Major Energy Users Inc.

Australian Energy Markets Commission

Stage 2 East Coast Wholesale Gas Markets and Pipeline Frameworks Review

WHOLESALE GAS MARKETS DISCUSSION PAPER

Submission by

The Major Energy Users Inc

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1. Introduction

The Major Energy Users Inc (MEU) welcomes the opportunity to provide its views on the AEMC wholesale gas market discussion paper.

The MEU considers that Australia's energy resource endowments have contributed to the development of a range of energy-intensive industries. Stemming from the use of products from some of these industries (e.g. fertilisers and explosives), they have also contributed to fostering our internationally competitive mining, minerals, agricultural, manufacturing and processed foods industries. These linkages are particularly important, as are the linkages to the economic and social benefits arising from the location of these industries in regional, rural and remote areas and the development of a more broadly based economy.

However, the promising outcomes from the well thought out energy reforms, begun in the 1990s to enhance Australia's economic development, have been sadly overturned by the loss of our international competitiveness in electricity and, more recently, gas pricing.

A number of factors have contributed to this loss of competitiveness in electricity and gas supply costs. They include the failure of national regulation to restrain increases in gas and electricity network costs. However, they also include a lack of political and regulatory will to respond to emerging challenges in the energy market in an effective and timely fashion. The current review of east coast gas wholesale gas markets is welcome but, we conclude, lacks the focus and sense of urgency required to address the critical issues now facing Australian industry.

The MEU, which represents large industry that employs many ordinary Australians, particularly in regional areas, has made several submissions during the White Paper and, more recently, to the reviews of the east coast gas markets by the ACCC and the AEMC stage 1 review on the very real threats to these industries due to higher gas prices. We are very concerned that the AEMC's process takes note of these previous submissions and recognises the urgency of dealing with the core market issues.

1.1 About the MEU

The Major Energy Users Inc (MEU) represents the interests of large energy consumers operating in the NEM and in other jurisdictions. The MEU comprises some 30 major energy using companies in NSW, Victoria, SA, WA, NT, Tasmania and Queensland. MEU member companies – from the steel, cement, paper and pulp, automobile, tourism, mining and the mining explosives industries – are major manufacturers in the NEM and in other jurisdictions, are

significant employers of labour and contractors, and are located in many regional centres, including Gladstone, Newcastle, Port Kembla, Albury, Western Port, Mount Gambier, Port Pirie, Kwinana and Darwin.

Analysis of the energy usage by the members of MEU shows that in aggregate they consume a significant proportion of the gas used domestically and electricity generated in Australia. As such, they are highly dependent on the competition that applies to the provision of gas and electricity, the retail functions needed to enable the competition to apply and to the transport networks to deliver efficiently the energy so essential to their operations.

Many of the members, being regionally based, are heavily dependent on local suppliers of hardware and services, and have an obligation to represent the views of these local suppliers. With this in mind, the members of the MEU require their views to not only represent the views of large energy users, but also those of smaller power and gas using facilities, and even at the residences used by their workforces that live in the regions.

The companies represented by the MEU (and their suppliers) have identified that they have an interest in the **cost** of the energy as well as the associated network services as this comprises a large cost element in their electricity and gas bills.

A failure in the supply of electricity or gas effectively causes every business affected to cease production, and MEU members' experiences are no different. Thus the **reliable supply** of electricity and gas is an essential element of each member's business operations.

With the introduction of highly sensitive equipment required to maintain operations at the highest level of productivity, the **quality** of energy supplies has become increasingly important with the focus on the performance of the energy transmission and distribution networks, because the transport systems control the quality of electricity and gas delivered. Variation of electricity voltage (especially voltage sags, momentary interruptions, and transients) and gas pressure, by even small amounts, now has the ability to shut down critical elements of many production processes. Thus member companies have become increasingly more dependent on the quality of electricity and gas services supplied.

Each of the businesses represented by MEU has invested considerable capital in establishing their operations and in order that they can recover the capital costs invested, long-term **sustainability** of energy supplies is required. If sustainable supplies of energy are not available into the future, these investments will have little value.

Accordingly, MEU members are keen to address the issues that impact on the **cost, reliability, quality** and the long term **sustainability** of their gas and electricity supplies.

The members of MEU have identified that in addition to the need for strong competition in the competitive parts of the energy supply chains, energy transport plays a pivotal role in the energy markets. This role encompasses the ability of consumers to identify the optimum location for their investment in their facilities, and provides the facility for generators and gas producers to also locate where they can provide the lowest cost for energy supplies. Equally, consumers recognise that the cost of providing the transport systems are not an insignificant element of the total cost of delivered energy, and due consideration must be given to ensure there is a balance between the competing elements of price versus reliability, quality and long term security;

The MEU recognises there is tension between the four elements of cost, reliability, quality and long term security and therefore makes its comments in this submission in full knowledge of the need for managing this tension.

1.2 The two elephants in the room

In regard to the issues raised in the AEMC's Discussion Paper, the MEU has identified that there are two overarching issues that dominate the gas market operations.

Elephant #1

> It is clear that the prospective export of LNG is already changing the face of the domestic gas market. Not only is the domestic market now increasingly exposed to international prices for gas, but the sheer magnitude of the export will grossly overshadow the domestic market. Indications are that the export market will be more than twice the domestic market in winter and more than four times the domestic market in summer.
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> The MEU understands that the export facilities have limited storage; the MEU has been advised that perhaps less than 20% of a ship's capacity can be stored at the export facilities. The implications of this are that the gas will have to be stored elsewhere and then delivered to the export facility as a ship is loading. The MEU is concerned that the impact of this will be far reaching.
>
> A lack of on site storage will result in significant swings in availability of gas, with short term shortages reaching deep into the domestic market when ship loading occurs. Once the ship is at capacity, the reverse will

apply with significant over-production looking for a market. This introduces a major gas balancing issue across the whole east coast gas supply network.

For example, as large amounts of gas will be stored in the delivery pipelines, this will cause significant issues as the "park and loan" arrangements impact pipeline capacity to deliver to the domestic markets.

There will be increased volatility in the market price of gas as a result of the swings in demand. Such volatility will not only impact on spot prices but will have to be included in long term gas supply contracts as well, raising the price for gas above export parity pricing.

The exporters have already indicated that they will seek for the domestic market to utilise gas at times of low export demand, yet the domestic market has limited ability to absorb even small amounts of short term swings in demand. However, domestic large end users of gas tend to have high load factors, so any short term gas availability has limited value for when they are operating, they will not be able to increase demand even though the prices might be low. Conversely, the risk of short term shortages can be catastrophic for their production.

Smaller users (especially commercial and residential) use gas mainly in winter so this does not assist in managing short term swings in demand that the exporters will be exposed to. The MEU sees that only generation and storage will be able to make some use of the bulk of the short term swings generated by the export facilities, with pipeline park and loan services being the major beneficiary of the swings in demand of the exporters.

The MEU considers that these fundamental issues have to be considered when developing any of the changes proposed for the gas markets. That is, it is all very well for the wholesale market price to reflect the changes to the supply/demand position of the export market, but has little value if domestic consumers cannot respond to those low prices to any significant degree and are forced to purchase at high prices during other periods and pay a risk premium to manage the price volatility expected.

Elephant #2

The SSTM and the DWGM are both net markets, with the STTMs operating in a contract carriage transport arrangement and the DWGM transport operating in a regulated market carriage arrangement. This is stark contrast to the east coast electricity market which is based on a

gross pool approach operating with regulated market carriage electricity transport.

The impact of the net market approach is that the gas traded on the market is "at the margin" with the bulk of gas trading carried out "off market". The outcome of this is that the net market price is not representative of the value of the gas transiting the market.

Concept #1 proposes trade occur at supply points rather than demand points yet provides no indication why this change will provide a different outcome to that currently seen. Unless a gross pool approach is implemented thereby preventing the trading hubs from bilateral trading, then it is not clear how the change will deliver the outcome sought.

Concept #2 proposes that the DWGM effectively operates as now and there is a northern hub developed similar to the DWGM. Currently the DWGM operates as a net market. Although the bidding structure of the DWGM does provide a basis for delivering a market price that reflects the price for gas across the DWGM, there are concerns that the price does not fully reflect the bilateral gas trades as it also includes the cost of balancing How then is the concept able to a gas price that reflects the price for gas?

Concept #3 proposes there be two virtual hubs. There is no clarity as to whether the two virtual hubs will be operated as gross or net pools. If bilateral trading between production and users is allowed to continue, then the reference price will still be "at the margin" and still reflect the cost of balancing.

While the MEU accepts that the concepts are not fully developed, it considers that a core aspect of developing concepts must address the two fundamental impacts of the export facilities and the gross vs net market considerations.

1.3 MEU views expressed in the response to the Stage 1 draft report

The MEU provided views on the specific issues of the STTM and the DWGM, indicating that, on balance, there was no need for wholesale redesign of the STTM or the DWGM. The MEU commented that, by any measure, the DWGM had proved to be a resilient and reliable market. The MEU did agree that there were aspects of both the STTM and DWGM where improvements could be made but this did not require redesign. Despite these observations, the AEMC did not listen to the views of end users active in the STTMs and the DWGM and persisted in recommending redesign.

As well, the AEMC also did not address the additional concerns raised by the MEU in those aspects where the MEU members had experienced direct harm. Specifically the MEU considers that the AEMC needed to address the very real issues of

- Limited competition and concentration of gas production;
- Limitations of the contract carriage model, with particular reference to augmenting capacity;
- Pipeline monopolies;
- Hoarding of pipeline capacity to limit competition in the contract carriage model but there is also concern about the potential for hoarding AMDQ in the DWGM

In its discussion paper, the AEMC provides considerable information about how other markets fare and features that might assist in making the east coast gas market provide better information and secondary market liquidity. The clear implication of the discussion paper is that the STTM (and aspects of the DWGM) are not best practice and redesign of them will deliver better outcomes. This view supports the recommendations made in the Stage 1 report.

1.4 The MEU views of the current arrangements

The MEU has asked its members (including those who are Market Participants) to provide their views on how well the current arrangements are assisting them. They advise the negatives of the current arrangements are:

- There is no clear wholesale market price. The MEU accepts that the gas prices revealed by the STTM and DWGM provide prices for gas at the margin, ie the price for balancing the market. But to a large extent prices at the margin are a result of the very bases of the markets - that the STTM and the DWGM are both net markets where the bulk of trades occurs outside of the markets. Unless the price of these trades outside the market is made transparent, any market based on a net market approach will not provide a clear price for gas. The MEU does not see that transferring the market to production hubs will result in a better reference price than is currently provided unless the prices at the production hubs include the bilateral trades.
- The demand centres are at best served by only two pipelines of which one provides a fixed flow of gas (the "flow" pipeline), and the other, the "pressure pipeline", has to provide the "swing service". This creates a disparity between pricing on one pipeline compared to the other and provides the basis for gaming by shippers with gas on both pipelines, particularly in the STTM through MOS payments.
- Specific pipelines are associated with specific production centres so competition is really between a production centre and its associated

pipeline. This means that effectively end user comparisons have to be based on a bundled "production+transport" assessment which provides producers with the ability to "shadow price" by knowing what the costs are for delivering gas from an alternative source. This is particularly and issue for the STTMs

- There are risks associated with the costs of uplifts and penalties arising from out of balance trades which are unknown until after the gas is used. While this issue applies to both STTM and DWGM, the move to five balancing periods each day for the DWGM has significantly reduced the impact of this issue in the DWGM
- End users external to the demand hubs cannot utilise the hubs to help manage their gas usage or use the markets to manage their unders/overs
- The MEU notes that there is limited ability (but no inability as bilateral trading is allowed in the DWGM and across the STTMs) for shippers and end users to trade gas or transport capacity amongst themselves as there is no trading exchange provided for this purpose. Capacity trading can also be limited by the contracts established by the pipeline owner and shippers and contracts between shippers and end users.

It is important to note that most of these issues are not related to the gas markets as such but due to the physical arrangements, so MEU members do not see that redesigning the markets is necessarily the answer to their concerns. However, the MEU members also advise there are many advantages that the current arrangements provide compared to before the DWGM and STTM were put in place. These are:

- For those operating within the hubs, the STTM provides the ability to trade gas and to operate more flexibly to buy and sell to match their usage. The MEU is aware that there are some end users either buying all or part of their needs from the spot market as they see this is commercially more attractive than just using bilateral trading
- The STTM provides the ability for large end users to sell gas rights (ie contingency gas) when there are shortages rather than them being constrained off with no recompense which applied prior to the implementation of the STTMs.
- For those operating within the DWGM, they advise that the DWGM is robust, allows field on field competition and the ability to source gas from the most appropriate provider without being constrained by pipeline capacity constraints and capacity hoarding
- All advise that both the STTM and DWGM provide
    - the ability to acquire gas at remote production points,
    - daily clarity on delivered prices at the point of usage and
    - transparency in the costs for balancing and allocation of the cost of balancing to those causing the out of balance.

Overall, MEU members advise that they see that the current arrangements work but need some improvement on specific aspects

1.5 The reasons posited for making changes

The reasons for making changes to the current gas market arrangements posited by the AEMC are:

- **The introduction of the LNG export facilities**. The MEU agrees that the impact of LNG export from the east coast will impact the domestic market and that the current arrangements should be tested for robustness to manage the impact. However, the discussion paper does not really address the issues other than to cite that the export facilities are looking to use the domestic market as a tool to manage the over supply that will occur from time to time. As noted in section 1.2 above, the impact of the LNG export facilities will be much wider and have greater impact than just an ability to trade surplus gas into the domestic market from time to time. Further, the ability of the domestic market to absorb large quantities of gas is limited yet this issue is not addressed at all.

- **There is not an ability to "see" a "real" price for gas as a reference for gas purchase**. The reason for this is that the STTM and DWGM are both net markets and unless this fundamental issue is addressed, none of the new concepts under consideration will address this issue. In neither instance is there transparency on the underlying gas contracts although the DWGM market carriage model provides transparency on transmission pricing.

- **There is an inability to trade capacity of pipelines from those with unused capacity to those seeking capacity.** The MEU agrees that this is a desirable feature and requires the introduction of a capacity trading market, particularly in the STTM. The MEU considers that, as there is limited competition for gas transport with each production point served by a dedicated pipeline to each major demand centre and shippers are already known to hoard capacity for commercial advantage, there is doubt as to how effective a capacity trading market will be and the degree of benefit it will bring. The MEU considers that investigation into the DWGM may identify a similar issue with respect to AMDQ trading.

- **Regulation does not provide for timely augmentation**. It has been asserted that the market carriage model (as used in the DWGM) imposes time constraints on needed augmentation. However, there is little evidence to support this view, particularly as AEMO provides objective forecasts of capacity requirements in its annual gas reports and the

regulator uses the AEMO forecasts in its assessments for future expansions.

In contrast, contract carriage is asserted to readily overcome time constraints yet MEU members report significant difficulties in getting needed augmentations. The MEU considers that the evidence does not support either of these assertions. Further, end users have seen that contract carriage has been used to discriminate against new entrants, as new entrants have to carry the entire cost of augmentation. However, as seen in the DWGM, a market carriage model overcomes this barrier to entry.

- **There is no liquidity in the gas secondary trading market.** The discussion paper highlights that the US secondary market is many times the volume of the physical market. What is not addressed is that the US market has many more production points and pipeline services than the very limited numbers in the east coast market. There is no discussion in the discussion paper about the structure of the physical arrangements and how this might impact the secondary market; there is an implicit assumption that the lack of secondary trading is all due to the structure of the market rather than the structure of the physical supply arrangements which is limited to a very few production points that are not dedicated to the export facilities and a very few pipelines delivering from these to large points of demand.

  It must be noted that there are, in principle, no barriers to a financial secondary market being established if there was sufficient demand for hedging arrangements.

- **There is a professed view that the costs of the STTM and DWGM are too high.** What is not cited is that the current arrangements provide a transparent method for identifying the cost for the market being out of balance and a transparent approach to allocating the costs to the causer of the out of balance or how a simpler approach would still deliver the same transparency. Further, no one has identified what the costs are and to what level of cost a simpler approach might achieve without loss of transparency.

  As a very involved consumer energy advocate during the development of the DWGM and the STTM, the MEU is very much aware as to the cost impacts of providing a reference price, transparency and balancing. What is totally absent from the AEMC discussion paper is any assessment comparing the cost to benefit of the current arrangements compared to alternative arrangements. In particular, the MEU is very concerned about the value from savings that might be generated by a simpler balancing

arrangement compared to the loss of transparency and generating reference prices elsewhere.

The MEU considers that each of the different options needs to be assessed against these criteria that have been identified as aspects that have to be addressed.

2. Views on the AEMC concepts

The AEMC has proposed three concepts for gas markets to cover the east coast domestic market. What is missing for the three concepts are:

- Sufficient detail as to how the markets would operate
- Whether they are net or gross markets
- What the impacts of the operation of the export facilities will have on the domestic market concepts
- Whether regulation would apply to pipelines in each hub although it is implies that pipelines within a hub would be regulated
- Whether the pipelines would operate as market carriage or contract carriage
- Whether the balancing would revert to the opaque practices used before the introduction of the STTMs

With these points in mind, the MEU makes the following observations about each of the options

Concept	Description	MEU observations
1	**Multiple hub locations**: Gas Supply Hubs at Wallumbilla, Moomba, Longford, Iona and Gladstone all of which represent physical hubs. Balancing arrangements would be in place at the major demand centres in Adelaide, Brisbane, Melbourne, Sydney and potentially Canberra.	Option 1 removes the DWGM in Victoria and adds two demand hubs (Melbourne and Canberra) and four additional trading hubs - Moomba, Gladstone, Longford and Iona in SW Victoria - which would operate the same as the Wallumbilla supply hub. The STTMs are rebranded "Balancing platforms" and could be restructured into swing balancing as before the STTM concept was developed. o Gladstone is designated as a trading hub although it has no production facilities as such. Because the LNG export facilities might want to trade significant amounts of surplus gas at times between themselves and with the domestic market, there is some validity in making Gladstone a trading hub

		o The removal of the DWGM in Victoria raises the problem with the small amount of linepack available in the DTS. Will the balancing hub created have to have balancing more frequent than daily which will make this demand hub different to the others? o How are the demand points external to the Melbourne hub to be managed? o Will there still be a need for regulating the DTS which has more in common with a distribution network than other delivery systems to demand hubs? o There is no comment as to whether the existing balancing arrangements at the STTMs would remain or be changed o Price discovery would be at the trading hubs, but there is no discussion whether bilateral trades would be included or excluded. Excluding bilateral trades would deliver a similar outcome to the STTM price o Once the supply hubs start operating, there is an assumption the secondary markets would evolve yet the physical arrangements do not provide sufficient competition to ensure that the secondary market will evolve. This element needs more discussion and evidence that the physical arrangements will allow the evolution of a secondary market o Haulage to the balancing markets would be contracted separately. Presumably haulage on the DWGM would remain as a regulated service. The overall assessment of option 1 is that unless bilateral trades are included into the trading hub operation, the revealed prices will be much the same as at the current STTMs and will only assess the value of gas at the margin. The balancing hubs will be less transparent than the STTMs in identifying the

		costs of balancing and allocating equitably the costs of balancing to the causers. Issues with pipeline capacity trading, augmentation, hoarding, are not addressed, even implicitly. Based on the limited information provided, the MEU considers that the changes proposed would not deliver a benefit to overcome the detriments consumers would face when assessed against the status quo. In particular, the end users currently gaining a benefit from being within the DWGM and STTM would lose the flexibilities they currently have for limited (if any) benefit.
2	**Northern and southern virtual hub, with balancing at Adelaide and Sydney**: A new virtual hub in the northern region that encompasses the Roma to Brisbane Pipeline and current Wallumbilla hub (the 'northern hub') and a virtual hub in the south covering the Victorian Declared Transmission System (the 'southern hub').	Option 2 is basically a business as usual maintaining the existing arrangements with the conversion of the Brisbane STTM and the Wallumbilla supply hub into a single trading hub arrangement similar to the DWGM. o The northern trading hub could be readily converted to a trading hub as the Roma to Brisbane pipeline is already regulated (as is the DTS in Victoria) o Presumably the northern hub would be converted to an entry/exit price basis as is the DWGM o Price discovery would be using the DWGM and the Wallumbilla/Brisbane trading hub. These would still be net markets so the price discovery excludes the impact of bilateral trades o Trading between the northern and southern hubs would be complicated by capacity constraints on QSN pipeline but this already occurs. o Where is the price discovery for the "balancing platforms" at Adelaide

		and Sydney? Will this be based on the northern or southern hub price + transport or just the cost of gas used for balancing as occurs now? o Where is the price discovery for end users remote from the two trading hubs and the balancing platforms? Based on the limited detail provided, this concept is better than concept #1 as it retains the flexibilities of the DWGM and extends these to end users in Brisbane. However, the end users within the Adelaide and Sydney STTMs lose their flexibilities of operation and lose transparency in balancing. Price discovery is not enhanced although there might be increased price transparency in the new northern hub. Issues with pipeline capacity trading, augmentation, hoarding, etc, are not addressed, even implicitly, except for the new northern hub where presumably the new hub would operate like the DWGM using entry/exit pricing.
3	**Two large virtual hubs covering the east coast**: Concept 3 is an extension of Concept 2 and involves the establishment of a northern and southern virtual hub that, together, cover the entire east coast. This approach would not require separate balancing mechanisms at Adelaide and Sydney.	Option 3 creates two trading hubs with Moomba and everything south of Moomba in the southern hub and everything north of Moomba in the northern hub. o Price discovery is enhanced as there is greater competition for gas provision as each hub has multiple sources of gas o Transfer between the northern and southern hubs is still reliant on QSN o The principles underlying the expanded hubs presumably is predicated on some form of regulation of all pipelines as it would seem that the

		two expanded hubs would replicate the DWGM in many ways. This is not explained but is implied from the way option 2 is assumed to be based on regulated pipelines. o The concept of the trading hub is based on a gas price for the hub plus (presumably) transport entry and exit charges as occurs in the DWGM. o This concept has the added benefit that it could readily accommodate increased gas flows from the proposed gas pipeline from Northern Territory as an added provider and potential source of additional gas storage o The need for pipeline capacity trading becomes less important. Capacity hoarding is eliminated and barriers to new entrants are reduced. On balance, the MEU considers that concept #3 presents a preferred option for consumers of the three concepts proposed, although it must be stated that the limited detail provided on the three options makes a categorical preference somewhat difficult. The MEU considers that this option has the potential to deliver a better outcome for all consumers than the status quo but this would have to be demonstrated during the development of the detail.