

1 June 2015

Mr John Pierce  
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Australian Energy Market Commission  
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FROM THE OFFICE OF THE  
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Dear Mr Pierce

**Subject: East Coast Gas Review Stage 1**

AEMO welcomes the opportunity to comment on the AEMC's Stage 1 Draft Report on the East Coast Gas Market and Pipeline Frameworks Review.

The gas industry in Australia is undergoing a period of immense change with rapid development of CSG gas fields and facilities to meet the demands of the LNG export industry in Gladstone. The review is an opportune time to consider the optimal design for gas trading, balancing and transportation markets to meet the current and future requirements of industry.

The draft report outlines a large scope of work that could take a considerable amount of time to complete. Direction on the development of the east coast gas and transportation markets is needed to give guidance to the proposed streams of work.

AEMO believes it is important to prioritise work on converting the Council of Australian Governments (COAG) Energy Council's vision into a road map for the development of the east coast gas and pipeline markets. It is not clear in the report how the various topics and issues would be packaged or prioritised in order to provide a coherent long term direction for the development of the east coast gas and pipeline markets.

AEMO supports continued initiatives to improve the efficiency and operation of the gas markets and the transparency of gas market information, where this is implemented through an integrated, long-term approach and where the benefits outweigh the costs. AEMO strongly supports measures that facilitate the efficient allocation of pipeline capacity including reforms that could facilitate greater capacity trading.

This submission focuses on the following:

- enhancing gas market information on the Gas Bulletin Board (GBB);
- the Declared Wholesale Gas Market (DWGM);
- the Short-term Trading Market (STTM);
- further development of the Gas Supply Hub (GSH).

## **Gas market information on the Gas Bulletin Board**

AEMO redeveloped the GBB, at the request of the Council of Australian Governments (COAG) Energy Council (the Council) in March 2014. The purpose of this redevelopment was to improve the useability and functionality of the GBB.

In redeveloping the GBB, AEMO scoped out improvements in close consultation with stakeholders, within parameters that included the delivery timeframe established by the Council and acceptable cost to stakeholders. The costs to develop and operate the GBB are passed on through AEMO fees to shippers, on a pro rata basis.

As part of this review, AEMO would be in favour of the AEMC establishing a vision for the development of the GBB, consistent with the Council's gas market vision. The vision should be focused on developing the GBB as a tool with which to support short- and long-term decision-making in gas markets through improved transparency and availability of gas market information. This could, as noted in the Stage 1 Draft Report, be aimed at improving coverage and information required to support risk management in the wholesale market.

As the AEMC notes in its Stage 1 Draft Report, the GBB has the potential to become a one-stop-shop for gas market data. AEMO supports this on the basis:

- individual improvements to the GBB are consistent with an overall vision for GBB development and meet the requirements of the intended audience;
- Costs of providing enhanced or new information are recovered on an equitable basis

As recommended, and subsequently endorsed, in AEMO's June 2014 Scoping Report to the Council, AEMO supports the inclusion of relevant price information from the Short-term Trading Markets and Victorian Declared Gas Wholesale Market. While AEMO had undertaken to scope the potential for inclusion of such price data on the GBB, AEMO sees this review as the most appropriate avenue for such scoping.

### *National Gas Rules (NGR) provisions*

AEMO hopes this review will present an opportunity for a thorough review of the GBB rules (Part 18 of the NGR). Based on operational experience, there is confusion about the application of the rules to some facilities, which has meant that the coverage and consistency of reporting on the GBB is not as comprehensive as it could be. In particular, the GBB definitions and rules around registration and exemption requirements could be significantly clearer. The rules would also benefit from clarification on how interconnected facilities, or integrated production and storage, should be registered or represented on the GBB.

### *Capacity listing*

The Stage 1 Draft Report suggests an expansion of the scope of the capacity listing page to include a separate listing service for gas, transportation and storage capacity. AEMO notes that participants can currently list commodity, transportation, storage and other gas services via the capacity listing service on the GSH (Trayport), which is published to the GBB. AEMO is also cautious about the value of establishing an additional separate capacity listing service to the capacity listing service on the GSH platform. Any additional capacity listing requirements are likely to provide limited value to the market without an underlying capacity trading framework. In AEMO's view, such a framework would support the usage of unutilised capacity and efficient flow and trade of gas between markets on the east coast.

### *Planning information*

The Stage 1 Draft Report also advocates for the inclusion of planning and longer-term forecasting information on the GBB, through development of a long-term forecasting and planning page that includes the GSOO, the NGFR and associated material. AEMO is supportive of this and the inclusion of other planning information where this fits within the broader GBB vision.

### *Reference price information*

The Stage 1 Draft Report outlines options for enhancing transparency of forward gas prices, including the development of a survey-based gas price index. To be of value to participants it is important that reported information relates to a standard trading product and that transactions are reported in a timely manner (i.e. recently executed).

It should be noted that AEMO, in conjunction with the Gas Supply hub Reference group (GSHRG), has developed the Wallumbilla Benchmark Price based on day-ahead trading in the Gas Supply Hub. The benchmark price is the reference price for the newly listed ASX Wallumbilla gas futures contracts. The ASX futures market has the potential to provide a transparent, transaction-based forward curve for natural gas.

Commodity markets, including overseas gas markets are supported by private market reporting organisations that survey market participants and publish this data on regular basis. AEMO notes that Argus Media currently publish an index based on participant surveys. AEMO notes Argus Media have provided a submission on the role of independent price reporting agencies in the east coast gas market.

### **Declared Wholesale Gas Market**

The DWGM is the facilitated wholesale gas market for the Declared Transmission System (DTS) in Victoria. As a spot market, the DWGM is used for the short-term trading of gas. It also performs a balancing and system security function for the DTS. AEMO operates the market and, unlike the STTMs, is the system operator.

### *Trading in the DWGM*

Participants could be expected to buy or sell gas in the DWGM if the ex-ante price is lower or higher respectively than their contract price. Participants also use the market to manage their contractual position to help manage their exposure to take-or-pay conditions or producer outages. In the coming years, AEMO understands that, in general, Gas Supply Agreements will have much less flexibility (for example higher take-or-pay proportions, lower MDQ/MHQ), and as such participants will increasingly look to the spot markets to manage their flexibility needs.

Participants have the ability to manage their exposure to the spot market through either physically contracting for gas (or developing reserves) outside of the market or through using financial products to hedge against spot market risk. As financial markets in gas have not matured at the same pace as electricity, the majority of hedging is done physically and as such participants bilaterally procure the majority of their load from outside of the market (e.g. directly from a producer), and use the spot market to balance their positions relative to their contracts. As such, the majority of trading in the spot market is done at the margin - rather than being a specific problem with the market design, this reflects the underlying dynamic of the gas industry's current structure. As outlined in the report, participants trade approximately 20% of their load through the market. Given the immaturity of financial markets, this level of

liquidity could be seen as indicative of a healthy spot market. This figure has increased over the previous 5 years.

### *DWGM Price Signals*

As a spot market, the ex-ante price in the DWGM should represent the value of gas on the day (or in the context of the DWGM's intraday prices, for the remaining scheduling horizon) to participants. Spot prices should provide a signal to support the efficient allocation of gas over the short-term. Efficient spot prices are a reflection of the short-term supply-demand balance, rather than a longer-term reference price which is a function more of a forward price.

It is important that the pricing structure in the spot market can support the development of a forward market, while also providing appropriate signals for participants to manage their day-to-day positions. There may be merit in considering how the spot pricing signals could be improved with the goal being to develop a more effective forward price for gas in Victoria. If price signals can be enhanced to improve the ability of market participants to manage their risk and position in the spot market and further facilitate the development of a forward price curve, then this may improve market efficiency. However, it needs to be balanced against the need to maintain cost-to-cause for congestion management.

### *Transaction costs and market value adding function of the DWGM*

The cost for the DWGM includes the cost of operating the market and AEMO's role in operating the DTS. Although the DWGM's primary role is that of a spot market, the value it creates extends beyond providing a means for short-term inter-participant trades. The DWGM provides a market-based balancing mechanism for participants that, given the retail market, would be required (in some form) regardless of the wholesale market's structure.

Further, through its system operation role and through the scheduling of the market, the DWGM plays a role in maintaining system security and for participants reducing the risk of curtailment (for example, through the scheduling out-of-merit order LNG when the network is constrained). Given these additional functions, it may not be reasonable to assume that the only value from the DWGM is from inter-participant trades and that therefore the cost of operating the market and system should be assessed solely against the volume of inter-participant spot trades.

### **Short Term Trading Markets**

STTM hubs are day-ahead markets for the wholesale trading of natural gas at hubs located between transmission pipelines and distribution networks in Brisbane, Sydney and Adelaide. The market overlays contract carriage arrangements for shipping, storage and withdrawal of gas. Each hub is scheduled and settled separately, but all hubs operate under the same rules.

There has already been considerable change to the domestic gas markets in response to the rapid increase in gas production and demand in Queensland. Trading in the STTM hubs has increased this financial year<sup>1</sup> as industry works to allocate ramp gas and a number of large gas users look to the spot markets to meet a greater share of their gas supply needs.

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<sup>1</sup> Financial year 2014/15 (to date) average and maximum trade statistics: Adelaide 15% and 52%, Brisbane 11% and 27%, Sydney 10% and 34%.

Other observations that should be considered when developing the optimal gas market design include:

- AEMO has also observed new registrations, and growing interest, from large end users in the direct participation in the facilitated markets as gas prices rise and users look to take a greater role in managing their supply costs.
- While a large component of demand continues to be managed under long term supply contracts, feedback from gas market participants suggests contracting horizons are, on average, likely to reduce in the future.

#### *Ex ante market prices*

The draft report compares the price volatility observed at the Adelaide STTM hub with that observed at the Henry hub in the United States. The report states the smaller number of trading participants operating in STTM hubs is the cause of the volatility, however it should be noted that the higher volatility also reflects the relatively large variability in gas production and demand from LNG projects, limited storage opportunities available to trading participants and volatility in related markets (in particular, the NEM).

#### *Development of new balancing market design*

The draft report recommends the establishment of a 'technical working group to begin analysis on the potential simplification of the STTM design with the goal of transitioning these markets to a more focussed balancing market design'. This is a significant undertaking. AEMO would suggest that a clearer high level direction of the east coast gas markets is required to carry-out this work effectively. High level consideration of core design matters including the balancing zones (distribution network only or broader demand zones that include GPG), how zones would be balanced (market mechanism v pipeline contract), who would perform balancing, and potential pricing solutions, would provide important guidance to the STTM technical working group.

The draft report also states that 'there may be merit in trialling a simplified market design at Brisbane'. A pilot market at Brisbane would create a fourth gas market design, going against what appears to be an industry objective of harmonising market designs. As such, AEMO considers it important to develop the design for the new market and ensure there is broad support of the design before undertaking a pilot. A pilot market design would ideally be one that would be applied in other regions over time and consequently would need to be cogniscent of the the physical characteristics at different gas networks and the requirements of trading participants.

#### *Gas day start time*

AEMO supports consideration of a harmonised gas day start time.

AEMO notes that trading participants raised concerns associated with contract changes and costs associated with changes to metering when gas day start times were considered in the past. It is important to include the end-to-end gas production and delivery chain, not just the facilitated markets, when considering the harmonisation of gas day start times.

#### *STTM functions*

The report highlights the facilitation of trading performed by the STTM which is one of the important functions of the market. Additional functions include a market balancing



mechanism, contingency gas capability for coordinating gas supply emergency events, centralised settlement and prudential arrangements and an information reporting system.

If and how these functions are carried out in the future should be considered as part of setting the direction for the design of the east coast gas markets.

### **Gas Supply Hub**

The GSH is a voluntary exchange for the wholesale trading of natural gas. The GSH exchange provides trading participants with direct access to an electronic platform to trade short-term and medium-term physical gas products.

The GSH was designed as a flexible national framework that can evolve to meet industry needs. AEMO is currently progressing two GSH development work streams through the Gas Supply Hub Reference Group (GSHRG), which are discussed below.

#### *Implementation of Moomba trading locations*

Following requests from large users in New South Wales and South Australia in 2014, AEMO commenced consultation with the GSHRG on the design and implementation of Moomba trading locations. Moomba is the connection point (as well as an important supply source) for several major gas facilities supplying demand for downstream markets and large industrial users in South Australia, Queensland and New South Wales. Following consultation with the GSHRG in 2015, AEMO has submitted a draft high level design for Moomba trading locations to the COAG Energy Council for consideration at the Council's July 2015 meeting.

In the draft report, "whether or not the establishment of a trading location at Moomba would reduce liquidity at Wallumbilla" is identified as a key issue for market participants. Although the potential for Wallumbilla liquidity to be impacted exists, following consideration of this issue, AEMO considers it unlikely that the impact from Moomba on Wallumbilla liquidity would be material. The reasons for this are outlined in AEMO's high level design report published in May 2015.

The report also notes that trading at Moomba could potentially be impacted by the Moomba to Adelaide Pipeline System (MAPS) connecting to the SEA Gas Pipeline due to odorant issues on the MAP. AEMO raised gas specification issues as part of its consultation on Moomba trading locations and trading participants and facility operators indicated that they believe there would be no issue across the constituent pipelines likely to affect trading.

Following extensive industry consultation and analysis of the issues raised through the GSHRG, AEMO supports the view of the majority of industry participants to implement a Moomba trading location.

#### *Wallumbilla Single Product*

The COAG Energy Council tasked AEMO with a review of hub services, to be carried out in 2015, as part of its request to implement the GSH in 2012. The purpose outlined for a review at the time was to consider and advise the Council on whether hub services are sufficient, from a physical and contractual perspective, to support a transition from the three existing node locations to a single trading zone.

Following further consideration of this task (after implementation of the GSH), AEMO sought to broaden the mandate from the Council and undertake a targeted review of hub services by first considering the requirements for the establishment of a single product. AEMO's suggested approach to a review of hub services was endorsed by jurisdictional officials at the

Gas Market Working Group (GMWG) in November 2014. AEMO commenced the single product review with the GSHRG in December 2014.

AEMO is presently undertaking a review of hub services in the context of what services are required to facilitate a single product, there could be considerable overlap between these two processes. As stated above, an important consideration as part of AEMO's review for any proposed single product model will be whether there are sufficient services to facilitate the trade of the single product and whether the competitive environment (including any need for commercial arrangements or regulations) for hub services is appropriate to support the proposed market model.

The draft report talks to Wallumbilla not currently offering hub services such as compression and redirection services. This statement is not entirely accurate. While Wallumbilla may not provide the level of services that is prevalent in other international hubs, participants have indicated to AEMO that services are available at Wallumbilla. AEMO undertook a survey of participants, as part of the review process that included questions on the availability of services at Wallumbilla. Responses to the survey indicated the vast majority of participants operating at Wallumbilla had access to services (including redirection and compression) and that the current firmness of these services is sufficient to support current trading needs. As noted previously, in terms of a single product, the pricing mechanism and level of competition of hub services are key considerations in each single product model. For example, under one of the single product models AEMO is proposing establishing a secondary market for the trading of services as a key component of the market design in the hope that this will facilitate further competition and transparency in service provision.

AEMO looks forward to working with you further during the course of this Review. Should you require any clarification or further information on the contents of this letter further, do not hesitate to contact myself on 03 9606 8559.

Yours sincerely



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