Submission to the East Coast Wholesale Gas Market and Pipeline Frameworks Review

1. Introduction

QGC supports the Council of Australian Governments Energy Council's ("the Council") Vision for Australia's future gas market outlined at its December 2014 meeting, which is underpinned by the Gas Market Development Plan.

> *The Council's Vision is for the establishment of a liquid wholesale gas market that provides market signals for investment and supply, where responses to those signals are facilitated by a supportive investment and regulatory environment, where trade is focused at a point that best serves the needs of participants, where an efficient reference price is established, and producers, consumers and trading markets are connected to infrastructure that enables participants the opportunity to readily trade between locations and arbitrage trading opportunities.*

In order to assist the Council realise its vision, the AEMC has been tasked with undertaking the East Coast Wholesale Gas Market and Pipeline Frameworks Review ("the Review"), which specifically focuses on the design, function and roles of facilitated markets and gas transportation arrangements. The first stage involves setting the direction for the east coast gas markets followed by a second stage addressing medium to long-term issues. QGC welcomes the establishment of the Review and the opportunity to respond to the Terms of Reference (ToR) and Discussion Paper.

While Australian gas markets have worked well over recent decades the market is experiencing significant change. Historical sources of oil and liquids rich gas are being depleted. New sources of gas from unconventional sources are more expensive to produce and generally lack liquids. Attracting international investment is critical in this regard given that development of unconventional gas reserves is complex, cost intensive and only likely to be viable on a large scale. The development of LNG export capacity has also contributed to changes in the market. These challenges must be carefully managed in order to meet the long-term interests of consumers. This will require the urgent development of new supply in all jurisdictions and renewed effort to improve market frameworks.

While the Review does not directly focus on issues associated with encouraging new competitive supply, it should address other fundamental factors limiting the development of an effective east coast gas market. Our interest in these matters is demonstrated through our participation on the Review Advisory Group and also through presenting at the Public Forum on 25 February 2015 on a specific capacity trading model operating in the European gas market.

With respect to the development of the gas market, this process has commenced with initiatives such as the Wallumbilla Gas Supply Hub (GSH), which was designed to meet the changing needs of the market due to the entry of the LNG export industry. Participants now have added flexibility in managing their short-term gas positions. Importantly, it also provides published information on bids and offers, traded prices and volumes. Not only is this information helpful to those wishing to directly trade at the GSH, it provides a benchmark price to underpin other contractual arrangements and the development of the futures and forward traded markets.

We consider, however, that gaps exist in the current market frameworks and without market-based policy lead reforms, the Council's Vision for the future gas market will be substantially delayed to the detriment of the efficient operation of the market and may not be realised. There are three issues that QGC believes should be prioritised by policy makers in the near-term if the economic benefits of gas trading are going to be maximised in the near term and into the future.

- Improved access to efficiently priced short-term pipeline capacity;
- Improved market information to support trade; and
- Promoting effective facilitated gas markets and the creation of an effective "within-day" market.

These points are central to the Review and are aligned with the *Industry Statement of Principles to Support the COAG Energy Council Gas Market Development Vision* ("The Statement"), which has been put forward by leading energy companies, large users and associations including QGC.

With these points in mind, QGC provides the following further comments on specific issues of concern.

2. Signals and incentives for efficient access to and use of pipeline capacity

Efficient access to and use of pipeline infrastructure is a fundamental component of a well-functioning gas market. A fully integrated east coast gas market will not develop without an effective transportation regime. Short-term capacity trading arrangements are essential to develop market liquidity, reduce price divergence and facilitate the development of the futures and forward markets. Addressing this issue is central to "opening-up" the market and enabling gas to be directed towards participants who value it most at any given time. In a small and stable gas market, this may not have been viewed as a priority, but the changing dynamics of the east coast gas market, now require the market frameworks to provide for efficient short-term pricing of capacity and pipeline utilisation.

<u>Current impediments to short-term trading in capacity</u>

QGC considers there are impediments to short-term trading in pipeline capacity. Short-term capacity is not being offered to the market at prices that result in trades 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 creating a situation where we are observing "capacity hoarding" (whether intentional or unintentional) emerging because the domestic pipeline system is "contractually congested" at points rather than facing physical capacity limitations. The consequence is it creates market distortions and low priced gas is unable to flow to higher value markets. Through our experience, shippers are not releasing this capacity (or "hoarding capacity") for various reasons including:

- **Potential lack of market awareness** - at a practical level, given the previous small and stable nature of the market, shippers could be potentially unaware of the level of potential interest by other parties in purchasing secondary capacity.

- **Transaction costs potentially exceed value of sale** – the bi-lateral nature of transacting for pipeline capacity is a cumbersome, slow, resource intensive and a relatively costly and time consuming process. Issues of credit, payment, dispute resolution and default conditions, physical delivery and gas quality and other specific terms need to be agreed.

Historically, it facilitated long-dated transactions involving sizable volumes. By comparison, in an unconstrained physical system, we would expect short-term capacity clearing prices to be relatively low. For this reason, current arrangements are not a particularly effective model for enabling short-term transactions. Developing some form of a facilitated market, which brings down these costs, is the first step in promoting any measurable short-term shipper to shipper capacity trading.

- **Maintains flexibility and avoids nomination complexities** - shippers may also be incentivised to forgo revenue from capacity sales (if the transaction value is relatively low) in preference for maintaining operational flexibility. The added complexity to work through the re-nomination process may also act as a practical disincentive to transact.

- **Potential commercial opportunities** – Through the management of capacity, price differences between markets may emerge, which do not necessarily reflect the underlying supply-demand conditions.

Pipeline owners also have a role to play in facilitating the short-term trade in unutilised capacity. 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 the price at which it is offered to the market.

With commodity price movements reflecting short-run supply and demand conditions, the price of gas can drop below published transportation offers. 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. It is our understanding that this is likely due to the operation of contractual agreements between the pipelines and existing shippers. The AEMC should investigate whether contractual clauses are precluding the offering of incremental capacity to reflect a short-run clearing price rather than a premium at or above the long-term price.

<u>Oversell and Buy-back Mechanism</u>

The European gas market faced similar challenges during the last decade and in October 2013, saw the introduction of a market-based mechanism that effectively avoids "capacity hoarding". This was effectively implemented, by the European Regulator (ACER) as part of the Congestion Management Principles (CMP), which included a specific "anti-hoarding" mechanism referred to as the "Over–Sell and Buy-Back" mechanism (the OSBB). It has been operating in the United Kingdom since 2002 prior to its broader application in Europe. It requires available pipelines to make day-ahead "firm" capacity available through an auction mechanism at market reflective prices.

On 25 February 2015, at the Review Public Forum, QGC described the operation of the OSSB on the basis that it is a good starting model to illustrate how a market-based solution could be developed. Its key features include:

- Applied in situations where a pipeline is fully contracted, but under-utilised on a day-to-day basis by existing shippers (i.e. the pipeline is contractually congested rather than facing physical constraints).

- Encourages the secondary trade in capacity ahead of the mechanism being applied and provides a commercial solution to the rationing of capacity when physical constraints occur.

- Pipelines retain the revenue from the "over sell" auction, which also funds any "buy-back" requirement. This provides incentives for pipelines to seek commercial opportunities.

- It has a number of features that make it attractive for the east coast gas market including being overlaid across the existing market arrangement and it does not expropriate the rights of primary capacity holders. It is also easy to implement

For the OSBB to be effectively implemented in the east coast market, given the regulatory framework, we recognise that the AEMC needs to consider the operational and risk management measures for pipelines and the structure of existing contracts and the OSBB approach. In this regard a number of points have been raised by various stakeholders, which QGC has considered on the basis of the broader BG-Group's involvement in its development and implementation in the European gas market.

1. **Regulatory framework** – We note the regulatory approach in Europe does differ to the arrangements applying in the east coast gas market and in Europe pipelines are largely regulated. It is our understanding, however, that this was not a primary driver underlying the design of the scheme. Importantly, pipeline owners (as in Australia) were already recovering the long-term costs (plus return) of the pipeline through underlying fixed contracts. The OSBB was an overlay to facilitate greater competition through improved access and it offered additional commercial opportunities (or upside) for pipeline owners as well as sufficient "in-built" mechanisms to manage any residual risk. In the context of the east coast gas market, a last resort default recovery mechanism could be investigated through some form of regulatory provision or the mechanism operated by an independent body and any residual costs recovered through means similar the funding services provided by the Australian Energy Market Operator (AEMO) such as the National Gas Market Bulletin Board (NGMBB).

2. **New pipeline investment** - the OSBB should not alter the incentives underpinning pipeline investment. It only applies when the capacity on the relevant pipeline is fully contracted. There is no requirement for "discounted"/short-run marginal cost pricing under an OSBB when the pipeline is undersold (although the pipeline operator needs to consider the economic value of using capacity to move gas). If there is "firm" demand for gas, at the other end of the pipe, then the incentive remains for the 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.

Given the attractiveness of the OSBB in terms of a simple and timely solution for addressing short-term capacity trading, we encourage the AEMC to explore these issues further, as part of this review, with overseas policy makers and other relevant stakeholders. As the design elements and trading platforms are well established, it could be introduced into the east coast gas market within an eighteen month timeframe following a policy decision. We believe the principles and objectives underpinning the OSBB are very relevant in the Australian context and industry and policy makers need to collectively work on establishing a practical short-term capacity trading model given the east coast gas market regulatory frameworks.

Moomba, the GSH and capacity trading

Addressing the fundamental issue of pipeline capacity is also likely to remove the need to introduce alternative design mechanisms, such as new trading locations, that are not necessarily the optimal long-term solution for the east coast gas market. The Wallumbilla GSH is central to growing liquidity in the east coast gas market. Introducing additional trading hubs offers a short-term solution, but could split market liquidity at the Wallumbilla GSH and create greater price volatility (particularly when exacerbated by capacity constraints). Furthermore, strategically in considering the expansion of the GSH, there is significant benefit in exploring options that enhance and concentrate overall liquidity in the market.

The Australian Energy Market Operator (AEMO) is considering the option of launching a Moomba Hub in the first quarter of 2016. QGC supports ensuring the market frameworks enable new participants/customers to enter the GSH and Moomba is an obvious delivery point for end-users with positions in the Southern markets to access supply. There are, however, a range of factors that need to be considered before any decision is made on the preferred arrangements that could result in splitting liquidity between Wallumbilla and Moomba.

Given the size of the east-coat market and at this stage in its development, there is significant benefit in concentrating trading/liquidity at one trading point (e.g. Wallumbilla). This will provide sufficient depth to enable the establishment of an efficient reference price, which is necessary if the Australian Stock Exchange (ASX) proposed futures contract market is to be successfully traded. Increased trading at one point narrows the bid-offer spreads and the overall price ticks between trades, which is a standard indicator of liquidity. Developing an effective futures market is in the long-term interest of consumers providing instruments to hedge risk and underpin security of supply.

An effective short-term capacity trading mechanism (reflecting efficient short-term pricing), would likely enable Southern participants (and those looking to supply the Southern markets) to more cost effectively transact and manage risk using Wallumbilla as a central point. QGC has suggested rather than establish a new pricing point at Moomba, it becomes a new GSH delivery/receipt point and trades are referenced to Wallumbilla.

3. Facilitated markets

QGC considers the existing east coast gas market is a loosely connected set of state based-markets with different operational arrangements. While we are not a registered participate in the Short-term Trading Market or the Declared Wholesale Gas Market (DWGM), as an upstream producer and participant at the Wallumbilla we have the following insight in terms of key areas for development. Our overarching view is the creation of a "within-day" gas market should be a priority issue. In-line with our comment on capacity trading, the changing dynamics of east coast gas market, now requires the market frameworks to provide for additional trading flexibility and efficient "within-day" pricing signals.

This would be initially facilitated by extending trading hours and reviewing the pipeline nomination timeframes. Currently trading on the Wallumbilla GSH opens at 9am and closes at 5pm. To allow participants added flexibility in responding to changes in gas production and demand requirements there would be benefit in extending the trading period from 6am to 10pm. Pipeline nomination timeframes should also align with the market and be responsive to physical customer requirements. Next day pipeline nominations are required by 4pm which makes it difficult to undertake any "day ahead" trades at Wallumbilla after this time. Renomination facilities are available, but at significant

cost. "Within-day" nominations are an accepted feature of mature overseas gas markets. This suggests that it is necessary for and should be readily achievable in the east coast gas market.

On the other STTM and the DWGM, multiple market designs make trading complex, inefficient and costly for participants. Due to the operation of specific design features and the size of the markets, it is also questionable as to whether the published prices in these markets always reflect the underlying supply and demand for gas or are impacted by other factors. As gas flows change, it is also highly likely that the benefits of operating some balancing markets will outweigh operational costs for participants and AEMO. For example we would suggest that it would be in the long term interest of the market to shifting trading to the Wallumbilla GSH and close the Brisbane STTM.

In terms of specific issues, there is a lack of harmonisation of key features including trading day definition, consistency of trading periods and settlement processes. As a starting point harmonising the "gas day" across the states (and potentially aligning to the timing of the electricity market) would make it easier to trade gas across the east coast.

4. Other – Market information

While not explicitly part of the scope of this Review, information is critical in facilitating a liquid and effective east coast gas market. Improved capacity trading arrangements and "within-day" gas pricing cannot be appropriately implemented without meaningful market information to support trade. As part of this Review, the AEMC should also identify any relevant changes to east coast gas market information reporting that are necessary to support the overall successful delivery of any of its key recommendations.

As both a supplier of information to the current NGMBB and user of published information, QGC considers there is a need for a comprehensive review of the existing frameworks guided by clearly stated objectives. We recognise that AEMO is progressing with the NGMBB redevelopment, however, more fundamental change beyond the existing National Gas Rules (NGR) framework are likely to be necessary. QGC has developed a "real-time delivery and receipt point" reporting model and would welcome the opportunity to provide the AEMC with an overview of its key features. Overall, this model shifts the approach to market information from infrastructure reporting (e.g. production at processing plants, pipes and storage) to a platform that captures data that is relevant to domestic gas trading and managing commercial positions.

Summary of QGC Recommendations to the AEMC

1. Acknowledge that gaps exist in the gas market frameworks and without policy action the COAG Energy Council's Vision for Australia's future gas market will not be fully realised.
2. Recognise improving access to competitively priced short-term pipeline capacity is central to the development of the east coast gas market and the need for a capacity trading mechanism. Addressing this issue will promote the development of a more integrated market and reduce the need to introduce new trading hubs.
    - Promote the introduction of an 'Over-Sell and Buy-Back' (OSBB) mechanism or at least another market based mechanism to be developed in the second stage of the Review. This will encourage secondary trading in capacity and avoid "capacity hoarding".
3. Highlight any relevant changes to east coast gas market information reporting that support the successful delivery of a short-term capacity trading mechanism and a "within-day" east coast gas market. Recommend a process to effect these changes initiated by a scoping study that clearly defines the overall objectives.
4. Recommend a process to improve market operations and flexibility through extended market hours, harmonising the "gas day" across markets and introducing "within-day" pipeline renominations.