundamental principle of future reform must be that market development initiatives should be conducted only where there is a demonstrated market failure and only on the basis of clear net benefit. This can most often be achieved by pursuing low cost solutions with clear utility and supporting industry-led initiatives which, by their nature, must both deliver clear positive returns and allocate costs effectively.

Recent initiatives have been underpinned by cost-benefit analyses that rely on assumptions and do not always indicate net benefit.

In addition to the direct costs of any market reform initiatives, it is also prudent to consider indirect costs and other considerations:

- Release of commercially sensitive information can lead to costs in respect of limiting innovation and competition, particularly in downstream markets (e.g. pipeline end users);
- Risk of penalties and reputational loss;
- Potential for confusion caused by operational data not relevant to market function;
- Purpose for which information systems have been built and their ability to supply quality data for other applications; and
- Differences between operational and financial data requirements.

⁶ AEMC Gas Market Scoping Study, 2013, pxii



When considering mechanisms to improve the operation of Australian markets, mechanisms that increase the size of Australian markets should not be overlooked. APIA believes that the greatest improvements will be made to gas market function if government policy focusses equally on increasing competition, increasing the size of the gas market and improving gas market function.



Other issues

Energy Market Governance

APIA supports the CoAG Energy Council's proposed review of governance arrangements for energy markets as flagged in the May 2014 Meeting Communiqué.

APIA notes that the Draft Report from Government's Review of Competition Policy has relevant recommendations regarding the establishment of a single national access and tariff regulator.

APIA considers the review of governance arrangements for energy markets should be conducted first, allowing the energy sector's specific and tailored energy governance regime the opportunity to be reviewed and opportunities to be improved assessed prior to consideration of the recommendations of the Review of Competition Policy.

ATTACHMENT C – Comparisons of International Markets to the Eastern Australian Gas Market

Taken from APGA's submission to the AEMC's Review of Facilitated Markets and Pipeline Frameworks Issues Paper

What is the Australian context?

For the purpose of this Review, the specific context is the Eastern Australian Gas Market. This is a market that is undergoing structural change; a market where an Australian demand of 687PJ in 2012¹ that has developed in a predictable and steady manner, is now dealing with the implications of around 1200PJ of additional export demand being introduced into the system over a period of 18 months.

In terms of the physical characteristics of the Eastern Australian Gas Market, there are 12 major pipelines (as defined by the NGBB) linking six capital cities, two industrial demand centres (one of which has all three export facilities) with three supply regions dispersed over roughly four million square kilometres. There are two storage facilities registered on the BB, one underground storage facility and one LNG peak shaver. There are five facilitated markets across Eastern Australia.

Given the geographical spread of supply and demand centres, there is one transportation option between any two points. In transporting gas from Victoria to Sydney, there are two transportation options. In transporting gas from Moomba to Victoria (and vice versa), there are up to three transportation options. Some investment is required to establish further bi-directional capability and the contract carriage model prevalent across Australia's gas markets will deliver this investment when serious demand arises.

In terms of participants the Eastern Australian Gas Market has three major producers, three exporters², around a dozen large users, three major retailers and four pipeline companies. In terms of facilitated markets, there are 43³ unique trading participants registered across five markets.

It should be noted that AEMO reports there are 22 participants in the DWGM once cross-ownership is taken into consideration⁴. This would remove 13 participants in the DWGM from APGA's chart below, making a total of 30 unique participants registered across all five markets.

¹ Eastern Australian Domestic Gas Study 2014

² Two of which are included in the major producer count also.

³ This number does not take into account all cross-ownership of participants.

⁴ AEMO presentation to the AEMC Public Forum 25 February 2015

Table 1: Registered Trading Participants in Facilitated Markets

PARTICIPANT	DWGM	SUPPLY HUB	ADL STTM	BNE STTM	SYD STTM
Adelaide Brighton Cement					
AETV Power					
AGL					
Alinta					
APLNG					
Aurora					
The Australian Steel Company					
BHP					
Bluescope					
Boyne Smelters					
BP					
Braemer Power Project					
Coogee Energy					
Covau					
Delta Electricity					
Energy Australia					
Ergon					
ERM					
Esso					
Go Energy					
Incitec Pivot					
International Power					
Lumo					
MMG					
Mt Isa Mines					
One Steel					
Orica					
Origin					
Pelican Pt Power					
Qenos					
QER					
Queensland Alumina					
Red Energy					
Santos					
Snowy Hydro					
Southern Natural Gas Development					
Simply Energy					
Synergen					
SA Water Corp					
Stanwell					
Tas Gas Retail					
Visy					
Walloons CSG					
Total participants	35	8	10	9	15

As Table 1 shows:

- three participants are registered in all five markets;
- none are registered in four markets;
- nine are registered in three markets; and
- seven are registered in two markets⁵. All of these are registered in the DWGM and either Sydney or Adelaide. It is likely that most of these seven participants are registered in the DWGM solely because they contract Victorian gas for use in NSW or SA operations.

⁵ The number of participants registered in three and two markets would be less if cross-ownership is taken into consideration.

Clearly, the majority of participants operate only in a particular region of the market. This is likely to reflect the predominant gas supply contracting approach for market participants which is a simple, single supply point contracting for gas used as a business input. Most market participants are not engaged in any trading activity for gas. For these participants, registration in these markets is more likely to reflect the compulsory nature of these markets, than the desire of these shippers to undertake significant trade of gas.

How will the Australian context change over time?

Many of the gas market reform actions undertaken by policy makers and advocated by some market participants seem to be in response to the specific conditions being experienced or perceived to be prevalent today. It is critical that the AEMC consider what is the most likely normal market state into the future when undertaking this review.

The Eastern Australian Gas Market is in a state of structural change at present. As the LNG facilities ramp up to full capacity there are periods where volumes of spare gas are available in Queensland. These periods have not been as frequent and the volumes not as large as anticipated by many market forecasters. Some market participants would like to access this gas and claim there are difficulties in achieving transportation arrangements.⁶

When the three LNG facilities reach full capacity, as much gas as possible will be flowing north to Gladstone. Key pipelines are highly likely to be fully utilised in this market environment. It is assumed that from time-to-time large volumes of gas will be available at the Wallumbilla GSH as LNG facilities shut down for periodic maintenance or other events. However, this may not be the case in practice. LNG exporters have interconnected pipelines and agreements in place to swap gas between each other as these maintenance events occur. This has been reported widely in the media.

"The interconnect points will enable gas to flow from one project to the other when necessary, for example to allow for LNG plant downtime and planned maintenance to occur without interrupting either project's gasfield operations," Mr Duke said.⁷

This suggests that large swings at the Wallumbilla GSH may not be as significant or prevalent as previously anticipated. Therefore gas market development should not focus too greatly on facilitating anticipated transactions that may never materialise.

What is the context of international markets that we compare ourselves to?

Comparisons are often made between Australian market frameworks and those in Europe and the US. When doing so, there are a number of questions that must be asked:

⁶ APGA notes that very few market participants are actually registered at the Wallumbilla Supply Hub, which is presumably the first step a market participant must take to acquire gas from the Hub.

⁷ Rod Duke, Santos Vice-president GLNG Downstream, quoted in the Australian newspaper on 5 July 2013.

- What Australia market failures (if any) are we trying to address?
- What were the market failures being addressed when international frameworks were introduced?
- What options were considered and why was the implemented measure selected in an international market?
- Are the international market conditions and characteristics (size, number of participants, level of competition, structures etc) prevailing at the time of reform comparable to current Australian conditions?
- What results are observable? Can similar results be expected in Australia?

APGA offers the following observations in regard to the final two points.

The entire domestic demand of the Australian east coast is roughly equivalent to a single large US city.

New York City had an annual gas demand of 500PJ in 2010⁸. It is the single largest city located in the Northeast Region of the US. This region covers the States of Connecticut, Delaware, Massachusetts, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Virginia, and West Virginia. The Region has an area of 520,000 square kilometres (sized half-way between Victoria at 227,000 and NSW at 800,000 square kilometres). In 2013 the Northeast Region had an annual gas demand of 5,110PJ. This gas demand is served by 20 major pipelines with a peak capacity of 47.3PJ/day⁹.

Chicago had an annual gas demand of 600PJ in 2009¹⁰. It is the single largest city in the Midwest Region of the US. This Region covers the States of Illinois, Indiana, Michigan, Ohio and Wisconsin. It has an area 954,800 square kilometres (slightly smaller than South Australia at 970,000 square kilometres). In 2013 the Midwest Region had an annual gas demand of 4,627PJ. This gas demand is served by 34 major pipelines with a peak capacity of 39PJ/day.¹¹

The load factor swing in these regions is huge, with peak winter demand exceeding median demand by around a factor of three¹². This massive swing in demand has major impacts of infrastructure utilisation in times of peak demand, it is critical that access to storage, processing and transportation infrastructure is managed closely.

⁸ Assessment of New York City Natural Gas Market Fundamentals and Life Cycle Fuel Emissions, ICF International 2012.

⁹ US Energy Information Administration

¹⁰ Chicago Regional Energy Snapshot, CNT Energy, 2009

¹¹ US Energy Information Administration

¹² Eastern Interconnection States Planning Council, Study on long-term electricity and natural gas infrastructure requirements, September 2014

These are just 2 of the 6 gas regions defined by the US Energy Information Administration. The continental US has a total gas demand of 27,710PJ in 2013. This gas demand is served by a grid that comprises:

- More than 210 natural gas pipeline systems.
- 500,000 kilometres of interstate and intrastate transmission pipelines.
- More than 1,400 compressor stations that maintain pressure on the natural gas pipeline network and assure continuous forward movement of supplies
- More than 11,000 delivery points, 5,000 receipt points, and 1,400 interconnection points that provide for the transfer of natural gas throughout the United States.
- 24 hubs or market centres that provide additional interconnections.
- 400 underground natural gas storage facilities
- 49 locations where natural gas can be imported/exported via pipelines.
- 8 LNG import facilities and 100 LNG peaking facilities. Export facilities are under construction.

The EU consists of 28 members states. Belgium, with an area of 30,000 square kilometres (the Greater Sydney area is 14,000 square kilometres) and a population of 11.2 million, consumed 652PJ of gas in 2013¹³. Belgium is bordered by France, Germany and the Netherlands. In 2013 these three neighbours consumed 6,717PJ of gas.¹⁴ The load factor swing for these countries would be comparable to North America. The combined surface area of these four countries, with its gas consumption of over 7,300PJ, is 1,070,000 square kilometres. This is about the same size as South Australia (which has annual consumption of around 100PJ).

Table 2: Comparison of Eastern Australian Gas Market with US and European regional markets

	Eastern Australian Gas Market	Midwest Region (US)	Northeast Region (US)	Belgium, France, Germany, Netherlands
Area (sq km)	3,813,110	954,800	520,000	1,070,000
Annual gas demand (PJ)	640 domestic 1200 export	4,627	5,110	7,369
Pipelines (#)	15 ¹⁵	34	20	19 ¹⁶
Nameplate	3.5 ¹⁷	39	47.3	16.3 ¹⁸

¹³ Eurogas stats 2014.

¹⁴ Eurogas stats 2014

¹⁵ Including the 3 LNG export pipelines in Queensland which are not yet deemed to be BB facilities

¹⁶ This is the number of cross border reference points between these countries as defined by ENTSOG (the European Network of Transmission System Operators for Gas) – each of these points represents an alternate transportation option within and across these countries.

¹⁷ Not including the 3 LNG export pipelines in Queensland as the nameplate capacity of these pipelines is not published anywhere

¹⁸ This number is indicative only, many of these points are enabled for bi-directional flow and have different capacities in each direction. Importantly, this figure represents only the interconnector capacity between these four countries, there are many more internal pipelines and interconnectors with other countries that play a role in transporting gas.

capacity (PJ/day)				
Annual pipeline capacity utilisation ¹⁹	52%	32%	30%	

The Eastern Australian Gas Market is miniscule in terms of gas demand and transportation options in comparison to these markets whilst being massive in terms of geographic coverage. It does not seem likely to APGA that it is appropriate to directly transplant frameworks from these markets into Australia. Nevertheless, there is potential for some insights to be gained in examining international frameworks.

¹⁹ Annual gas demand divided by annual pipeline nameplate capacity. This analysis cannot be used for the European example, as gas enters these four countries through many other points than the interconnections between these countries.