Major Energy Users Inc.

Australian Energy Markets Commission

Stage 2 East Coast Wholesale Gas Markets and Pipeline Frameworks Review

Review of the Victorian Declared Wholesale Gas Market
Discussion Paper
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Submission by

The Major Energy Users Inc

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The views expressed in this document do not necessarily reflect the views of the Consumer Advocacy Panel or the Australian Energy Market Commission. The content and conclusions reached in this submission are entirely the work of the MEU and its consultants.

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1. Introduction

Major Energy Users Inc (MEU) is pleased to respond to the AEMC's Stage 2 review of the East Coast Gas Market. This current submission is in response to the AEMC's Discussion Paper, Review of the Victorian Declared Wholesale Gas Market (DWGM review).[1] The MEU has also provided separate responses to the other Stage 2 discussion papers.

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 and 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 manufacturing industries.

The MEU, which represents large industrial operations that employ many ordinary Australians, particularly in regional areas, made several submissions during the Energy White Paper process 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 manufacturing industries face due to higher gas prices and potential shortages in gas supply.

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] AEMC 2015, Review of the Victorian Wholesale Gas Market, Discussion Paper, 10 September 2015, Sydney.

1.1 About the MEU

The Major Energy Users Inc (MEU) represents the interests of large energy consumers operating on the east coast gas markets and in other jurisdictions. The MEU comprises some 30 large energy using facilities 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 served by the east coast gas markets (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 where the members operate.

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. The loss of supply effectively prevents the operations deliver the high products the members make for their markets. 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 production 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 domestic gas market operations on the east coast.

Elephant #1

> The domestic east coast gas market is dominated by a very few gas producers and very few gas production facilities. Adding to this, each gas production facility is served by a sole gas pipeline to transport the gas produced to each of the major domestic gas markets. Victoria is fortunate in that it has two significant sources of gas production - Bass Strait (dominated by Esso/BHP at Longford) and Port Campbell.
>
> Further, there are few providers of gas transmission services for the domestic east coast market, with APA Group having by far the largest holding of all of the east coast gas transmission pipeline assets. Because

it controls so much of the gas transmission services, the contractual arrangements for accessing capacity over much of the east coast gas transmission system are effectively determined by APA Group.

This domination by a very few of the production and transmission of gas on the east coast creates extraordinary challenges to develop a competitive gas market, and provides those few companies providing production and transmission services significant control and influence. Without some form of countervailing power to protect the interests of consumers, the current gas supply structure on the east coast limits the competition needed to provide economically efficient outcomes for consumers regardless of the market structures put in place.

Elephant #2

The domestic east coast gas markets are dominated by a small number of very large retailers which has resulted in them being the dominant shippers on the gas transmission pipelines. These large retailers have the ability to use their position in the markets to control the capacity of the gas transmission services. Because these retailers are so important to the gas transmission pipeline owners, there is a synergistic relationship between the pipeline owners and the large retailer/shippers which does not necessarily provide the most competitive outcome for consumers.

Supporting these views, the MEU notes that in a recent presentation on 17 September, ACCC Chair Rod Simms commented that:

"Indeed many aspects of the east coast gas market are opaque and complicated.

- The market is dominated by confidential, bi-lateral contractual arrangements which make price discovery almost impossible.
- Trading markets are immature and illiquid, with conflicting views as to their utility.
- At nearly all points along the value chain, the market is dominated by large players: be they gas producers and processors, pipeline operators or gas aggregators and retailers.

These types of characteristics have the potential to set a market up for the inappropriate exercise of market power."

MEU members have confirmed that they agree with the views expressed by the ACCC Chair as to what is occurring and which reflects the ability of a very few to set prices for gas at various points in the supply chain that unnecessarily inflates the cost of gas to domestic end users.

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

In its response to the AEMC stage 1 report process, the MEU provided views on the specific issues of the DWGM indicating that, on balance, there was no need for wholesale market redesign necessary. 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 the DWGM where improvements could be made but these do not require redesign. Despite these observations, the AEMC appears to be persistent in the need for redesign.

The MEU makes to following observations regarding various aspects of the east coast gas markets.

1.3.1 Contract carriage v Market carriage

In addition to not addressing the lack of upstream competition, the AEMC has also asserted a view that the contract carriage model has been generally considered to date to have resulted in timely and efficient investment in new capacity, whereas the market carriage model used in the DWGM has not provided the same level of timely investment.

The MEU challenges this assertion which is derived from the report to the AEMC in 2013 by K Lowe Consulting, *Gas Market Scoping Study*. In the Lowe report, the specific observation about the view that contract carriage provides better investment outcomes is made in contrast to supposed difficulties in gaining investment in the Victorian transmission network (the DTS) which operates under the market carriage model and the conclusion is drawn that the cause of the problem lies with the model of carriage used - market or contract. What is not highlighted in the report, was that almost universally, transmission pipelines operating in the east coast gas market under contract carriage are not regulated[2]. In contrast, the DTS is regulated and the augmentation of the DTS has to undergo both AER and AEMO assessments of the need for augmentation.

This means that the conclusion reached that contract carriage provides better investment signals could just as easily be a result of lack of regulation and/or the AEMO processes rather than the type of transmission control. As the Lowe report was based on stakeholder interviews there could be a clear bias that stakeholders were really responding to the perceptions of regulation on investment and/or the AEMO approaches rather than the type of carriage model used. It should be recognised that the electricity market uses the market carriage model

[2] In appendix A, the MEU draws attention to the recent news report from the US where, under contract carriage, major delays do occur. In comparison, the DWGM has not seen problems anywhere near like those referred to in the news article.

for energy transmission and there is no recommendation in the electricity market that market carriage should be replaced with contract carriage. The MEU therefore considers that greater investigation and more evidence than anecdotal stakeholder input (such the Lowe report is based on) is warranted to support the assertion.

The MEU also notes that the Lowe observations in table E.2 of its report (summary of stakeholder comments page x) under Victorian market carriage model:

> "In general stakeholders recognise that this model has a number of positive attributes but concerns have been raised about the timeliness and efficiency of investment in the DTS and the difficulties some have experienced in the past exporting gas via the DTS."

The MEU points out that the "difficulties" experienced in the past about timeliness and efficiency of investment is clearly a reference to the regulatory draft decision by the AER not to approve the augmentation of the Culcairn interconnect as a regulated augmentation and to gaining AEMO support for some augmentations of the SW Pipeline. The MEU points out that the AER decision was appropriate as the AER recognised that Victorian consumers should not have been required to pay for augmentations that do not provide value to Victorian consumers - an augmentation to provide greater export would have clearly been of no value to Victorian consumers[3].

What is also overlooked in the Lowe report is that, in the DTS, it is AEMO which identifies the need for augmentations and it has been demonstrated that AEMO actions have generally led to a DTS which has performed extremely well with regard to ensuring augmentations occur as and when required, despite there being some specific projects which might have seen some procedural delays.

MEU members have advised there are also instances under contract carriage where augmentations do not occur as and when required and that there are barriers to new entrants. This is a result of the contract carriage model tending to impose a requirement on the new entrant to underwrite the cost of the entire augmentation - a cost impost that actively militates against implementation of augmentation.

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[3] The MEU notes in the Lowe report that export of gas from Victoria should be funded by all users benefiting from the augmentation and that the AER was initially incorrect in not allowing the augmentation of the Culcairn interconnect. The MEU notes that in the electricity market, it has been recognised that importers of energy should contribute to the cost of the assets used in the exporting region that allow this import. However, under the Gas Rules, there is no similar provision so that (in the case of the Culcairn interconnect) there was no provision for NSW end users (the beneficiaries of the augmentation) to contribute to the augmentation made in Victoria and paid for by Victorian end users.

The MEU considers that the assumption that it is the contract carriage model which results in more timely investment is not proven and the AEMC needs to recognise this as it undergoes this stage 2 review.

A criticism made of market carriage is that, whilst capacity is provided on an as available basis to all shippers, when there is congestion, there are significant costs (eg uplift and ancillary payments) which are usually not known until ex post. Equally, in contract carriage there are significant charges for over-running firm capacity which apply regardless as to whether there are constraints or not[4]. Whilst over-run charges are set at known levels, the frequency and extent of over-runs is unknown meaning that overall, over-run charges are also unknown. Few shippers are aware of an over-run until ex post so the cost of over-runs is only known ex post, just as in market carriage. So to assert that market carriage results in unknown (and at times significant penalties) and contract carriage does not, does not reflect the realities.

1.3.2 Gaining new capacity in a contract carriage model

The MEU notes that under contract carriage, the pipeline owner allocates capacity based on a queuing methodology usually where the first in the queue is assessed on when the application for capacity is made[5].

The most efficient method for allocating capacity on monopoly assets is by allocating capacity to the shipper that values it most, rather than capacity being allocated on an arbitrary basis set by the pipeline owner. By allocating capacity on the value of the capacity to shippers and potential shippers provides a clear signal as to when augmentation is required. Allocation on any other basis does not provide a strong signal of the need for augmentation. An auction of the available capacity is a common approach to identifying which shipper values the capacity the most and to what value. This mechanism provides a clear value of the capacity provided and identifies whether augmentation is warranted and to what amount. Yet auctioning capacity is not common practice on the east coast.

Under the current approaches used in contract carriage, the signal for new investment is obtained when a new entrant advises that it will

[4] It needs to be recognised that contract carriage imposes over-run charges regardless as to whether the over-run caused congestion or not, so there is a cost for over-runs under contract carriage, potentially even higher than the costs of over-runs under market carriage

[5] See for example the queuing requirements issued by NT Gas (an APA Group subsidiary) for access to the Amadeus gas pipeline. The Amadeus Gas Pipeline Access Arrangement Revision Proposal section 2.2.4 explains how capacity is allocated and is available at http://www.aer.gov.au/system/files/Amadeus%20Gas%20Pipeline%20-%20Access%20Arrangment%20revision%20submission%20%20-%20public%20-%20August%202015.pdf

underwrite the augmentation. By allocating all of the costs to the new entrant provides a financial barrier to new entrants.

The MEU points out that in a market carriage model, such as augmentation of energy transmission in the NEM, the need for augmentation is based on assessments of identified need for all shippers, and not just the new entrant shipper. The cost of the augmentation is then allocated to all shippers so that all shippers ultimately benefit from greater utilisation of all the assets used in delivering energy to end use points.

1.3.3 Natural monopoly pipelines

In its submission to the ACCC east coast gas review, the MEU provided first hand experience of attempting to get a natural monopoly pipelines "covered" and subject to regulation. The experience demonstrates clearly that the coverage provisions in the Gas Rules (and Gas Code) are totally inadequate for the purpose of preventing monopoly rent seeking and provide no protection at all for consumers.

The MEU notes the reports to the AEMC from Incenta and Castalia that both point out that the rules for gaining coverage of monopoly pipelines are probably insufficient for the task. The experience of MEU member Kimberly-Clark Australia (KCA) in attempting to gain coverage of a monopoly pipeline in South Australia certainly supports the views expressed in the two reports that the rules for gaining coverage are not fit for purpose, particularly where the owner of the pipeline is not involved in upstream or downstream activities (the focus of the coverage test criterion (a)) and yet is willing to provide access to the asset, albeit at a price including monopoly rents. This even applies where the asset clearly provides a monopoly service where it would be uneconomical to duplicate the asset in order to break the monopoly.

1.3.4 Capacity hoarding

The MEU agrees with the AEMC that there is limited capacity trading on the east coast and it is probable that this is a direct result of the lack of a transparent and readily accessible market for capacity trading.

The MEU also points out that the lack of capacity trading is also impacted by capacity hoarding and MEU members have seen the outcomes of this first hand where spare capacity is not made available as this would result in greater competition[6] to the shipper(s) holding the capacity. The MEU has provided advice to the ACCC east coast gas review regarding such activities in response to its review of the east coast gas market.

[6] Particularly in downstream markets

Allocation of AMDQ to end users (as in the DWGM) prevents retailer/shippers from hoarding capacity and, by allowing the easy transfer of capacity to new retailers, prevents capacity hoarding as a tool to limit downstream competition

2. Overview of aspects of the Discussion Paper

The MEU understands that, in tasking the AEMC to undertake a review of the East Coast Gas Market, the CoAG Energy Council is seeking to specifically facilitate: [7]

- Liquid and competitive wholesale spot and forward markets – as tools to manage risk;
- Access to markets through more harmonised pipeline capacity contracting arrangements – flexible, comparable, transparent and non-discriminatory;
- Harmonised market interfaces – facilitating trade between regions;
- Development pathways to improve interconnectivity between supply and demand centres.

Unlike the other elements of the East Coast Gas review, however, the review of the DWGM was initiated by the Victorian Government following the recommendations set out in the 2013 review of gas supply options in Victoria.[8] This review recommended (inter alia) that the Victorian Government request the AEMC, in consultation with AEMO, to undertake a "thorough review" of the DWGM with the objective of ensuring arrangements for access to pipeline capacity promote:

- Competition in the gas market;
- Risk management by market participants; and
- Appropriate investment signals and incentives.

The CoAG Energy Council subsequently agreed that the review of the DWGM should be incorporated into the overall review by the AEMC of the East Coast Gas Market. In this context, therefore, the AEMC's review explicitly links the DWGM review with its overall review of the east coast gas supply issues and with the CoAG Energy Councils "Vision" for future Australian gas supply as summarised above.

This approach raises an important issue for any assessment of the DWGM and the options for its future development. In particular it highlights the importance of distinguishing between:

- A review of the DWGM that has a focus on its effectiveness in delivering a safe, secure and reliable supply of gas to Victorian consumers including encouragement of new gas production, pipeline investment and retail competition within Victoria; and

[7] Adapted from the COAG Energy Council Gas Vision statement and from presentation by Mark Feather, Executive Director, Energy Sector Development Branch, Victorian Department of Economic Development, AEMC East Coast Wholesale Gas Market and Transmission Pipeline Frameworks Review, AEMC Public Forum, 25 February 2015, Sydney.
[8] Victorian Gas Market Taskforce, Final Report and Recommendations, October, 2013, Recommendation 16.

- A review of the DWGM in the context of the overall efficiency and reliability of the competitive supply of gas to the east coast demand centres.

The AEMC has also acknowledged the importance of linking the AEMC's east coast gas review with the concurrent inquiry by the ACCC into Eastern and Southern Australian wholesale gas prices.[9] The ACCC Inquiry is due to report to the Commonwealth Government by April 2016.

The MEU welcomes this linkage. Our long standing position is that the major problem with east coast gas supply is the lack of competition in upstream gas production and the difficulties this poses for large users of accessing competitive gas supply contracts. The MEU is also concerned with the issues around the access to and cost of gas transportation from supply sources to demand centres, particularly those outside Victoria.

In particular, as noted in section 1.2 above, the MEU considers that the benefits of the AEMC's Stage 2 investigations into the wholesale market structures (such as the DWGM and the STTM) will be limited unless the fundamental issues of upstream gas competition and access to pipeline capacity are addressed.

Moreover, the MEU is strongly of the view that addressing the issues of upstream gas competition and pipeline access is likely to drive the enhancements in liquidity of the downstream markets that the AEMC and the CoAG Energy Council see is an essential element of the review.

It is our view that liquid secondary markets will evolve if/when there is a need for them to do so. While upstream competition is limited[10], and access to pipeline capacity constrained by long-term contracting, the "push" for secondary markets is minimal (other than balancing markets). If, however, multiple suppliers emerge then competition amongst suppliers and users will create the demand for a more liquid secondary market in both gas supply and capacity.

In this regard, the MEU points out that the DWGM is showing signs of greater liquidity in the market as additional points of production in Victoria are brought into the Victorian market. The MEU is also aware that increasing numbers of end

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[9] The ACCC's Inquiry was directed by the Commonwealth Government in April 2015 pursuant to subsection 95H(1) of the *Competition and Consumer Act 2010,* and is due to report to the Commonwealth Government by April 2016. The focus of the ACCC Inquiry is on the availability and competitiveness and transparency of gas supply; access to gas production, gas processing and gas transportation and barriers to entry in the upstream production sector. See also http://www.accc.gov.au/system/files/ACCC%20gas%20inquiry%20-%20signed%20letter%20and%20notice.pdf

[10] For example, the MEU points out that the SA regional electricity market in the period 2008-2010 exhibited significant illiquidity but this was not caused by a flaw in the market arrangements but was a direct result of market power being exercised, permitted by low competition at the point of production.

users are using the DWGM as a source of gas in addition to longer term contracts they have direct from producers and retailers.

This highlights that it is multiple sources of gas that increases trade in the secondary market rather than any other aspect.

In addition, the developments of new sources of production are supported by greater facility for new upstream or downstream entrants to access pipeline capacity on the Victorian Declared Transmission System (DTS)[11] without the risks of entering into long-term capacity contracts.

[11] The DTS includes the following pipelines: Longford to Melbourne; South West Pipeline from Iona to Brooklyn (SWP), New South Wales interconnect, and the Western Transmission System.

3. The Victorian DWGM

3.1 The conceptual basis for the DWGM

As the AEMC notes, the Victorian DWGM is the first wholesale gas market established in Australia and, in the language of the AEMC, the DWGM is still the only "virtual hub" market. Around 1.8 million customers interact directly or indirectly (through a retailer) with the DWGM and some 220 PJ of gas per annum transacts through the DWGM.[12]

The design of the DWGM reflects the Victorian Government's focus on establishing a competitive upstream and downstream gas market as a central component of the restructure and privatisation of the Victorian gas industry undertaken in the late 1990s.

However, the DWGM design also reflects the contractual realities of the time, namely a single major gas producer (ESSO/BHP joint venture partners authorised to trade as a single entity), with a single source of gas supply (from Longford in Gippsland).

Importantly, and often underestimated, the design of the DWGM and the Declared Transmission System (DTS) arrangements reflect the physical realities of the existing Victorian gas transmission and distribution networks.

In particular, the MEU would highlight:

- The reluctance of the ESSO/BHP partners to separately contract with the new privatised gas retailers (initially all Government owned but later privatised) spawned from the Gas and Fuel Corporation. This decision by ESSO/BHP not to trade led to the creation of Gascor as an intermediary contractual body "on-selling" gas to the new retailers;
- The limited line pack in the Victorian gas transmission system;
- The intermeshed nature of the Victorian gas transmission and distribution systems;
- Highly seasonal nature of demand, and intra-day swings in demand;
- The importance of storage, including LNG, for system security given the daily swings in demand and limited line pack.

The complexity of the Victorian physical network was highlighted in a 2012 paper by Larry E Ruff, one of the experts involved in the initial design of the Victorian DWGM and DTS arrangements[13]. In this paper, Ruff argues that "commercial capacity rights" are not appropriate in complex networks such as the Victorian

[12] AEMO, "Overview of Australia's Energy Markets", http://www.aemo.com.au/About-AEMO/Services/Market-Development
[13] Ruff, Larry E, "Rethinking Gas Markets – and Capacity", available at http://www.marketreform.com/wp-content/uploads/2013/11/LERuff-EEEP-Final-02Jul12.pdf

network. He characterises the Victorian network as follows (page 2 of the Ruff paper):

> "[The Victorian transmission network] takes gas from several, widely-separated injection points to more than 100 withdrawal points, with storage facilities and interconnections that can be injection points one day and withdrawal points the next, multiple laterals interconnected by a large ring, gas flows that can reverse direction from day to day or within a day, volatile weather that can cause the mostly-residential demand to change significantly and unpredictably from day to day and during the day, and little linepack that must be managed carefully to deal with the unpredictable swings in demand from day to day and within days."

The DWGM/DTS arrangements were designed to specifically cater for the complexity of the Victorian network. The MEU considers that the AEMC must take much greater account of this physical complexity before it seeks to replace the DWGM/DTS arrangements with arrangements that include the allocation of capacity rights across the Victorian gas market (including AMDQ) or the proposal to replace the DWGM with supply hubs and a balancing arrangement at Melbourne[14].

In particular, the AEMC would need to demonstrate there is a real **and compelling** issue around investment signals and futures market in Victoria that overrides the risks for deliverability, costs and competition that a capacity market would introduce. The AEMC's discussion papers to date do not provide such a compelling case.

3.2 Benefits of the DWGM/DTS Arrangements

The MEU recognises that there are a number of limitations in the DWGM as it currently operates (see section 3.3 below). However, we also acknowledge that the DWGM has generally performed well in providing a competitively priced, reliable gas supply to all Victorian consumers and has in large part successfully adapted to the changes in the demand/supply arrangements in Victoria including the connection of new system injection and system withdrawal points and the conversion to intra-day trading.

For instance, the DWGM, and the associated transmission arrangements for the Declared Transmission System (DTS) have:

- Provided a secure and reliable supply of gas to Victorian consumers; particularly since the 2009 changes to the market design allowing intra-day trading;
- Adapted to, and supported the entry of new sources of gas supply into the market;

[14] Eg as proposed in concept 1 from the Discussion Paper on Wholesale gas markets

- Supported the entry of new gas retailers into the downstream gas retail market;
- Enabled interstate movement of gas (albeit limited to date) including development of two way flow capability at key points in the northern section of the DTS (Culcairn interconnect);
- Provided transparent pricing arrangements for transmission services (via the AER regulatory determinations);
- Provided transparent spot pricing of gas, with prices that are largely responsive to the demand and supply conditions in the market;
- Provided independent and transparent rules based market governance arrangements (through AEMO);
- Provided independent and transparent forecasting[15] and information services, including information relevant to transmission planning and gas supply adequacy (through AEMO);
- Enabled large users to directly participate in the gas wholesale market and have access to transportation services.

The DWGM arrangements, supported by AEMO's forecasting and planning activities, have also facilitated expansions of the Victorian gas transmission system capacity to provide more secure and diverse supply of gas to Victorian consumers.

Examples include the Corio looping and additional compression at Winchelsea, which have both supported additional gas supply into western and southern reaches of Melbourne and districts, as well as providing greater security of supply to all consumers and less congestion.

In addition, the DWGM has worked well in conjunction with private investment, enabling the development of the EGP, SEAGas, VicHub, TGP and the expansion of the Victorian-NSW interconnect, all of which have enabled greater interstate export in gas from Victoria.

The winter of 2015 provided an example of the successful expansion and management of the gas transmission system in the face of a 1 in 20 year winter weather conditions. AEMO reports that "declared transmission system" (DTS) cumulative demand for winter 2015 was 10% higher than 2014. In its review of Victorian winter supply and demand in 2015, AEMO noted that:[16]

> "We had a record peak system demand of over two million standard cubic metres per hour, together with three days in a row of total demand (includes Gas Powered Generation) of 1,150TJ and nine consecutive days and a total of 14 days of more than 1,000 TJ of system demand in July. Historically, this would

[15] For example, AEMO's annual Gas Statement of Opportunities (GSOO), and the National Gas Forecasting Report – Victoria.
[16] Matthew Clemow, AEMO Senior Manager – Gas Real Time Operations. Cited in AEMO Newsletter, August 2015.

> have put immense pressure on the system with the potential loss of gas supply to the outer extremities of the distribution networks, however in 2015 we have not seen any pressure breaches within the system."

A further important feature of the DWGM relates to access to transmission capacity and the cost of this access.

In the DWGM, as the DTS is a covered pipeline, the overall revenue to the pipeline owner is set by the AER through the regulatory processes including public consultation. As such, transmission pricing is transparent and all authorised shippers on the pipeline are subject to equal prices for equal injection and delivery points.

Moreover, the pipeline owner or retailer/shippers do not control access to capacity on the pipeline, thus reducing the opportunity for monopoly pricing and capacity hoarding. In particular, it is the customer/user who (in large part) is allocated the capacity/withdrawal rights (through allocation of AMDQ). Thus, the customer is in control, and is able to change between different retailers, or take direct supply from the Victorian market without the challenges faced by consumers in other regions subject to the contract carriage model of transport[17].

When there is no constraint on the pipeline, all shippers can have access to the pipeline at the regulated transmission tariff rates. When the pipeline is constrained, the consumers' AMDQ rights provide a form of protection to a retailer (or the market customer). If the customer changes retailer, the AMDQ rights attached to individual customers are "transferred" by the consumer to its new retailer, avoiding the problems seen in other regions of hoarding of pipeline capacity by some shipper/retailers. In other words, AMDQ process ensures that the consumer has some control over who provides gas to them.

Both the certainty and transparency of transmission pricing and the "ownership" of AMDQ by the user/consumer, facilitates the development of upstream and downstream competition. This is because they both act to reduce the risks to new entrant shippers and new entrant retailers as well as providing more assurance of access to key pipeline connection points for new producers.

At the same time, the owner of the covered pipeline (such as the DTS) is assured of a reliable stream of revenue through the AER's regulatory process. In general, the regulatory processes in Australia provide a favourable environment for investors[18]. The greater diversity of customers and overall reduction in revenue and cash flow risks also reduces the cost of capital for the pipeline owners.

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[17] These challenges are more fully detailed in the MEU response to the AEMC Discussion Paper on pipeline regulation and capacity

[18] As is evidenced by the keenness by investors to acquire regulated energy transport assets

3.3 The limitations and risks of the DWGM

Despite its success to date, the MEU considers that there are a number of limitations with the DWGM "virtual hub" market that need to be addressed over time. However, we do not advocate wholesale and/or rapid change in the market structures as the DWGM has performed comparatively well over time and has been able to adapt readily to the entry of new sources of production and changing gas usage.

The AEMC's paper has identified a number of areas where it considers there is additional risk in the DWGM. These are similar to the risks identified in the original Victorian investigation into the Victorian gas market. They include:

- Concern that the "spot price" of gas in the DWGM is not sufficiently reflective of the real cost of underlying gas contracts;
- The lack of a liquid and transparent secondary market including the lack of risk management tools such an active futures market;
- Exposure to unhedgeable risks through uplift charges that may be allocated to shippers/users even when they are not the cause of the congestion causing the constraint;
- The difficulties faced by shippers and large users in transferring gas from south to north (specifically from the Victorian DWGM to the NSW STTM) market and from north to south;
- The limited signals for investment in the transmission pipeline.

The MEU considers that these criticisms of the DWGM require a more critical examination by the AEMC. For example, the MEU would highlight the following:

- With respect to the gas market "spot price":
    - The MEU is aware that increasing numbers of larger gas consumers are sourcing varying quantities of gas directly from the spot market and so are only paying the revealed spot price. The MEU is aware of some end users are looking to source all of their gas requirements from the DWGM spot market.
    - This development reflects a view that the "spot market price" is a reasonable indication of the underlying physical contracts, particularly taking into account the winter spot price should reflect recovery of the cost of MDQ "insurance" (such as gas storage contracts). Such price signals are important to signal the need for any additional contractual flexibility or storage facilities.[19]

[19] Storage facilities create value by injecting gas when the price is low and withdrawing it when the price is high. The variability of spot prices (or AMDQ) is crucial to the profitability of such investments. This applies to both the spread between summer and winter prices in Victoria as well as shorter-term price volatility. See also: Ofgem, *Wholesale Energy Markets in 2015* 9

- In this sense, it is little different than the electricity spot price, in that the price in the NEM does not necessarily reflect individual contract positions of the generators or the retailers/consumers. If it is acceptable that the spot price in the NEM is not representative of the "true" cost of generating electricity[20], the MEU questions why the same approach is not acceptable for gas?
- The DWGM spot price is a “pure” gas price in that it does not include transportation costs. This allows consumers to compare price offers from other providers. In contrast, the STTM balancing market in contract carriage models reflects (to varying degrees), the cost of gas and transportation costs from producer to demand centre. That is, it includes two separate and generally unknown components (on the basis that most gas transport outside Victoria is now via an uncovered pipeline).

- Unhedgeable risks (uplift):

  - The MEU believes that uplift payments were a significant risk in the original market design. However, this risk has been substantially reduced following the introduction of intra-day trading in gas,
  - Additional capacity/compression investment on the south-west and northern pipelines has significantly addressed both localised and general congestion issues.
  - There is increased awareness by participants of the need for appropriate physical hedging for gas supplies e.g. through entering into additional storage agreements.
  - It would also appear that AEMO’s ability to forecast and manage gas flows throughout the network (including assessments of line-pack) has improved over time, reducing the risks of “surprise” uplift.
  - While the uplift arrangements do not allocate costs perfectly to the agent causing the uplift, this problem exists to various extents in all balancing arrangements (e.g. through out-of-balance penalties on pipelines operating under a contract carriage model) – the difference being that in the DWGM “virtual market”, the penalties only apply when there is a constraint. Generally out of balance penalties under contract carriage apply irrespective of whether there is a constraint on the system or not (the MEU has made comment about this in section 1.3.1 above).
  - Given the very small amount of uplift that has occurred in the DWGM since the changes described above were implemented, it is reasonable to conclude that the revealed spot price is a reasonable

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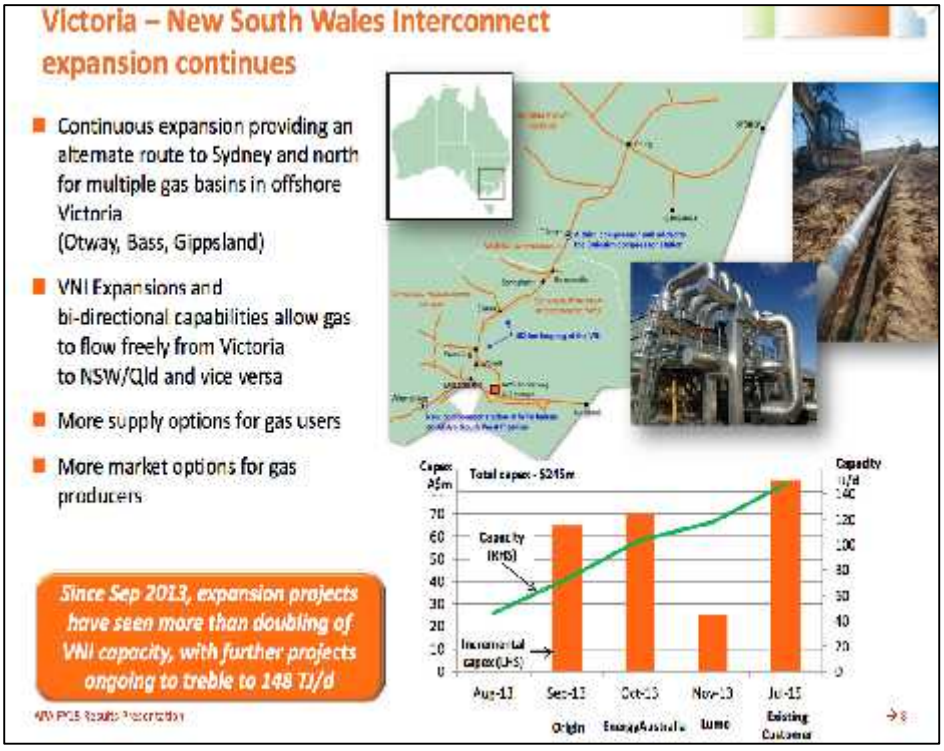
September, 2015, p 43 available at https://www.ofgem.gov.uk/sites/default/files/docs/2015/09/wholesale_energy_markets_in_2015_final_0.pdf

[20] The "true" cost of electricity is probably more related to the hedge arrangements between generator and retailers than by the spot market

basis for a futures market if/when that is required by participants to manage risk.

- Investment signals:
    - In practice, there have been relatively few incidences of significant constraints in the DTS, indicating that the perceived issue of lesser signalling for new capacity might be overstated[21]
    - The system has responded to constraints on the South West gas system in an efficient and effective manner and has prioritised additional compression before additional pipeline investment, as a more economically effective approach to constraints (in most instances);
    - While there were specific concerns raised about investment in expansion of the Culcairn interconnect, ultimately this investment did occur and was largely funded by the private sector rather than socialised across all Victorian consumers. The MEU believes this is the correct outcome as there was no justification for expansion based on Victorian consumption needs. Figure 1 below illustrates the growth in capacity on the Victorian-NSW interconnect (VNI).

Figure 1: APA Victorian Network & Current Expansion of the VNI.



Source: APA, *FY 2015 Results Presentation,* 26 August 2015, p 8.

[21] The MEU is aware that there was specific concern raised about building more capacity to increase export through Culcairn, but the MEU questions why Victorian consumers should fund augmentation to provide gas transport for NSW consumers.

In Summary, the AEMC has not made a case for the need of significant change in the DWGM based on the operation of the DWGM over the last few years, including the most recent 1 in 20 winter period.

However, that still leaves open the question of whether the design of the DWGM is sufficiently robust to ensure a continued reliable supply of efficiently priced gas to Victorian gas shippers and end users. The MEU considers that the Victorian DWGM has proved to be resilient despite significant change, and the MEU has no reason to consider that the DWGM resilience will not continue despite future changes.

3.4 Future Risks

The AEMC's Stage 1 investigations of the East Coast Gas Market has identified that the advent of large scale LNG processing from 2016 will change the physical and financial dynamics of the east coast gas market.

Not only will the LNG market lead to a huge and rapid increase in demand for gas from the Queensland CSG fields, it will create significant pressures on other and, hitherto, stable gas markets and transportation systems in NSW, Victoria and South Australia. Not only will overall capacity on the pipelines be tested, but the need to ensure capability for two way flows will require additional investment.

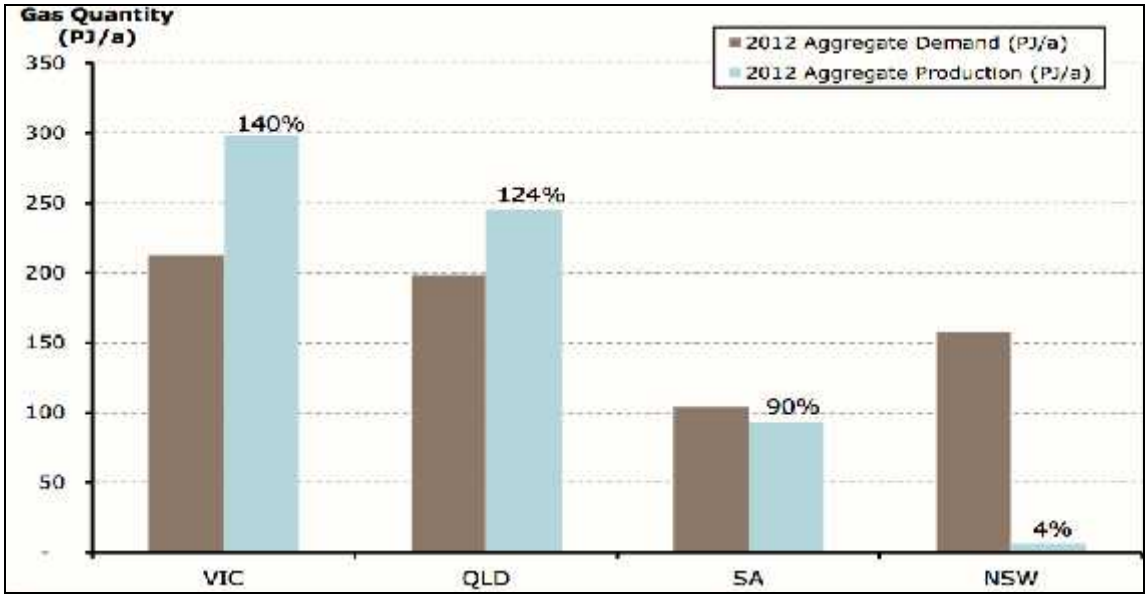
Exacerbating these challenges is the failure of both the NSW and Victorian governments to develop a clear and consistent policy on the development of on-shore unconventional gas production. In particular, NSW has a clear mismatch between its demand for gas and "local supply", meaning that NSW users will need to compete directly with Queensland and Victorian consumers for access to gas.

For example, Figure 2 below illustrates the supply-demand balance in 2012. At that time, both Victoria and Queensland had a surplus of production over demand. Additional gas supplies from Victoria and via Cooper Basin readily addressed shortfalls in indigenous supply in South Australia and NSW.

However, by 2017-18, Queensland demand is expected to increase from around 200 PJ to some 1700 PJ (including LNG). Figure 3 illustrates this rapid change.

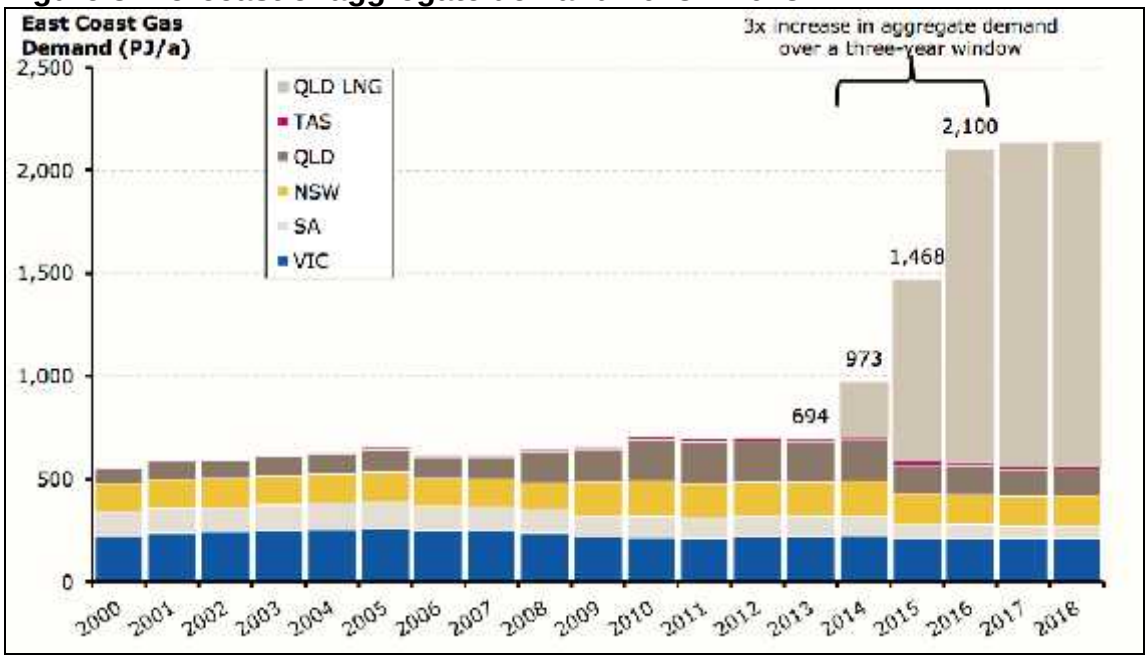
Despite expected small declines in gas usage in other states (particularly for gas generation), the pull on interstate supplies during the LNG filling and push of surplus Queensland supply during LNG surplus is likely to be disruptive to all markets.

Figure 2: Aggregate gas production and gas demand (PJ/annum)



Source: AGL, "CoAG gas market vision", February 2015, p 7. Presentation to AEMC's, East Cost Gas Public Forum, February 2015. http://www.aemc.gov.au/Markets-Reviews-Advice/East-Coast-Wholesale-Gas-Market-and-Pipeline-Frame/Initiation/Public-forum-presentations/AGL

Figure 3: Forecast of aggregate demand 2018 – 2018



Source: AGL, "CoAG gas market vision", February 2015, p 4. Presentation to AEMC's, East Cost Gas Public Forum, February 2015.

The MEU has been identifying this as a major issue for large industrial and commercial customers for several years and has provided considerable evidence to various government bodies on the potential impact of this on the future viability

of these businesses. We have provided numerous case studies of consumers having difficulty in getting access to firm long-term gas supplies at a reasonable price, requirements that are essential if these firms are to continue to invest in production in the future.

While this issue has been recognised by CoAG Energy Council and others for some time, real, timely and effective action to address these issues has been distinctly lacking. As stated previously, the MEU considers the critical elements of regulatory reform are:

- Enabling a more competitive gas supply market, including the break up of joint marketing arrangements that reduce competition in gas supply;
- Dismantling the unequal and preferential access to transportation, and the ability of incumbent shippers to hoard capacity;
- Use it or lose it rules around the holding of exploration and development tenements;
- Amending the current arrangements under the Gas Law that relate to decisions on whether a pipeline should be covered or uncovered.

To these, the MEU would add:

- The importance of the ACCC's decisions with respect to further consolidation of the upstream gas producers (eg the merger of Shell/Arrow and BG), r revocation of joint marketing authorisations (eg at Moomba) and gas transmission/storage ownership;[22]
- Stronger capacity for the ACCC to investigate monopoly conduct in the upstream gas production and transportation markets;
- Increased transparency, particularly outside the DWGM/DTS markets
- Specific facilitation of capacity trading markets (noting that the reforms listed above will also promote capacity trading)
- Consideration of the future role of gas powered generation in the electricity market to provide reserve services given the growth in renewable energy from wind and solar.[23]This role will require, inter alia higher ramping capabilities, which can provide additional stress on the gas network particularly when there is limited line-pack.

[22] The MEU is aware that the application by APA Group for ownership of the Iona gas storage facility did raise competition concerns by the ACCC. The acquisition of the Iona storage facility by QIC maintains the current levels of competition.

[23] As renewal energy grows as a proportion of total energy, the overall system stability will increasingly require access to fast ramping and reserve services. Assessment in the European market suggest that gas plants conceived as merchant plants when built will increasingly be used as system stability plants, providing secondary reserves. To provide this service, gas plants will need to "synchronise over multiple hour timescales while they are not system price makers". See for instance, Professor Pantelis Capros, "Capacity Remuneration Mechanisms Delivering Flexibility to Integrate Renewables in Europe". Presentation to the 12th International Conference in the European Energy Market, Lisbon, May 2015. http://www.eem15.com/images/junho2015/Pantelis_Capros.pdf

Whilst there is an expectation that the massive increase in demand for gas in Queensland will impact the east coast gas market, the AEMC has not identified any aspects of the DWGM that indicate it does not have the flexibility and capacity to operate under the expected future changes facing the east coast gas market.

4. Potential Reforms of the DWGM: General Comments

Given the challenges to the east coast gas market listed above, the MEU believes it is appropriate to review the market structures, including the DWGM. However, we do so with two caveats:

- Changes to the market design of the DWGM, the STTMs and Wallumbilla gas hub are important but are also secondary to, and should not distract from, the overwhelming need to improve competition in upstream supply and to reduce the monopoly power of transmission pipeline owners on uncovered pipelines along with the risk of capacity hoarding by shippers;
- More specifically, the DWGM and the DTS arrangements have served Victorian consumers with a reliable supply of gas and enabled increasing competition both upstream and downstream. Any changes to the DWGM and the DTS arrangements arising from increased LNG demand and/or an idealised east coast gas market, should not disadvantage Victorian gas consumers relative to the service they currently receive from the DWGM.

Therefore, the MEU does not accept any changes to the DWGM that:

- Compromise the level of existing services to Victorian customers, including the level of competition (upstream and downstream), the level of gas supply reliability, open access to the DTS, independent information provision and forecasting on gas supply and DTS capacity (all as provided by AEMO) and the overall governance structures;
- Increased costs of transportation services to Victorian customers particularly if/when additional investment is required to support the export of gas from Victoria;
- Provide a mechanism that implicitly or explicitly increases the market power for APA GasNet, as the owner of the DTS pipeline in Victoria; noting also:
    - The additional threat posed by APA GasNet's ownership of the key Iona processing and storage plant[24];
    - Potential for APA GasNet to seek removal of coverage on the Victorian DTS.

After considering the five options proposed by the AEMC for reform of the DWGM, the MEU is therefore strongly in favour of progressive development of the DWGM, providing this development is undertaken to service the interests of Victorian consumers and is undertaken in conjunction with all Victorian gas users.

The MEU considers, for instance, that the AEMC has appeared to place too much weighting to date, on the views of those from the pipeline industry despite

[24] Although the sale of the plant to QIC removes this risk at this time, there is always the future potential that more and more gas assets to become part of the APA Group fleet

their relatively poor past record of responding to both policy developments seeking greater competition in the gas markets and acting in the interests of shippers, retailers and consumers.

The focus of reform of the DWGM should be based on the following:

- Enhance the governance/rule change arrangements to improve responsiveness to changes in the market, particularly given the unpredictability and likely speed of these changes;
- Simplifying and make more transparent, the processes for allocation of AMDQ and AMDQ cc, and to provide opportunities for trading AMDQ (including opportunities for "D tariff" users to trade AMDQ allocated to their sites and for market participant users to trade AMDQ cc);[25]
- Ensuring that access to the Culcairn interconnect elements that provide service to Victorian consumers is not restricted given that, while recent expansion of capacity has been funded by shippers, the initial investment in capacity was funded by all Victorian gas users;
- More generally, ensuring that transportation across the VNI and other exit points is facilitated by measures such as alignment of the gas day and enhanced co-ordination in managing forecasting and operational gas flows between APA (NSW) and AEMO (Victoria);[26]
- Investigating approaches that might simplify and therefore encourage direct participation in the DWGM by end users;
- Assessing whether the DWGM price cap of $800/GJ is set at the correct limit given the two competing requirements of encouraging new entry into the market (including by direct users) and encouraging investment in additional supply, particularly storage, line pack and compression as a result of new interstate demand and potential flows back into Victoria; and
- Assessing the impact of additional private investment in expansion of facilities to meet interstate demand from Victoria, and whether such investment will challenge the principal of equal access to the DTS and/or expose the investor to the so called "free rider" effect. .

The following section (section 5) sets out the MEU's response to the specific proposals set out in the AEMC's discussion paper.

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[25] AMDQ was allocated to D tariff (demand tariff) consumers at market start based on their demand at the time. Large consumers who are market participants can, in principle, purchase at auction additional AMDQ cc.

[26] The MEU notes that in June 2014, AEMO addressed a potentially important issue on the VNI, by establishing a requirement to have and hold firm capacity rights on an interconnected pipeline before making or hold AMDQ transfers or nominations at that system point. This addressed a risk of using AMDQ to hoard capacity at the interconnect system point. See for instance, http://www.aemo.com.au/Gas/Metering-and-Settlements/Victorian-Declared-Wholesale-Gas-Market/Authorised-Maximum-Daily-Quantity-AMDQ##forms

5. Potential Reforms of the DWGM: Specific Comments

As stated at the outset of this submission, there are two primary issues to consider. That is, what reforms are needed to enhance the operation of the DWGM per se, and what reforms are needed in light of the potential challenges from the threefold growth in gas demand driven by the Queensland LNG projects.

The MEU has argued above that the focus of change should be on reforms to encourage competition in the upstream markets and access to capacity on the transmission pipelines. With respect to the DWGM, however, the MEU considers that gradual reform at minimal cost to Victorian consumers - noting that it is Victorian gas consumers for whom the DWGM must deliver reliable low cost gas - is the most appropriate response. The MEU considers that transparent, liquid secondary markets for gas and AMDQ can, and will, emerge when required by users of the DWGM as there is no institutional barrier currently existing to the emergence of such a market, particularly as it is a commodity only market.[27] As more competition occurs at the production end of the supply chain, so to will there be an increase in secondary market liquidity provided there is pipeline access. The DWGM has seen increased production competition and at the same time has seen increasing numbers of users enter the DWGM. This supports the MEU view that gradual change as needed will achieve the goals of the CoAG Energy Council, without the need for major change.

In support of this, the MEU notes the experience of the National Balancing Point (NBP) in the UK gas market. The NBP is also a “virtual gas market” and operates under broadly similar principles to the DWGM (rather than contract carriage). As additional sources of supply into the UK gas market developed, so did a liquid futures market for short and long term requirements evolve. There is no reason that a similar outcome will not occur in the DWGM.

5.1 The AEMC’s five packages of reform

The AEMC has identified five packages of reform to address the issues the AEMC considers have or will occur within the DWGM. The packages vary in terms of the degree of complexity and cost to implement. They are:

- Package A: Targeted Measures;
- Package B: Simplified DGM pricing mechanism and transmission rights;
- Package C: Zone-based pricing and capacity rights;
- Package D: Entry-exit model; and
- Package E: Hub and spoke model.

[27] In contrast, prices at the STTM are based on delivered price of gas, that is, it includes a component of transportation costs in the offered price.

Figure 4 provides an overview of these five packages organised under the headings of “market improvement”, “market development” and “market reform”.

Figure 4: AEMC’s high-level packages for reform of the DWGM

<table>
<tr><th colspan="1">Market improvements</th><th colspan="2">Market development</th><th colspan="2">Market reform</th></tr>
<tr><th>Package A
Targeted measures</th><th>Package B
Transmission rights</th><th>Package C
Capacity rights</th><th>Package D
Entry/Exit model</th><th>Package E
Hub & Spoke model</th></tr>
<tr><td>Targeted transmission rights</td><td>Simplified pricing mechanism</td><td rowspan="4">Zone-based pricing and capacity rights</td><td rowspan="4">Entry/Exit model</td><td rowspan="4">GSHs at Longford and Iona and balancing in Melbourne</td></tr>
<tr><td>Trading of AMDQ rights</td><td rowspan="3">Transmission rights</td></tr>
<tr><td>Clearer AMDQ allocation process</td></tr>
<tr><td>Review planning standard</td></tr>
</table>

Source: AEMC, Victorian DWGM Review – Discussion Paper, 10 September, p 55

The AEMC states that the each of the packages also consistent with one of the three concepts established as part of the AEMC’s Wholesale Gas Markets Discussion Paper (6 August 2015). Those three concepts are:

1. Multiple physical supply hub locations on the east coast with balancing arrangements in place at the major demand centres (concept 1);
2. A "southern" virtual hub based on the DTS and a "northern" virtual hub based on Roma and Brisbane with balancing at Adelaide and Sydney (concept 2)
3. Two large virtual hubs covering the entire east coast gas market - a "southern virtual hub" encompassing Moomba and all gas activities south and a "northern virtual hub" covering all gas activities north of Moomba (concept 3).

The MEU has already provided its views on the Wholesale Gas Markets Discussion Paper and expressed a view that of the three basic concepts, it favoured concept 3.

The MEU views expressed in this response to the DWGM are consistent with the views expressed in its response to the Wholesale gas market discussion paper, in that there are too few production facilities and too few transmission pipelines to attempt replicating the US gas market approach (concept 1), and that the proven performance of the DWGM provides clear evidence that its structure provides a robust structure for a gas market in Victoria.

5.2 Package A: Targeted Measures

The AEMC states that the key objectives of this package would be to:[28]

> "…provide increased opportunities for market participants to better manage short term risk exposure, address the free-rider problem for new investments and strengthen existing market signals for investment by reducing uncertainty around the allocation process for AMDQ."

The AEMC notes that there would be no explicit mechanisms to deliver an efficient price and therefore this package would be unlikely to contribute directly to the development of new financial risk management products.[29] The MEU disagrees with the AEMC that this package would be unlikely to deliver financial risk management products as the MEU considers that the DWGM is already starting to exhibit the development of such products; the MEU considers the main reason that such products have not emerged is related to limited competition in gas production and until this is remedied, any secondary market products will be limited.

Features of this package include:

5.2.1 Targeted transmission rights:

> This change would recognise that there could be some transmission assets that had been funded privately. A usage charge would provide reimbursement to the developer of the new capacity where shippers use this capacity.
>
> Targeted transmission rights (for additional capacity on the DTS) provides a possible solution to the “free-loader” issue and might encourage efficient investment, especially for new investment needed to export gas. As it applies only to new investment (following rule changes) its scope is limited and would not require any fundamental changes to the DWGM. The MEU notes that there has been private investment already in the DWGM to enhance export from Victoria, highlighting that this option can be implemented within the existing DWGM rules.
>
> The MEU is concerned that private expansion of the DTS for Victorian consumer needs has the potential to result in "hoarding" of capacity by the private developer to limit downstream competition as has been seen in other parts of the east coast gas market. The market carriage model used in the DWGM for the use of capacity by Victorian consumers has essentially eliminated this risk, so any expansion to the DTS that is

[28] AEMC 2015, *Review of the Victorian Declared Wholesale Gas Market, Discussion Paper*, p 55
[29] Ibid.

required for the benefit of Victorian consumers should continue to be funded under the current socialised arrangements as this has already been proven to be very effective.

The MEU considers that only investment that is required for export of gas from Victoria should be subject to this proposal.

5.2.2 AMDQ and AMDQ cc trading mechanism:

Since 2014, AEMO's procedures for the DWGM allow trading in physical AMDQ and AMDQ cc. However, this current proposal will allow market participants to transfer all or part of their portfolio of financial benefits associated with AMDQ and AMDQ cc while retaining physical ownership and any curtailment rights.

The AEMC states that the benefits of this approach will include facilitation of access to unused pipeline capacity, encouraging competition, reducing transaction costs and contribute to expansion of the pipeline only when it is efficient to do so.

The MEU also notes the potential benefits of an AMDQ/AMDQ cc financial trading system that would complement the existing physical trading system and allow market participants greater flexibility in how AMDQ cc is used.

However, we would not want to see a system where gas end users risk losing their rights over AMDQ where this is attached to a customer site rather than be "owned" by a shipper/retailer (as per a D tariff customer). For example, if a D tariff gas user wanted to change retailer but the current retailer had "sold" the financial right to a third party, the MEU is concerned that the user would be restricted in its ability to change retailer. The MEU's view is that the users' "right" to that AMDQ must prevail under the rules as this is the primary control to prevent hoarding of capacity and maximising downstream competition.

5.2.3 AMDQ and AMDQ cc allocation processes:

AMDQ cc arises *after the investment* for increased capacity on a pipeline in the DTS and therefore does not signal ex ante the need for expansion. The AEMC states that: "… the demand for new AMDQ cc is a backward looking signal which may not result in optimally timed investment".[30]

There is also a constraint in the current 2013-17 access arrangement on the pricing arrangements for AMDQ cc which does not allow AMDQ to be set at a market rate that reflected the value of AMDQ cc to market

[30] AEMC , p 28.

participants. This also serves to restrict the relevance of AMDQ cc pricing as a signal for network expansion.[31]

Whilst the allocation of AMDQ cc provides a backward looking investment signal, it must also be recognised that, like all other market carriage mechanisms, needed expansion is identified ex ante by the party responsible to operating the network - in the case of the DWGM, this is AEMO. So, for the identification of new investment to provide for the needs of Victorian gas consumers, AEMO provides the necessary forecasting for new investment[32].

Beyond these limitations of AMDQ cc as an investment signal, the AEMC highlights that the process for allocating AMDQ cc lacks transparency as it is not specified in the NGR, the current DTS access arrangement, or by AEMO. In contrast, the AMDQ allocation process is specified in a procedure as provided for by the rules and is carried out by AEMO.

The AEMC's package therefore suggests that:

- Implement a more consistent approach to the allocation of AMDQ and AMDQ cc (AEMO currently manages the allocation of AMDQ, while APA manage the process for AMDQ cc).
- Include the allocation process for AMDQ cc in the rules, consistent with the approach for AMDQ allocation process
- Requiring APA to develop and make publicly available a policy statement setting out the process it intends to following in allocating AMDQ cc.
- Allocation of AMDQ cc to take place ex ante rather than ex post pipeline capacity expansions, to facilitate the use of AMDQ cc as a signal for investment[33]

With respect to the issue of allocation of AMDQ cc; the MEU is not convinced that the AEMC is correct in its assumption that "market signals" provide a better for consumers than (say) central planning (as used successfully in the NEM and the DWGM to date) or that consumers interests are best served by allowing "market signals" to be the dominant factor in future gas transmission planning[34]. The central planning provided by AEMO (in conjunction with APA) appears to have been quite effective in developing capacity for the needs of Victorian consumers in the DTS

[31] Ibid., pp 28-29.
[32] As AEMO is the focal point for advice for all capacity expansions and the cost for approved capacity expansions is included in the regulated asset base, the MEU considers that the principle for forecasting and implementing new efficient expansions, is no different to the forecasting for new capacity under contract carriage
[33] The AEMC has recently published a discussion paper on the DWGM AMDQ allocation rule change request proposed by AEMO in 2013.
[34] See appendix A that highlights that market signals are not as efficient as is implied

when this was needed. It is not at all clear that the advent of LNG and its potential associated demands will require an ex ante signal of the type contemplated, or that this would result in better outcomes for Victorian gas consumers.

Nevertheless, the other recommendations made by the AEMC to address allocation of AMDQ cc are reasonable, particularly where they require APA GasNet to put out in the public domain (e.g. as attachment to an access arrangement) how it would plan to allocate AMDQ cc. As such a document would be part of the access arrangement approval process, this plan would undergo consumer scrutiny as well as by the regulator.

5.2.4 The DTS Planning Standard:

The AEMC notes that AEMO uses the “1 in 20" planning and system security standards, a standard that is consistent with some international gas systems but which APA GasNet considers is overly conservative in its application to determining additional capacity requirements.

The AEMC also considers that there is merit in revisiting this planning standard ahead of APA’s next access arrangement. The benefit of this would include some coherence between AEMO’s and APA’s planning standards and approach.

Equally, it must be recognised that the AEMO approach did allow the DTS to accommodate the 2015 "1 in 20" gas demand experience. The MEU also highlights that the DWGM has very limited line pack and therefore a conservative planning standard is appropriate. The MEU also notes that APA owns the LNG storage facility in the DTS and was keen to acquire the Iona gas storage facility. Using a less conservative planning standard would result in greater usage of the storage facilities and therefore could benefit APA.

The MEU is not convinced that just because APA considers that a "1 in 20" planning standard is overly conservative, is sufficient reason to consider the need for a change.

5.2.5 Conclusions on Package A:

The MEU sees some benefits in each of the proposals that form Package A, but considers that great care is needed to select those which will enhance the operation of the DWGM in the interests of Victoria gas consumers.

5.3 Package B: Simplified DWGM pricing mechanism and transmission rights

MEU members and other users have observed that the complexity of the DWGM is a barrier to their participation as direct market participants but, despite that, some have entered the market directly and others have entered the market partially by taking some exposure to the gas spot price. This slow take-up is typical of what occurred in the NEM.

Package B retains the virtual hub concept and is therefore consistent with concept 2 (and perhaps concept 3). However, the AEMC claims that Package B will address two areas that they consider are key problems with the DWGM. These are:

5.3.1 Encourage the development of financial products that can be used to hedge exposure to prices in the DWGM – this would be achieved by removing the current ancillary payment mechanism.

The removal of ancillary charges/uplift is to be achieved by establishing a single schedule where currently there is a pricing schedule and an operating schedule.[35] The AEMC claims that this will produce a 'cleaner' market price that internalises the costs associated with ancillary payments. This in turn, asserts the AEMC, would support the development of a futures market.

Firstly, the MEU highlights that the issue of uplift payments is a result of a constraint in the transportation system, and this constraint is caused by shippers seeking to exceed the capacity of the pipeline system. The uplift is allocated to the causer of the constraint (as it should be) but the AEMC proposal would result in socialising of the constraint costs, passing costs onto those who do not cause the cost.

Secondly, even under a contract carriage model, any exceedance of firm capacity is charged to the causer by the pipeline owner. If any charge is levied under package B for exceeding firm capacity (ie AMDQ and AMDQ cc) would be used to offset the socialised costs for any constraint. This means that the incentive not to exceed firm capacity rights will be weakened as the party exceeding its firm capacity rights will have its charges effectively reduced. This is inequitable.

Thirdly, the MEU considers that the risks of ancillary payments are overstated given the increased capacity provided and changes to the DWGM rules in the last few years. If the export to other regions and to the LNG exporters are to be the beneficiaries of access to Victorian gas,

[35] Currently, the pricing schedule operates as if there are no constraints, the operational schedule includes constraints and the difference between the two can generate ancillary payments.

then LNG owners should fund any changes to the DWGM to address the higher ancillary payment risks that they cause.

Fourthly, the MEU regards it as artificial to change the market rules to merely promote a futures market – as if this is an end in itself. Providing there is sufficient upstream and downstream competition, a futures market will emerge (as it already seems to be) when it is needed by market participants, just as it has in the NBP and in the NEM. The presence or absence of ancillary charges will be a minor issue.

The AEMC has also acknowledged that the changes will lead to higher and more volatile spot market prices .The AEMC also claims that this will encourage a gas futures market and other hedging arrangements, and therefore it is likely that: "the risk profile of market participants will be improved significantly compared to the unhedgeable exposure to ancillary payments". [36]

The MEU points out that a more volatile market leads to higher spot prices and higher futures prices[37] as is concluded in the report to the AEMC by Ernst and Young analysing outcomes caused by price volatility arising from late rebidding in the NEM[38]. The MEU points out that increased volatility increases risks and reduces liquidity; increased risk requires a cost premium to manage the risk, so unnecessary volatility inevitably leads to increased prices. The AEMC has not substantiated its assertion that the cost of the increased volatility and higher market prices will results in overall lower costs for market participants when compared to the ancillary payments incurred (which are currently very low). To meet the Gas Objective, there has to be a case where the change will result in demonstrable benefits that more than offset the costs.

5.3.2 Address the current "lack" of market-led investment in the DTS by replacing the "limited" capacity rights currently provided by AMDQ with a set of firm transmission rights for private providers of investment in the DTS.

Under this proposal, market participants would contract with APA directly for the firm transportation services. Capacity rights and transmission charges would be allocated under these contracts and reflect the value of firm and non-firm services. A firm service contract would also provide some protection from congestion uplift and curtailments, although shippers would presumably be subject to over-run charges. However, if a

[36] Ibid, p 63.
[37] Ernst & Young, Report to AEMC 11 September 2015 "Impact of late rebidding on the contract market"
[38] The fact that the cause of the volatility was late rebidding does not detract from the fact that the resultant volatility caused higher than warranted futures prices which ultimately increase consumer costs.

market participant does not contract for firm services, they would be required as a condition of connection to enter into a service agreement with APA that specifies gas flows as non-firm.

In addition, the current tariff arrangements with APA would need to be altered with the volumetric component of the tariffs replaced by capacity based charges and longer term contracts. Changes for overruns would also be required for non-firm services.

This proposal fails to recognise the benefits to Victorian gas users of the current arrangements which strongly facilitate active competition between incumbent and new gas suppliers and retailers. The focus of the assessment appears to be solely on the claimed incentives it provides for expansion of the networks. It fails to demonstrate how there is a net benefit to Victorian consumers when allocation of firm capacity rights to shippers introduces the problems of hoarding and increases the risks for new entrant retailers in the market.

In addition, the AEMC acknowledges that for transmission rights to work as an investment signal overrun charges must also be introduced. However, establishing fair overrun charges when in most instances overruns will not cause system constraints is problematic in the extreme and likely to increase unhedgeable risks by as much or even more than the current ancillary/uplift payments which are only incurred when there are actual constraints on the system.

5.3.3 Conclusions on Package B

The MEU does not support Package B and it will require significant changes to the current Victorian arrangements. It is not clear that there is a need for such changes other than there is an assumption that contract carriage provides more timely investment in new capacity and that firm capacity rights will eliminate constraint charges. That Victorian consumers have not been disadvantaged by the current arrangements is not discussed and only theoretical assessments made as to the benefits of the proposed changes.

Further, it is not at all clear who should fund the costs involved as the changes appear to be for the benefit of APA and shippers (particularly interstate shippers) but not for Victorian consumers.

5.4 Package C: Zone-based pricing and capacity rights

Package C is consistent with concept 2 (and perhaps concept 3), in that it includes the establishment of a virtual hub covering the DTS aimed at providing a ‘southern’ reference price for gas on the east coast.

Package C also includes the same simplified pricing mechanism as Package B. However, the mechanism is applied separately to each of four zones such that in times of constraints in the DTS there may be up to four different prices.

The MEU refers to the comments made under package B in regard to its concerns for package C

5.4.1 Conclusions on Package C:

The MEU does not support the implementation of Package C.

The AEMC considers that this approach will provide clearer ex ante signals about where on the network additional investment is required. Again, therefore, the package is focussed on structures that are claimed to provide greater investment signals than the current market design. As with package B, the proposal does not recognise that the current arrangements work for Victorian consumers and the need for excess expansion is driven by the desires of exporters of gas from Victoria and possibly those of the LNG exporters.

However, package C also suffers from the problems identified in Package B and, in particular, is likely to limit the development of a competitive market in the event that owners of firm capacity choose to hoard capacity rather than participate in a trading market for firm capacity. New entrant shippers and retailers would face increased risks from overrun charges even when the system is not operating at capacity in each of the zones.

Package C identifies that at times of constraint, there could be up to four different spot prices. While this might provide a signal for investment, having up to four spot prices detracts from the drive for a single price which would be replicated in the futures market. As such, the MEU considers that the proposal fails even to address the desires of the CoAG Energy Council and the AEMC.

5.5 Package D: Entry-exit model.

Package D involves the conversion of the existing market carriage model applying to the DTS to an entry-exit model, although it must be recognised that the DWGM already reflects some of the entry/exit model features in its transportation pricing. This market design has been established in the European gas market, although there are differences in detail of the design in different countries.

As stated by the AEMC:[39]

> "An entry-exit system is a gas network access model that allows network users to secure capacity rights independently at entry and exit points. Market participants therefore need to neither specify a specific transmission path nor distance, merely the network points they intend to use for entry and exit into/out of the system.

Package D proposes that the entry-exit rights would be coupled with a virtual hub covering the entire DTS. The entry-exit system hub would be based solely on the trading of gas with no implicit allocation of DTS capacity as occurs in the current DWGM. The entry-exit model considers allocation of entry rights quite separately from allocation of exit rights and there is no need for shippers to balance their portfolio of injections and withdrawals. However, if a shipper exceeds their entry or exit capacity entitlements, then it may incur overrun charges.

The AEMC also claims that the entry-exit model promotes competition, supports gas trading and provides a meaningful reference price; this would, the AEMC asserts, result in "cost reflective" capacity prices for the DTS.[40] What an entry/exit model does not do is provide locational pricing within the hub - something that the DWGM does do and by doing so provides a cost reflective approach to the cost for transportation services and assists in identifying potential constraint points.

Further, decisions have to be made about the equitable allocation of entry capacity and exit capacity and whether the same process applies to existing capacity and to new capacity. For example, in the European market, auction processes are commonly used for allocation of firm capacity entry and exit rights, but also allow an allocation of long-term firm exit capacity by application (e.g. to supply the retail market)[41].

While capacity trading is encouraged in the European market, there is also concern about the hoarding of entry-exit capacity. This has led to the introduction of mechanisms such "firm day-ahead use-it-or-lose-it capacity" and similar requirements for long term capacity bookings.

5.5.1 Conclusions on Package D:

> The exit-entry model addresses some of the issues raised with respect to ancillary risks although are still there are overrun penalties applying to shippers at entry and exit points. However, it does not address the risk of

[39] Ibid, p 69.
[40] Ibid, p 69.
[41] The MEU can see a potential problem for existing Victorian gas users where capacity is sold for export at such a price that it could cause Victorian consumers to cease using gas. This would result in Victorian consumers who underwrote the development of the DTS being priced out of the capacity they provided to benefit exporters of gas. This would be inequitable.

"hoarding" of entry and exit capacity by shippers and may create more obstacles for gas users who choose to be market participants. Complex allocation of capacity and capacity trading mechanisms are needed to address the risks of hoarding. In contrast, the open access within the hub eliminates the concerns with hoarding but equally, identifying the need for augmentation within the hub relies on central planning as used for the DWGM and the NEM. The MEU does not see a problem with this central planning as it has served consumers reasonably well in both the DWGM and the NEM[42].

In general, therefore, the entry-exit models have a number of advantages but would require a substantial revision of the DWGM arrangements and create a major disruption for shippers and users. In addition, it requires significant regulatory oversight and the "use-it-or-lose it' approach would face significant opposition, especially from shippers who have paid for the service.

The MEU, therefore, considers that a watching brief on developments in this style of market may be beneficial. However, a change to this type of package is neither necessary nor appropriate at this stage in the evolution of the east coast gas market or of the DWGM in particular.

The MEU would also highlight other concerns with the European entry/exit model that have been raised by international experts, including Larry Ruff who was involved in the design of the Victorian DWGM/DTS arrangements. [43]

In discussing the relative merits of various point-to-point and entry/exit models, Ruff highlights that in complex physical networks with variable demands (such as Victoria[44]), point-to-point and entry/exit models, both of which involve forms of "commercial capacity rights", pose a number of problems. For instance, Ruff states that in a complex network with potential peak constraints and a dynamic gas market (such as in Victoria):

- The "US Model", based on long-term, point-to-point commercial capacity rights, there are many capacity rights that must be

[42] In fact, central planning in the NEM has probably led to over-investment rather than insufficient investment

[43] Ruff, Larry E, "Rethinking Gas Markets – and Capacity",

[44] As noted previously, Ruff characterizes the Victorian market as complex on the basis that it takes gas from several, widely-separated injections points to more than 100 withdrawal points with storage facilities and interconnections that can be injection points one day and withdrawal points the next, multiple laterals interconnected by a large ring, gas flows that can reverse direction from day to day or within a day, volatile weather that can cause the mostly-residential demand to change significantly and unpredictably from day to day and during the day, and little linepack that must be managed carefully to deal with the unpredictable swings in demand from day to day and within days.

continually reallocated and reconfigured, making trading difficult/illiquid and market outcomes suboptimal;

- While entry/exit models make trading easier and more liquid, they are operationally problematic. Shipper-only trading would result in such a large gap between market and optimal (or even just feasible) outcomes that the Transmission System Operator (TSO) must engage in active capacity and gas trading itself to offset unconstructive/dangerous shipper trades.

Ruff concludes that in complex situations, commercial capacity should be eliminated and replaced with a TSO-operated on-the-day market that prices and allocates physical capacity directly, with financial hedging as an equivalent (or better) substitute for commercial capacity. Ruff notes that a "simplified" version of such a market has been operating successfully in Victoria since 1999.

While the MEU is not in a position to critically evaluate Ruff's claims, it raises important issues about the operational risks that might arise in the Victorian market. The MEU considers that this issue requires much further investigation by the AEMC, particularly if it proposes significant changes to the DWGM/DTS such as an entry/exit model (package D) or Hub and spoke/contract carriage model as in Package E (described below).

5.6 Package E: Hub and spoke model

Package E involves a balancing hub at Melbourne and the conversion of all other sections of the DTS to a contract carriage model, ie one that is consistent with the rest of the east coast transport services. This package is consistent with Concept 1 proposed in the wholesale gas market discussion paper.

5.6.1 Balancing hub at Melbourne

The balancing hub would operate in a similar manner to the Market Operated Service (MOS) in the existing STTM design. The AEMC states, however, that the MOS balancing service relies on the ability of the transmission pipelines to store and release imbalance gas to ensure daily balance between supply and demand: The AEMC also notes that:[45]

> "…there is currently daily balancing on the STTM and that balancing may need to be done more frequently for the DTS due to the limited linepack. The concept of MOS would therefore have to encourage balancing over a shorter period than a day (for example, every 4 hours between 6.00am and 10.00pm".

[45] AEMC 2015, p 74.

The AEMC concludes that a balancing hub and removal of the wider DWGM would resolve the issues associated with how ancillary payments are recovered from market participants. However, the AEMC in part acknowledges the complexity issue, noting that gas may not flow freely between the "spokes" and therefore:

> "…hub services are likely to be required at Melbourne to assist this transfer of physical gas".[46]

What the package does not address is

- Where the confines of the Melbourne hub would extend to. The MEU notes that there are a considerable number of large gas demand centres within Victoria but outside of the Melbourne distribution networks. Does the proposal to exclude or include these within the balancing hub? If not, how is balancing to be managed when there is little line pack to provide for this?
- There are a large number of entry points into the Melbourne city gas distribution networks. Where would the balancing take place to ensure that gas flows into all of the extremities of the distribution network centred around the City, recognising that not all entry points can deliver gas to every extremity of the distribution network?
- How the out of balance costs would be assessed and then distributed, recognising there are a large number of entry points and that gas from (say) SWP might not be readily delivered to gas users in (say) the south eastern outskirts of Melbourne.

The MEU considers that there will need to be significant investigation (just as occurred when the DWGM was initially developed) to identify how the Victorian gas network might be converted to a single balancing hub, especially that, since then, there has been considerable expansion of the gas network, amplifying the challenges in implementing change.

The MEU then questions whether the decisions made in the late 1990s when the DWGM was developed are no longer valid and what the benefits would be to Victorian gas consumers from the massive changes required to implement the package, when the existing system works well.

5.6.2 Application of contract carriage to the DTS

The AEMC claims that compared to the market carriage model, the contract carriage mode is generally considered to:[47]

[46] Ibid.
[47] See Ibid, pp 75 - 77

- Promote efficient investment in pipeline infrastructure
- Provide a better allocation of investment risks because shippers can secure firm access rights to any capacity expansions; and;
- Allows more “bespoke” transportation and storage services to be offered to shippers

.

The AEMC concludes from this assessment that conversion of the DTS to a set of contract carriage pipelines is anticipated to resolve “both a lack of investment signals” in the DWGM and to encourage “timely and efficient investment in pipelines via market-led investment”.[48] The AEMC states that the hub and spoke design would also enable physical trading at locations that connect sources of production with demand, similar to the Wallumbilla gas supply hub. This in turn will facilitate the development of a derivative financial market.

In sections above, the MEU has questioned whether the issue of "better investment signal from contract carriage" is real, and if it is, by how much. Further, the MEU questions whether the implementation of contract carriage in the DTS would deliver a better outcome for Victorian gas consumers than they currently have. As the current system works for Victorian gas consumers, the MEU questions whether the AEMC is seeking an outcome that benefits really only those proposing to use the Culcairn interconnect as the EGP, the TGP and SEAGas pipelines are all working "amicably" with the Victorian DWGM. Effectively, is the AEMC seeking to change the entire DWGM merely to promote easier access on the Culcairn interconnect?

The AEMC notes that conversion to a contract carriage model for the DTS would raise a number of complex design issues that would result in a model that is different from the contract carriage models used for the rest of the east coast. These include:

- The allocation of firm capacity on the meshed section of the DTS (specifically, the key Melbourne to Culcairn and Iona to Melbourne spokes).
- The limited linepack means that imbalance tolerances would need to be more narrow, and penalties more significant, for any imbalances. This will have a particular impact on small, new entrant retailers, particularly those servicing the volatile residential load
- Loss of expertise in the overall operation and optimisation of the system as each shipper becomes responsible for its own balancing and staying within firm capacity allowances [NB: this is similar to the issues raised by Ruff] ;

[48] Ibid, p 75.

- Requirements to enable/facilitate backhaul services at Culcairn and Iona would need to be highly developed;
- Capacity trading mechanisms would need to be developed to ensure ready access to pipelines;
- Optimisation of investment across the overall system, which is now possible under the central coordination of AEMO, but would need to developed under contract carriage; and
- The problem of transitioning existing rights of market participants provided via AMDQ to a system of contract carriage. This would involve issues of property rights and the allocation methodology itself.

In the first instance, the MEU notes that the contract carriage model was examined as part of the original reform of the Victorian gas market and was found to be unsuitable for the Victorian network (see, for instance, previous comments from Ruff).

Since that time, the network has become increasingly complex with additional injection points and two way flow requirements. If anything, the contract carriage model is even less suitable today than it was when the market was developed. The AEMC understates the physical issues of the Victorian network and dynamic nature of Victorian gas demand.

The AEMC makes much of the benefits of contract carriage in providing efficient investment signals. However, it does not demonstrate that the market carriage model has failed to ensure efficient investment or that the east coast contract carriage model has indeed promoted the most efficient and timely investment. Further, as the MEU has been involved in the initial development of the DWGM, the gas access regime in 1996-7 (for the Gas Access Code) and the subsequent change from gas code to the gas market rules, the development of the STTM and Bulletin Board, the MEU is well aware of instances where reform of gas markets has been made more difficult by pipeline owners wishing to continue with their current practices, becoming very reluctant participants in these reforms.

Moreover, the AEMC understates the potential risks for new entrants of imbalance penalties under contract carriage, which will need to be significant in the case of the Victorian meshed DTS. These risks are unhedgeable, just as ancillary payments in the DWGM are unhedgeable, so overall it is not clear that much is gained even if hedging is available for the gas commodity prices.

The MEU notes that the AEMC recognises that it would have to implement a method similar to the MOS used in STTMs to allocate imbalance costs, yet the MEU is aware that, in other forums, the AEMC has been critical of the complexity of the STTMs and the needed MOS approach.

The MEU considers the AEMC should investigate these instances further before it concludes that contract carriage provides improved and more flexible services to shippers and users in the DWGM.

In addition, the AEMC appears to pay limited attention to the issues around upstream and downstream competition and the fact that the Victorian gas market has facilitated the addition of new sources of gas and vigorous competition at the retail level as new entrant retailers do not face the same issues of access to pipelines that are seen in other markets.

Optimisation of the total system is also an important benefit of having a central and independent TSO/planner such as AEMO. AEMO has an obligation to review and where necessary report on capacity issues. [49] These reports indicate the importance of a wider perspective on the operation of the DWGM system in order to determine what augmentation is required, the most efficient approach to increasing capacity (including additional compression) and to responding to two way flow requirements.

AEMO has a high level of accountability and transparency for failure to optimise flows (as can be seen in the investigations that followed the 2007 ancillary payment incidences). Similarly, AEMO publishes multiple reports on the status of gas supply and transmission capacity and engages stakeholders in the governance processes, while the AER provides transparency over transmission pricing on the DTS.

The MEU is not aware of equivalent transparency and accountability by the pipeline owners in contract carriage models. Indeed a major complaint made by shippers is that there is lack of information on pipeline capacity and on pricing and service arrangements.

Finally, the large consumers in the Victorian market appreciate the flexibility that the AMDQ allocation process has provided, specifically the ability to either participate in the market directly or to more readily contract with different shippers providing different services and gas prices. Again, the AEMC's paper understates the benefits to consumers of this competition in the market and to the ability of users to negotiate flexible supply arrangements with retailers and who are not constrained by contracts with the pipeline owner.

These users, in the main, do not want to compete with shippers to purchase equivalent contractual rights for transportation under some sort of capacity auction or allocation methodology.

[49] For example, see AEMO, *Victorian Gas Declared Transmission System Capacity Report*

Nor do current Victorian customers, who have funded the current market carriage arrangements want to now fund the cost of changing these arrangements, particularly as the benefits to Victorian customer are not clear.

5.6.3 Conclusions on Package E:

The MEU does not support the adoption of Package E.

6. Overall Conclusions

The MEU supports a number of the measures proposed in Package A. We consider that these measures will facilitate the market to adapt to the changes that may arise from the rapid expansion of LNG demand, but will do so without imposing significant new costs and risks on Victorian consumers.

The MEU does not oppose, for instance, the allocation of firm capacity rights to shippers that fund investment in new capacity, such as the VNI. However, this must be accompanied by protection of existing rights for capacity and systems that enable efficient access to new capacity when/if this is funded by all consumers in Victoria.

The MEU also considers that, in developing the alternative packages (B to E), the AEMC has overly focused on investment and establishing financial markets to overlay the physical markets. The AEMC has paid to little attention to the potential risks to upstream and downstream competition, the complexities of the Victorian physical market, the implementation costs of alternatives to Victorian consumers and the increased risks that Victorian consumers might face from the changes.

As a final comment, the MEU reiterates that issues such as price discovery and development of a secondary financial market for gas price depend on more fundamental reforms such as promoting greater upstream competition in gas supply and breaking down the monopolies over capacity and pricing arrangements that currently prevail in the east coast.

Of all the markets, the DWGM has arguably best addressed these issues, and some of the reforms set out in Package A will further promote these outcomes in Victoria. The MEU considers that the AEMC should focus its attention on facilitation of interstate trade, the elimination of monopoly powers and avoid the distraction of implementing major changes to a system that is generally working well for the benefit of all Victorian gas users.

Appendix A

America's Biggest Shale Gas Field Is Choking on Its Own Supply

BloombergBusiness

Christine Buurma
October 15, 2015 — 8:03 AM AEDT
Updated on October 16, 2015 — 6:07 AM AEDT

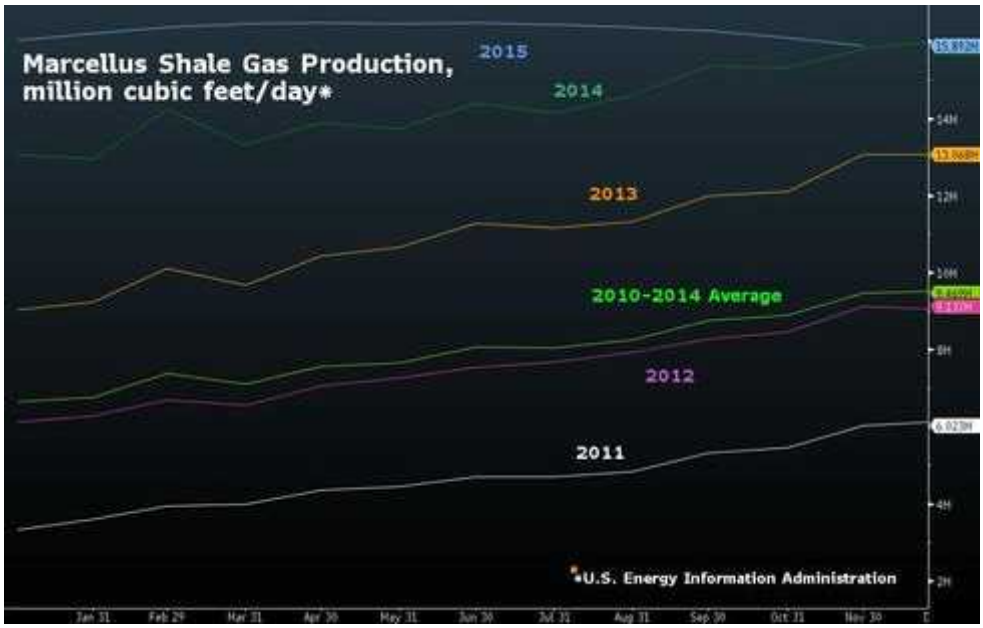
- New pipeline capacity isn't keeping up with production
- Marcellus gas production may fall 1.3 percent in November

For the first time since America's shale boom began, the flow of natural gas from the nation's biggest reservoir is close to dropping below year-ago levels.

Output from the Marcellus basin in Pennsylvania and West Virginia is faltering as pipeline capacity fails to keep up with the surge in production. While space on Appalachian pipelines has more than doubled this year, it hasn't been enough to keep the flow moving freely, according to Bloomberg New Energy Finance.

That has some producers "choking back" the output from wells in the play, said Charles Blanchard, an analyst at BNEF in New York. "They're saying it's not even worth it day to day to keep my wells online because I'm losing money on every molecule that I sell."

Marcellus production has surged more than 14-fold in the past eight years. Now drillers are waiting on seven new Appalachian pipeline projects scheduled to enter service this quarter, with eight more scheduled for 2016, according to Range Resources Corp., a Fort Worth, Texas-based company active in the Marcellus.



How 2015 is looking compared with previous years

Gas prices have tumbled 15 percent this year as mild weather limits demand and stockpiles approach a record. Without declining production and rising consumption by power plants, the price slump might have been even more pronounced.

Marcellus gas production may slip 1.3 percent in November to 15.892 billion cubic feet a day from October, compared with 15.699 billion a year earlier, according to the U.S. Energy Information Administration's monthly Drilling Productivity Report. Output is poised to drop for four straight months.

Average gas production is still set to climb for the year, even as the dearth of pipelines keeps supply off the market. And there's a chance it won't dip below 2014 levels.

"We're on the cusp," Blanchard said. "But you have new pipelines coming in. Everyone hopes to finish these projects before the heating season in November."

See http://www.bloomberg.com/news/articles/2015-10-14/america-s-biggest-shale-gas-field-is-choking-on-its-own-supply