



PIPELINE REGULATION AND CAPACITY TRADING DISCUSSION PAPER

1. INTRODUCTION

QGC welcomes the opportunity to provide comment on the Pipeline Regulation and Capacity Trading Discussion Paper (**the Paper**), released by the Australian Energy Market Commission (**AEMC**). In our view there are two key market development objectives that will underpin the delivery of the COAG Energy Council's Vision for a liquid and transparent east coast gas market.

1. Enabling gas to move freely to customers who value it most; and
2. Ensuring that underlying price of gas is efficient (i.e. reflects underlying supply-demand conditions and not subject to distortions in the short-term and signals the need for new investment longer-term).

This means, to the extent that pipeline frameworks impact the effective operation of the gas market, these issues need to be addressed. In a small and stable gas market this may not have been viewed as a priority, but the market is experiencing significant change due to the introduction of LNG. The nature of LNG production (which experiences planned and unplanned swings in production that occur "within-day" and across the short term planning horizon) will lead to short-term volatility. This presents new risks and opportunities for market players. Market frameworks need to adapt and enable participants to manage some of their gas supply and demand balancing through more liquid spot markets and or short-term structured products.

QGC believes that unutilised pipeline capacity exists across much of the east coast market and increased incentives to make this capacity available at a competitively determined price is central to stimulating an efficient and effective gas market that fluctuates and responds to dynamic changes in supply and demand.

A summary of our key comments to the Paper is outlined below:

- We support the majority of AEMC's assessment of the issues and their causes. The current pricing arrangements for unutilised capacity (offered by pipelines) and contractual congestion (due to the lack of incentives for shippers to release capacity) are the most significant issues requiring policy attention.
- There are clear indicators that suggest "available gas" is not necessarily able to flow to the highest value customers and as a result market distortions are present:
 - The cost of short term capacity relative to the value of the underlying product being transported is high compared with overseas gas markets.

- Pricing structures for pipeline services on some east coast gas pipelines are inconsistent with outcomes expected under a workable competitive market with unutilised capacity. For example, “as available” and “interruptible” services are offered at prices that are higher than firm long-term services at times when there is both unutilised capacity and material price differences between neighbouring gas hubs. For capacity that has already been sold once, we do not support the view that a premium “extended load factor” pricing model is reflective of the value of short-term capacity provided to the market on underutilised pipelines.
- The price of short-term capacity should reflect the dynamic supply-demand requirements on a pipeline, which means it could be higher or lower than the “firm long-term price” depending on conditions. If the pipeline is not fully utilised, you would expect pricing to tend towards the marginal cost of transport.
- QGC believes there is currently little incentive for near term industry led reform and as a result policy involvement is necessary to meet the COAG Energy Council’s Vision within an acceptable timeframe. Table 1 outlines QGC’s recommended policy reform package/process and timeframes for addressing these concerns. QGC does not prefer one approach over another rather we draw out the relevant elements in each of the options, which in combination, best target the specific challenges facing the east coast market.
- With respect to the release of unutilised capacity, a mechanism of some sort is necessary to overcome the current issues (within the timeframes required by the market). We support the objectives and principles underpinning the Oversell & Buyback (OS&BB) Scheme and also recognise other less complex options could be developed that achieve similar objectives.
 - There is merit in considering a “Use It or Auction It” (UIOAI) methodology with a retrospective usage review by regulators. The UIOAI is preferred to a standard UIOLI approach as it would enable capacity holders to retain control over the trading of reallocated capacity and promotes transparent pricing. Furthermore, it avoids the expropriation of property rights (or appropriately compensates capacity holders) and leads to more efficient consumption and production decisions.
 - Some stakeholders are concerned about “free rider” issues resulting from the introduction of new mechanisms (i.e. the emergence of “flight from firm”). We note this has not necessarily been observed in other markets following the introduction of such arrangements and have included a specific case study to illustrate this point. However, we do not support policies that expropriate property rights or create material “free rider” problems or “flight from firm”.

Table 1: QGC Recommended Policy Pipeline Reform Package

Policy element	Approach	Next step
Standarised capacity rights/contract terms		Implement now
Standarised capacity trading platform		Implement now
Information on trades (including price)	Approach A	Implement now
Voluntary capacity trading		Implement now
New capacity reallocation arrangements –UIOAI/OS&BB (or alternative)		Investigate preferred option
Prohibit contractual provisions in GTA’s which limit capacity trading by pipeline owners	Approach B	Commence implementation process
Prohibit contractual provision in GTA’s that limit capacity trading by shippers	Approach C	Commence implementation process

2. ASSESSMENT OF EXISTING GAS TRANSMISSION ARRANGEMENTS

The Paper identifies a number of potential impediments to the efficient allocation of short-term pipeline capacity and is seeking feedback on the materiality of the issues and whether they could be addressed without regulatory intervention. QGC considers that the AEMC has appropriately identified the range of issues, which are largely consistent with the points we (and other stakeholders) have raised in earlier submissions to the East Coast Wholesale Gas Market and Pipeline Frameworks Review (the Review).

A. OVERVIEW OF QGC'S CURRENT POSITION

- Short-term capacity is not being offered to the market at prices that reflect its short-term value. As a result, very few trades are being executed. There is no current requirement (or incentive) on relevant pipeline capacity holders/shippers (or the transporter) to offer unutilised capacity to the market at an economic price. This is resulting in a situation where the domestic pipeline system, at points is, “contractually congested” rather than facing physical capacity limitations.
- Through our experience, there is no market or commercial incentive for shippers to release unutilised capacity. Potential reasons include:
 - The costs of transacting (i.e. the resources and timeframes involved in negotiating contracts and reviewing the process) could exceed the revenue received by the shipper for the short-term sale of capacity;
 - Maintaining flexibility and avoiding nomination complexities; and
 - Creating/ protecting potential commercial opportunities for shippers.
- Some pipelines do list day ahead (and longer-term) “as available” capacity for sale, however, it is not traded extensively. In our view this is not necessarily due to a lack of interest, but more that the pricing construct does not reflect the short-term value of that capacity.
- Anecdotally, we understand that provisions (i.e. most favoured nation clauses) may apply that influence the price at which pipelines are willing offer capacity to the market. The practical application of these clauses means secondary capacity offered to the market, by pipelines, is at prices equal to or above the long-term contract price. Otherwise, existing shippers are likely to be entitled to price reductions for existing commitments.

B. RECENT QGC ANALYSIS

QGC has conducted a high level analysis (based on publicly available information) which provides some insight into the potential materiality of the issue. Charts 1 and 2 provide the pipeline flows on the major east coast pipelines (South-West Queensland (SWQP), Roma to Brisbane (RBP), Moomba to Sydney (MSP) and Moomba to Adelaide (MAP). Chart 3 provides the price differential between the Brisbane and Sydney Short-term Trading Markets (STTM) and the flows on the SWQP.

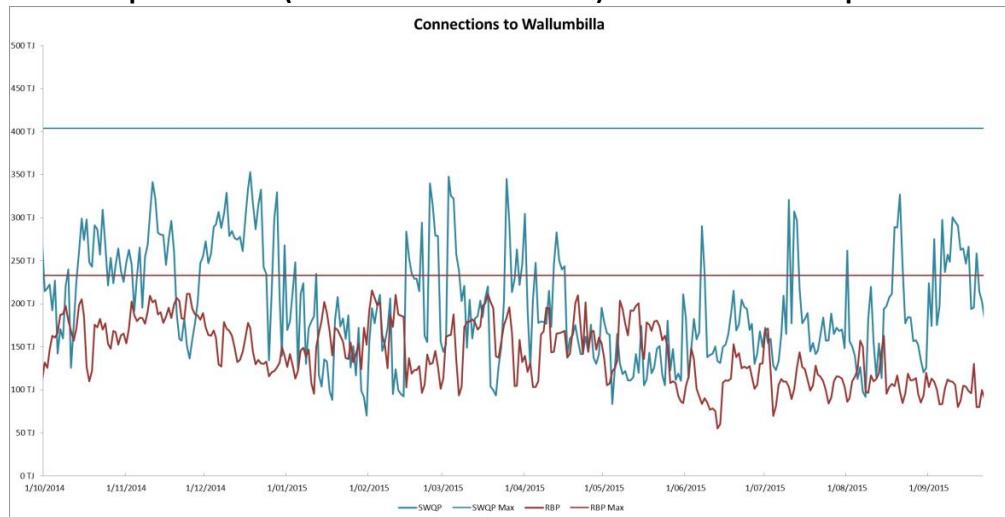
The key conclusions from this analysis include:

- Over the past twelve months, the reported daily flows on the key pipelines across the east coast gas market consistently fall short of maximum levels.
- In contrast, over this period, pricing offered for short-term capacity has been relatively static and at a premium to the long-term contract price. In an efficient market, the price of short-term capacity should reflect the dynamic supply-demand requirements on a pipeline. This means, the price could be higher or lower than the “firm long-term price” depending on system conditions. If the pipeline is well underutilised, you would expect this pricing to tend towards the marginal cost of transport.
- Furthermore, with fluctuating gas prices (driven in part by LNG) there are likely to be times when the wholesale price of gas could fall below the published transportation offers and depending on the price of gas downstream, transactions would be uncommercial and the value of trade is not maximised.

For example, if the downstream market price for gas is \$1.30/GJ and the short term value is \$0.50/GJ, purchasing capacity offered at \$0.95/GJ, means the seller would make a loss on the sale if it is required to purchase transport. In this circumstance, the short-term value of trade is not being maximised. Instances such as these were observed in the Q3 2014 during the “ramp phase” of the QCLNG project.

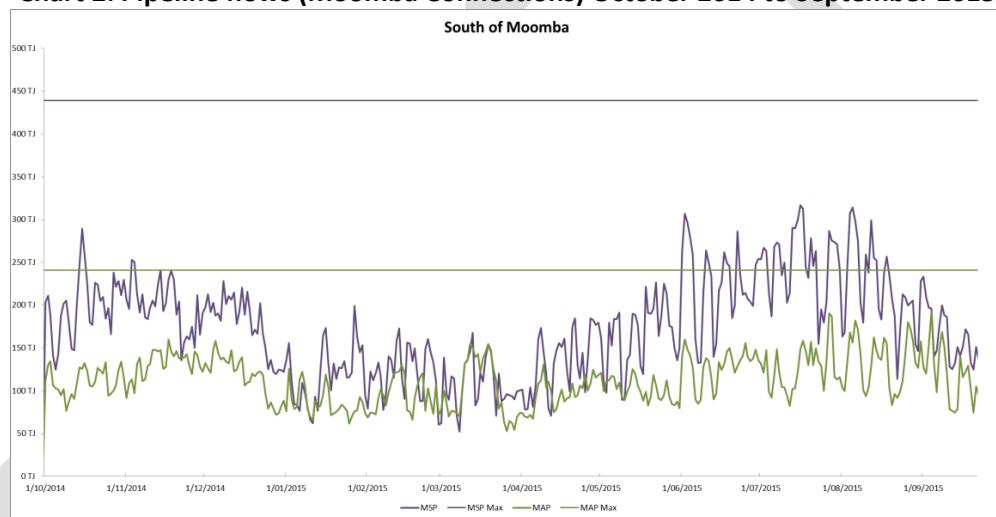
- We also observed price separation (up to \$5/GJ) between the Brisbane and Sydney STTM's at times when the SWQP was not fully utilised. This could indicate that incumbent market participants are able to use their capacity positions on the SWQP to maintain an arbitrage between the Queensland and New South Wales markets which may prevent other market participants from accessing these same opportunities.

Chart 1: Pipeline flows (Wallumbilla Connections) October 2014 to September 2015



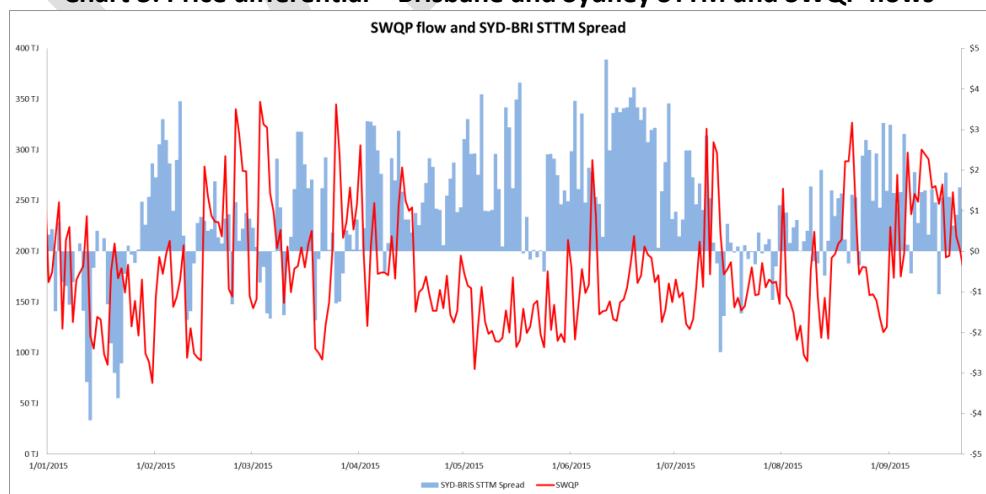
Source : National Gas Market Bulletin Board

Chart 2: Pipeline flows (Moomba Connections) October 2014 to September 2015



Source : National Gas Market Bulletin Board

Chart 3: Price differential – Brisbane and Sydney STTM and SWQP flows



Source : National Gas Market Bulletin Board

3. INITIAL ASSESSMENT OF THE POTENTIAL APPROACHES

QGC has undertaken an initial assessment of each of the elements under the three approaches outlined in the Paper. These are based on the following criterion¹:

- **Degree of change/cost** – the extent of regulatory change and costs (direct and indirect)
- **Impact** – the change in the level of secondary capacity trading
- **Supports other mechanism** - Whether it necessary/supports the effective operation of other reform initiatives
- **Impacts on property rights** – whether it potentially results in the expropriation of existing property rights
- **Market based** – Does the initiative incorporate a market solution to the allocation of pipeline capacity.

The following analysis provides a high level assessment followed by a description of the key benefits and challenges that apply under each of the approaches to pipeline regulation. Each element has been assessed against the criteria outlined above. The shaded boxes indicate whether the element is likely to have a positive or negative impact on market development or presents particular challenges. **GREEN** = positive and should be progressed, **AMBER** = moderate impact and / or presents some implementation challenges **RED** = could have negative impacts on market efficiency and / or presents significant implementation challenges. The overall results of the analysis and recommendations are reflected in Table 1 (Section 1).

A. APPROACH “A”

This is designed to facilitate trading between parties and primarily addresses transaction cost issues. Elements under this approach include- standardised terms and conditions for capacity contracts; standardised platform for offering available capacity (incorporating a mechanism to voluntary surrender capacity) and publication of trade volumes and price.

Table 2: Assessment of Elements under Approach A

Element	Degree of change/cost	Impact	Supports other mechanisms	Impacts property rights	Market Based	Recommended for implementation/examination
Contract Standardised	LOW	MODERATE	YES	NO	n/a	YES
Common Platform	LOW	MODERATE	YES	NO	n/a	YES
Trade publication (inc price)	LOW	MODERATE	YES	NO	n/a	YES
Voluntary capacity trading	LOW	MODERATE	YES	NO	YES	YES

¹ This assessment criterion is based on QGC's guiding principles for gas market development.

General Comments:

- The lack of standardised arrangements and a common platform for capacity trading is a contributing factor to the lack of secondary capacity trading. However, as previously indicated QGC considers that the key issue is the lack of incentive for shippers to release unutilised capacity and / or pipeline owners to offer short-term capacity at prices reflecting short-term supply demand dynamics.
- It is not until these issues are addressed that we would expect a significant increase in the volumes in capacity traded and ultimately a more efficiently traded gas market across the east coast.

Specific Benefits:

- We view Approach A as a starting point and the key aspects should be implemented as soon as possible. To address the fundamental issues inhibiting the secondary trade in capacity, however, reform needs to extend beyond these initial steps. The key benefits of Approach A include:
 - It will assist “on the margin” to facilitate additional trade
 - Provides transparency around price and volumes to inform the market and policy makers on the level of activity and whether further steps are necessary
 - These elements are necessary to support the mechanisms described under Approaches B and C.

Challenges/Issues:

- The major challenge is the need to shift from point-to-point contracts to the development of delivery point zones to enable greater pooling of buyers and sellers.

B. APPROACH “B”

This is designed to improve the incentives of capacity holders in the provision of capacity. Elements of this approach could include the compulsory acquisition of capacity (such as the mechanism utilised by the EU) reserving firm capacity to be traded in the short-term and removing the contractual provisions in Gas Transportation Arrangements.

Table 3: Assessment of Elements under Approach B

Element	Degree of change/cost	Impact	Supports other mechanisms	Impact property rights	Market Based	Recommended for implementation/examination
OS&BB (Modified)	HIGH	SIGNIFICANT	n/a	NO	YES	YES
Firm day ahead UIOLI	MODERATE	SIGNIFICANT	n/a	YES	PARTIAL	NO
Long-term UIOLI	HIGH	Moderate	n/a	YES	PARTIAL	NO
Reserving firm capacity for short-term trade	HIGH	Moderate	n/a	YES	NO	NO
Removing “favoured national clauses”	MODERATE	SIGNIFICANT	n/a	POTENTIAL	PARTIAL	YES
UIOAI (New Option)	MODERATE	SIGNIFICANT		POTENTIAL	YES	YES

General Comments:

- International experience suggests that some form of a compulsory capacity release mechanism is necessary to incentive short-term unutilised capacity to be made available to the market.
- We are not in favour of the UIOLI approach or the “Reserving of Capacity” for short-term trade. The standard UIOLO approach does not represent a “true” market based response and would potentially result in inefficient outcomes and increase the risk of “free riders”. The “Reserving of Capacity” does not support the objective of delivering a market-based solution.

- We support the objectives and principles underpinning the OS&BB Scheme and however also recognise other less complex options could be developed that achieve similar objectives in the interim.
 - There is merit in considering an alternative option - the UIOAI methodology with retrospective usage review by the regulator. Under the UIOAI, shippers would be required to offer unutilised capacity for sale via a common platform (similar to the Trayport system used to facilitate trades at the Wallumbilla Gas Supply Hub (GSH)). Under this option, the seller retains control of the sale/trading process placing bids and accepting offers. A minimum floor price could be set to ensure that the market clears. We would, however, expect prices to reflect dynamic market conditions.
 - Under a UIOLI approach, there is a significant risk that capacity would be surrendered to a 3rd party and prices linked to a static (backward looking) tariff determined by an independent regulator reflecting underlying costs. This is disconnected from the risks facing the capacity holder and the dynamics of the market.
 - Overall, the UIOAI approach is preferable to the standard UIOLI approach which potentially impacts the rights of existing shippers to flow gas on the day (and / or provides appropriately determined compensation). In effect, the UIOAI avoids the expropriation of the rights of capacity holders by applying a more market based solution where price is determined by the interaction of commercial factors/incentives and supply demand dynamics. Furthermore, through the use of transparent pricing, it avoids other market distortions by promoting efficient consumption and production decisions.
 - It potentially offers a relatively simple interim solution to test whether a new capacity reallocation is effective in encouraging further trading in secondary capacity. It is likely to inform whether a scheme with “sharper pricing” (but more complex) is necessary to deliver meaningful outcomes.

- With respect to the OS&BB, consideration should be given to a “modified” form when the pipeline receives all the revenue from an oversell auction (where the primary capacity holder has chosen not to release its capacity in advance). This is likely to be more effective by creating the right commercial incentives on pipelines (to support this approach and recognise the commercial benefits). It is also appropriate as there is not necessarily the regulatory “safety net” for recovering “Buy Back” costs in the east coast framework as exists for regulated pipelines in Europe. This would avoid the need for specific pipeline regulation.

Alternatively, the introduction of a last resort default recovery mechanism could be investigated through a specific regulatory provision or a mechanism operated by an independent body and any residual costs recovered through means similar to the funding services provided by the Australian Energy Market Operator (AEMO) such as the National Gas Market Bulletin Board (NGMBB).

- Similar mechanisms to the UIOAI and the “modified” OS&BB have not led to the “free rider” problems described by some stakeholders.
 - The investment incentives to underpin pipeline development remain unchanged. If there is “firm” structured demand for gas, then the incentive remains for shippers to

enter into longer-term transportation contracts to underpin new builds or expansions. In Europe, the Capacity Allocation Mechanism (CAM) provides the auction methodology to ensure the highest bidders receive the long-term capacity. See the case study below on the development of the Milford Haven Pipeline.

- The OS&BB is only applied when the capacity on the relevant pipeline is fully contracted. There is no requirement for “discounted” pricing under an OS&BB when the pipeline is undersold.
- In the context of the east coast gas market, interest in Northern Territory (NT) Pipeline proposal does not appear to have been dampened by the possibility of regulatory changes resulting from this Review and / or the East Coast Gas Market Inquiry being conducted by the ACCC.
- We recommend there is a next phase of development where more detailed design aspects of the UIOAI and OS&BB (and any other relevant options) are considered and the costs and benefits are fully explored. Tables 4 and 5 expand on the key benefits and challenges relating to the UIOA and “modified” OS&BB approaches and compare and contrast these across the two options.

Table 4: Common and contrasting benefits of the UIOAI and “modified” OS&BB

POTENTIAL BENEFIT	UIOAI	MODIFIED OS&BB
Encourages the secondary trade in capacity ahead of the schemes being applied and provide a commercial solution to the allocation of capacity when physical constraints occur	YES -Although likely to be less effective in efficiently allocating capacity during time of constraints.	YES
Provides a market solution to the allocation of capacity	YES	YES
Can be overlaid across the existing market arrangements	YES - Could apply to a contact carriage model and non-regulated pipelines. May avoid significant changes to the underlying pipeline regulatory framework.	YES -Could apply to a contact carriage model and non-regulated pipelines. Unclear what changes may be necessary to the 3 rd party access arrangements.
Does not expropriate the rights of primary capacity holders	UNLIKELY - Capacity holder retain control over the trading of any surrendered capacity with pricing determined by market outcomes reflecting the interaction of commercial factors and supply demand dynamics rather than by an independent party.	NO - Capacity holders are able to “nominate-up” on the day and or participate in a reverse auction to be compensated for the commercial impacts of not receiving their schedule gas.
Ease of implementation	Offers a benefit over the OS&BB - avoids the need for 3 rd involvement in the sale process of secondary capacity and the external determination of price. In terms of systems and frameworks - could draw on the arrangements that are already operating in the UK and Europe and / or utilise existing Trayport system	Likely to be more involved than the UIOAI to implement as it involves 3 rd parties to undertake the “Oversell” and “Buy Back” if necessary. In terms of systems and frameworks - could draw on the arrangements that are already operating in the UK and Europe.

Table 5: Common and contrasting challenges under the UIOAI and “modified” OS&BB

POTENTIAL CHALLENGE	UIOA	MODIFIED OS&BB
Involves 3rd parties and potentially confers additional functions (and risks) on these parties	<p>LIMITED - Would not need to directly involve pipelines secondary capacity trade. Their involvement would only extend to submitting their own available capacity reflecting efficient short-term prices.</p> <p>An external party would need to operate the trading platform.</p>	YES - The OS&BB confers additional functions and responsibilities on pipelines. It creates additional risks that would need to be managed.
Requirement for risk mitigation measures for pipelines given the current regulatory framework	UNLIKELY	YES – The proposed “modified” version (by awarding the pipelines the revenue from the oversell process would provide a “safety net” for the recovery of “Buy Back” costs) offers a potential solution (i.e. avoiding the need for pipeline regulation on the east coast).
Implications for existing contracts	YES - It is highly likely that changes would be necessary to existing contractual arrangements between pipelines and shippers including the removal of any “most favoured nation” clauses. A legal examination is would be necessary to identify the level of required change and potential barriers.	YES - It is highly likely that changes would be necessary to existing contractual arrangements between pipelines and shippers including the removal of any “most favoured national clauses”. A legal examination is would be necessary to identify the level of required change and potential barriers.
Require changes to the current regulatory framework (i.e. 3 rd party access arrangements and pipeline regulation)	UNLIKELY	UNCLEAR - The regulatory approach in Europe (where it is in operation) does differ to the east coast gas market - pipelines are largely regulated. The proposed “modified” version (by providing a “safety net” for the recovery of “Buy Back” costs) offers a potential solution (i.e. avoiding the need for pipeline regulation on the east coast).
Requirement for specific anti-competitive provisions	UNLIKELY - The existing market conduct rules are likely to be sufficient to discourage market manipulation.	<p>YES - To ensure the OS&BB is not subject to market manipulation there needs to be firm rules to prevent incumbents “gaming” the situation through “nominating-up”.</p> <p>This can be managed where there is no physical congestion. Where congestion is evident, then appropriate signals exists for incremental capacity / value for curtailment in the short term.</p>
Internationally tested	NO - While less complex than the OS&BB, it is untested in an international sense and further design consideration is necessary to understand the costs and benefits.	YES - Arrangements have successfully operating in the UK for a many years and were recently introduced through the 3 rd Energy pack in Europe. Significant learnings are available if the option was to be implemented on the east coast.
Introduces administrative/regulatory burden	<p>LIKELY – Capacity holders (and those seeking capacity) would be required to monitor expected pipeline usage and participate in a daily auction for any unutilised capacity. Existing and potential capacity holders would need to develop internal systems to monitor (and price) short-term capacity requirements.</p> <p>Compliance frameworks would also need to be established.</p>	<p>LIKELY – In addition to the requirements being placed on pipelines, capacity holders would also need to monitor expected pipeline usage and participate in a “Buy Back” if capacity constraints are in place. Existing and potential capacity holders would need to develop internal systems to monitor (and price) short-term capacity requirements.</p> <p>Compliance frameworks would also need to be established.</p>

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Case Study – Milford Haven Pipeline

Capacity auction mechanisms do not preclude long term investment signals nor mean a “flight from firm”.

In the UK, National Grid (main gas and power infrastructure owner), accepted auction signals from BG Group, Petronas and Exxon Mobil to construct the 700m GBP Milford Haven pipeline.

The bidders were going to construct two LNG regasification terminals to bring around 20% of the UK’s natural gas requirements and the eventual 316km pipeline built around challenging terrain (Brecon Beacons) ensured the capability to deliver gas to the heart of the UK market.

Auctions were conducted in late 2003 and National Grid were contracted to finish the build by October 2007 (although local planning delays meant this was slightly delayed).

The bidding shippers had to meet an investment test – 50% of the net present value of the total investment within an 8 year window. Given the projects were long term commitments, the shippers were able to contract out until 2025 (furthest bidding window at the time). The price the shippers paid reflected the cost of the investment and the usual UIOLI rules still applied.

Shippers pay for the capacity regardless of whether they use it: Exxon has a steady throughput of LNG through South Hook, whereas BG Group sends relatively few cargoes to the UK market when there are opportunities to send gas to higher value global markets. They still pay for the capacity, even though it is largely unused. Others are free to use the capacity, both on the pipeline and through 3rd party access arrangements to bring LNG into the UK.

C. APPROACH “C”

Improve the incentives of pipeline owners in facilitating access to capacity. This approach seeks to address the issue of pipeline owners having insufficient incentive to facilitate access to capacity. Elements of this approach include changes to the economic regulation of pipelines and prohibitions on contractual provisions in GTA’s which limit capacity trading by shippers.

Table 4: Assessment of Elements under Approach C

Element	Degree of change/cost	Impact	Supports other mechanisms	Impact property rights	Market Based	Recommended for implementation/examination
Changes to economic regulation	VERY HIGH	SIGNIFICANT	YES	YES	n/a	NO
Prohibit contractual provision in GTA’s that limit capacity trading by shippers	MODERATE	MODERATE	YES	NO	n/a	YES

General Comments:

- QGC recognises that the current economic regulatory framework that applies to gas pipelines in Australia has been effective in facilitating significant investment in new infrastructure.
 - Altering the underlying regime represents a significant departure from the existing arrangements. A major review focusing entirely on this issue would be necessary to fully understand the issues and whether there would be any unintended consequences.
 - With careful consideration, we are of the view that a new capacity allocation mechanism could be designed and introduced without the need for major changes to the current pipeline framework.
- There is benefit in commencing a process to identify whether there are any contractual provisions in GTA’s that limit capacity trading by shippers. This is likely to be necessary to enable the effective introduction of a new capacity reallocation/trading mechanism.