



10 September 2015

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235
Project Number GPR0003

RE: Qenos submission – Wholesale Gas Markets Discussion Paper

Thank you for the opportunity to provide a submission on the issues and questions raised by the Wholesale Gas Markets Discussion Paper (**Discussion Paper**).

Executive Summary

Qenos is Australia's sole producer and leading supplier of polyethylene. Qenos is also one of the largest industrial gas users in Australia with a total gas usage in the order of 40 PJ p.a., including ethane, which is an important feedstock used in our operations.

Qenos is a member of the Plastics and Chemicals Industries Association (PACIA), Energy Users Association of Australia (EUAA) and Australian Industry Group (AIG), which share the following vision.

"A domestic gas market that is deep in capacity, liquid in supply, competitive, transparent, informed and with good price discovery."

The creation of an East coast gas market that meets the above objective and is consistent with the Energy Council's vision, requires the facilitation of a market with sufficient participation at trading hubs to provide enough liquidity for the creation of a meaningful reference price. To improve participation pipeline access should be improved to empower end users to purchase gas from multiple locations. The current system requires an end user to contract with multiple pipeline owners to enable supply from the different sources. To further improve access Qenos suggests a small number of hubs be created to enable domestic end users to buy gas from anywhere within the system. End users would pay an appropriate upfront fee for access to such hubs to cover pipeline charges.

In addition to the options in the paper, Qenos believes a fourth option should be considered. This option would allow users to buy gas at the demand centres (eg. the existing STTM and DWGM) which already have a number of shippers and users. The DWGM has the most participants followed by the Sydney and Adelaide STTMs.

Of the options in the paper, the third option (with Northern and Southern virtual hubs) is the most attractive, provided the questions raised in the Discussion Paper are adequately addressed. As the Discussion Paper highlights, Option 3 would increase the complexity in market operations. However Qenos believes this risk is outweighed by the potential benefit of larger hubs making it easier for end users to participate, ultimately resulting in increased liquidity. The paper is not clear on whether participation will be compulsory. The experience in the current STTM's and Wallumbilla Gas Supply Hub has shown that compulsory participation by both suppliers and end users is required to maximize market depth and liquidity. The regulatory changes required to pipeline and pricing mechanisms would then need to be put in place facilitate the change in market structure.

Introduction

Qenos Pty Ltd ("Qenos") is Australia's sole manufacturer and leading supplier of polyethylene. Polyethylene is the raw material used in the manufacture of plastic products including water tanks, pipe, film and bottles for household chemicals. The company employs approximately 700 people across its two large manufacturing sites at Botany (New South Wales) and Altona (Victoria).

Qenos manufactures ethylene and three types of polyethylene (low, linear-low and high density). The ethylene produced on the Botany site is from ethane sourced by a 1400 km pipeline from South Australia's Moomba gas fields (constructed in 1995 at a cost of \$240 million). The Altona site, sources its ethane from Bass Strait via Longford and Long Island Point processing plant through a pipeline across Port Phillip Bay.

Qenos is involved in substantial value-adding processes to Australia's indigenous hydrocarbon raw material reserves through its manufacturing operations at Botany and Altona. The Company's annual turnover of between \$700 and \$900 million makes it one of the largest petrochemical companies in the region and the largest in Australia (with a capital replacement cost of \$2.5 billion).

Qenos is a large gas user consuming 8 PJ p.a. of natural gas (methane). When you include ethane gas (a derivate of natural gas production), which is used as a feedstock in the manufacture of ethylene, our facilities can currently consume up to 40 PJ p.a. This makes gas and the gas market a vital part of our business.

Qenos supports the work of the AEMC in the development of a liquid wholesale gas market and offers the following comments to the issues raised in the discussion paper.

Options for creation of a Liquid Wholesale Gas Market for Eastern Australia

The discussion paper puts forward 3 options for the creation of both physical and virtual hubs to facilitate liquid trading in Eastern Australia.

In order for physical or virtual hubs to operate in a manner consistent with the Energy Council's vision the following matters need to be addressed:

1. Ease of access – avoiding end users needing multiple transportation agreements.
2. A meaningful reference price.
3. Liquid market – which may require some level of compulsory participation (eg. Sydney and Adelaide STTMs).

Qenos favours a fourth option, which would be founded on maintaining or enhancing existing markets operating via the DWGM and STTM. Qenos does not support a move to change the STTM to a voluntary market that is solely focused on providing gas balancing arrangements without an alternative that enables supply at major demand hubs. In all scenarios it should remain possible to purchase gas direct from an STTM type hub.

Ultimately, regardless of what changes are made to the network, an efficient pipeline transportation system is required. In this regard, Qenos is looking forward to reviewing the AEMC's paper on pipeline capacity trading. If the pipeline networks have spare capacity, Qenos is confident it would be able to access gas irrespective of the selected option. An efficient pipeline network would also mean that gas prices across eastern Australia would 'equilibrate' to include pipeline costs.

Pipeline access is a major hurdle for many end users in accessing gas from multiple locations. The concept of purchasing entry or exit capacity into a hub (regardless of which option is adopted) would help facilitate end users purchasing from different supply hubs with an end result of increased liquidity.

Option 1 involves the creation of 5 physical trading hubs and 4 or 5 balancing hubs at major demand centers. Qenos makes the following observations in relation to Option 1:

- It is unlikely to result in the desired liquidity due to there not being enough participants across the entire market to create a meaningful reference price at each hub.
- Firm transportation rights would need to be introduced to improve the ability for end users to trade gas.
- Multiple transportation agreements would need to be in place for end users to source gas from more than one hub. For Qenos there are up to four different pipeline routes to source gas to supply its Sydney facility.

Option 2 involves the creation of Northern and Southern virtual hubs with balancing at Sydney and Adelaide. Qenos believes that the Northern hub should include Moomba, which is a gas production hub and a natural trading point linking gas between the Southern States and Queensland. The advantage of limiting the number of hubs to two is that it is likely to increase the number of participants trading in each hub. To enhance liquidity, the option should incorporate pipeline capacity trading between the hubs. To enable trading in each hub, firm capacity would need to be contracted on multiple pipelines to enable movement between hubs and demand centers, improving competition and efficient pricing.

Option 3 involves the creation of two large virtual hubs that cover the entire east coast. The Discussion Paper raises a number of questions, which need to be addressed including:

- a. How clear the pricing will be? Will pricing be based on a locational area or simply averaged over the entire virtual hub?
- b. How can gas be delivered efficiently? How will the transportation component be calculated and which party will be responsible for these costs?
- c. Are there any additional service charges? If additional charges are calculated after the price is agreed then it does not provide a 'clean' pricing signal that would enable a suitable reference price for financial hedging instruments. An inclusive price will meet the requirement for timely information in order to participants to make informed decisions.

From the view of an end user, Option 3 offers benefits over the other 2 options. It would reduce the requirement for complementary transportation agreements to be in place. A simpler entry and exit model would further simplify purchasing.

Qenos believes a fourth option should also be considered. This would be to maintain the current STTM structure allowing users to buy gas at the demand centers (eg. the existing STTM and DWGM). These markets already have liquidity, especially the DWGM, followed by Sydney and Adelaide STTM. This structure would still need to be combined with potential changes to the pipeline transportation system already mentioned.

Comments to specific questions raised within the discussion paper

A number of other questions were raised within the discussion paper to which Qenos offers the following comments.

Over the next 10 years, how do industry participants see their gas sales and procurements activities changing?

- Qenos believes more gas users will switch from purchasing gas through intermediaries to direct purchasing from the wholesale market. Currently our Botany gas requirements are purchased via a portfolio of options including wholesale fixed price contracts and direct from the STTM's. In the future we believe a greater share will be sourced from trading hubs. This would especially be the case if liquidity is increased at the hubs and futures products become more readily available. Qenos would like to see financial markets develop to provide derivatives. This would give purchasers another avenue for managing specific gas price risks with options to manage pricing risks and swaps to manage volume risk.

Do the current market arrangements adequately support participants' needs?

- Current market arrangements support our strategy of purchasing from a mixture of sources. However the need to enter into pipeline transportation agreements restricts access to hubs other than the Sydney STTM. An additional barrier to such access is the lack of accurate and timely pricing information to enable informed trading decisions. There is a misalignment on some pipelines between when daily gas pricing and pipeline capacity nominations need to be made. This misalignment means that some pipelines transportation nominations need to be made before the daily spot price is known, thereby reducing the flexibility for purchasing gas direct from the STTM vs fixed contracts. The timing provision between gas and pipeline capacity trades is another important consideration. A Participant needs to know the price and availability of pipeline capacity before it can finalise arrangements to purchase gas at a supply hub. Conversely, the price of gas at a supply hub will have an impact on the availability of pipeline capacity.

Does having multiple gas hubs contribute to or detract from the objective of achieving a liquid wholesale gas market and why?

- The facilitation of gas trading markets is vital for the development of an efficient and liquid market. As stated above, a large virtual market with a small number of hubs would provide the greatest opportunity of meeting the Energy Council's vision of creating a dynamic and liquid market. Multiple gas hubs detract from liquidity by reducing the number of participants and ease of trading. Qenos acknowledges that pricing mechanisms in a large virtual market will need to be further investigated to ensure clear pricing signals are given.

What are the main barriers to achieving a liquid wholesale gas market on the east coast and are regulatory solutions required?

- The main barrier to achieving a liquid market is the lack of access to transportation from the hubs to the demand centers. Currently, to take advantage of the multiple hubs, a number of fixed transportation agreements would need to be put in place. Larger virtual hubs with entry and exit fees would be simpler for end users and would encourage greater participation. This may require additional regulatory changes in relation to the operation of the pipelines in Eastern Australia. Additionally changes to the way ancillary / uplift / imbalance charges are made would need to be put in place so that any quoted wholesale price at a hub is a 'clean price' that can be compared. This would again remove complexity and increase participation and liquidity.

Conclusion

Qenos believes the way to encourage participation and increase liquidity in the market is to reduce the complexity for participants. Currently the main barrier to Qenos participating in trading hubs, other than the Sydney STTM, is the need to enter into agreements for pipeline capacity. Qenos recommends that the DWGM and STTM be maintained at the demand centres, which provide the ability for end users to purchase short-term supply.

From the options presented, Option 3 with 2 large virtual hubs covering Eastern Australia in its entirety offers the best solution and Qenos would be interested in understanding further how this could actually work. Qenos believes that AEMC should not lose sight of the end objective and put in place the required structural and regulatory changes in order to best meet the Energy Council's Vision for Australia's Future Gas Market for all participants.

Thank you for considering Qenos' comments. We welcome the AEMC's review into the East Coast Wholesale Gas Market and look forward to the Stage 2 report.

If you have any questions concerning this submission, please do not hesitate to contact Wendy Holtz on (03) 9258 4420.

Yours sincerely

A handwritten signature in black ink that reads "Stephen Bell". The signature is fluid and cursive, with the first name "Stephen" written in a more stylized, connected manner and the last name "Bell" written in a simpler, more legible script.

Stephen Bell
General Manager Commercial