



AGL Energy Limited
ABN: 74 115 061 375
Level 24, 200 George St
Sydney NSW 2000
Locked Bag 1837
St Leonards NSW 2065
t: 02 9921 2999
f: 02 9921 2552
agl.com.au

Mr John Pierce
Chair
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

24 May 2017

Dear Mr Pierce,

Review of the Victorian Declared Wholesale Gas Market

AGL welcomes the opportunity to comment on the Australian Energy Market Commission's (AEMC) Review of the Victorian Declared Wholesale Gas Market (DWGM) Assessment of Alternative Market Designs (Paper).

AGL has a long history of involvement in Eastern Australian gas markets and has actively participated in the various gas market reviews currently underway, wholly supporting the Council of Australian Government Energy Council's (COAG) 'Vision' of a liquid wholesale gas market.

The DWGM has operated since 1999 and AGL considers it to be the most successful gas market on the east coast. However, as the east coast moves from a net 'long' market, to a more balanced market, AGL agrees that the DWGM must evolve to meet the changing needs of the east coast gas industry.

In this submission, AGL outlines the package of reform options it sees as the best fit for the DWGM, leveraging AGL's considerable market experience and previous contributions to the policy debate. In the Attachment, AGL has endeavoured to respond to each of the options discussed in the Paper.

Section 1 – The DWGM review terms of reference

AGL has considered the Victorian Government's four terms of reference (ToR) in framing its response to the Paper. In regard to each, AGL provides a short commentary of its view and understanding of each:

1. Provide appropriate signals and incentives for investment in pipeline capacity:

AGL considers the AEMC's deliberations to give effect to ToR 1 have come down to a fundamental market design choice between contract carriage and market carriage.

AGL considers further that the market carriage model of the DWGM has proven to be a successful model, however it also notes that there has also been a reluctance to invest in new pipeline capacity where APA is unsure of the likely returns. Hence AGL is of the view that a mechanism to support private sector investment for network augmentation should be rewarded through appropriate mechanisms given it removes cost recovery risk from the rest of the market.

However, AGL does not consider that delivering this outcome would require a move to a contract carriage model, but argues it is possible to deliver capital investment within a market carriage framework.



The merits and pitfalls of contract carriage are explored in Section 4 below, while market carriage is examined further in Section 3.

2. Allows market participants to effectively manage price and volume risk:

AGL takes the view that effective management of price and volume risk is best achieved in two parts:

- i. Participants bid and offer in a market confident that any scheduled outcomes will be rational, and unsurprising, (assuming a reasonable understanding of the physical limitations of a network); and
- ii. Risks should be easily tradable to the person who can hold it at the lowest cost, with the mechanism exposing the participant, being clear to understand.

Whilst the DWGM provides some risk management methods, they are complicated (AMDQ transfers are difficult). Typically, the disconnection in the Operating and Market Schedule results in unpredictable market outcomes. AGL contends that this is the most significant shortcoming of the current DWGM, and the biggest barrier to forward trading i.e. the potential for misalignment between Operating and Market/Pricing Schedules (the OS and the MS). AGL provides further detail on this point later in this submission.

3. Facilitates the efficient trade of gas to and from adjacent markets:

AGL considers that the DWGM is set up to enable trade between regions. Gas can currently be traded in and out of the DWGM efficiently on transport agreements at every interval of the DWGM gas day. AGL considers the barrier to trading between regions is not the DWGM, but the STTM's. Specifically, the relatively inflexible single day ahead schedule that participants must meet in the STTM's.

4. Continues to effectively promote competition in upstream and downstream markets, in the long-term interest of consumers:

AGL supports the current gas market reform process, and the ultimate aim of enabling a more liquid gas market. AGL notes the current reform taking place, through the Gas Market Reform Group and that this reform of the DWGM should enable and promote competition of supply in the two key aspects of the gas market; supply and transport.

Section 2 – AGL's proposed reform package

The AEMC has sought feedback from stakeholders on an appropriate package of options for reform.

Fundamentally however, AGL does not actually consider that the DWGM is in urgent need of reform. In fact, it is AGL's considered view that the DWGM is the most liquid gas market on the east coast, and - for the most part - provides the opportunity for gas to move to the user that places the highest value on it. AGL's position is clearly evidenced by the large volumes of gas that AGL routinely exchanges in the DWGM across the year. AGL also considers that the effectiveness of the DWGM is also reflected by the number of DWGM participants. Accordingly, it is AGL's view that the general framework of the DWGM should be retained, including:

- Compulsory bid/offer;
- Intraday schedules; and
- Market Carriage.



Whilst AGL does not consider that broad reform of the DWGM is necessary, AGL considers that the effectiveness of the DWGM could be improved by implementing the incremental improvements outlined in this Section.

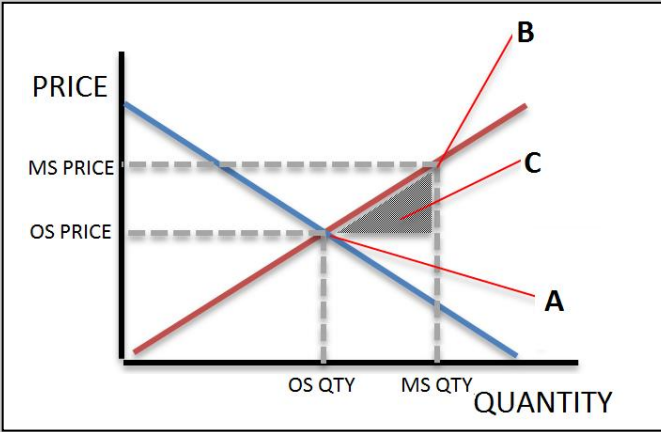
As noted above, it is AGL's view that the single largest impediment to market development - including the development of financial products - is the misalignment of the OS and MS (explained further below), and AGL would urge the AEMC to fast track the currently proposed Energy Australia rule change to address this issue.

In the table below AGL outlines the incremental reforms that could be introduced to improve the effectiveness of the DWGM (ranked from most to least important). Where AGL's preferred options relate to options from the Paper, these references are provided, and discussed further in the Attachment.

Benefit	Proposed Package	Change Proponent
<p>Transparent, and Rational Clearing Price</p>	<p>AGL strongly recommends that the AEMC fast track the pending rule change on the application of constraints in the declared transmission system (DTS) (GRC0039). Aligning the operating and pricing schedules to reflect constraints, but retaining separate schedules, will assist in resolving several concerns with the current DWGM.</p> <p>AGL has noted that since the decoupling of this rule, the Market Schedule has been 'solved' at a different level of demand than the operating Schedule on a number of occasions.</p> <p>Overall this skew has seen the Market Schedule (the pricing schedule) solve at higher prices and demands than the Operating Schedule.</p> <div data-bbox="427 1429 1235 1816" data-label="Figure"> <p>The chart displays the distribution of differences between operating and market schedules. The x-axis represents the amount in GJ, ranging from -25,000 to 44,000. The y-axis represents the number of schedules, ranging from 0 to 2000. The data shows a very high frequency of schedules with a difference of approximately 2,000 GJ, with a long tail extending towards higher positive values up to 44,000 GJ.</p> </div> <p>The converse of this (in the operating schedule - due to the discrepancy) is that participants are 'chasing each other to the bottom'. Offering their gas at \$0 to try and ensure a physical schedule. This has led to a large amount of \$0 offers, which are then being tie-broken alongside \$0 with AMDQ.</p>	<p>AEMC (Item 3.1)</p>



Benefit	Proposed Package	Change Proponent																																																																																																																
	<p data-bbox="424 562 1241 622">Looking at the nodal pricing schedule, a similar pattern can be seen in the difference in price between the node and the market.</p> <div data-bbox="424 645 1214 1272"> <p data-bbox="547 663 1094 730">Price difference between Longford and the Market Price</p> <table border="1"> <caption>Approximate data for Price difference between Longford and the Market Price</caption> <thead> <tr> <th>Price Difference (\$)</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>-\$2.00</td><td>0</td></tr> <tr><td>-\$1.00</td><td>0</td></tr> <tr><td>0.00</td><td>1050</td></tr> <tr><td>1.00</td><td>800</td></tr> <tr><td>2.00</td><td>100</td></tr> <tr><td>3.00</td><td>100</td></tr> <tr><td>4.00</td><td>150</td></tr> <tr><td>5.00</td><td>200</td></tr> <tr><td>6.00</td><td>100</td></tr> <tr><td>7.00</td><td>50</td></tr> <tr><td>8.00</td><td>20</td></tr> <tr><td>9.00</td><td>10</td></tr> <tr><td>10.00</td><td>10</td></tr> <tr><td>11.00</td><td>10</td></tr> <tr><td>12.00</td><td>10</td></tr> <tr><td>13.00</td><td>10</td></tr> <tr><td>14.00</td><td>10</td></tr> <tr><td>15.00</td><td>10</td></tr> <tr><td>16.00</td><td>10</td></tr> <tr><td>17.00</td><td>10</td></tr> <tr><td>18.00</td><td>10</td></tr> <tr><td>19.00</td><td>10</td></tr> <tr><td>20.00</td><td>10</td></tr> <tr><td>21.00</td><td>10</td></tr> <tr><td>22.00</td><td>10</td></tr> <tr><td>23.00</td><td>10</td></tr> <tr><td>24.00</td><td>10</td></tr> </tbody> </table> </div> <div data-bbox="424 1294 1214 1921"> <p data-bbox="528 1312 1114 1379">Price difference between SWP and the Market Schedule</p> <table border="1"> <caption>Approximate data for Price difference between SWP and the Market Schedule</caption> <thead> <tr> <th>Price Difference (\$)</th> <th>Frequency</th> </tr> </thead> <tbody> <tr><td>-\$2.00</td><td>0</td></tr> <tr><td>-\$1.00</td><td>0</td></tr> <tr><td>0.00</td><td>950</td></tr> <tr><td>1.00</td><td>880</td></tr> <tr><td>2.00</td><td>100</td></tr> <tr><td>3.00</td><td>100</td></tr> <tr><td>4.00</td><td>120</td></tr> <tr><td>5.00</td><td>200</td></tr> <tr><td>6.00</td><td>100</td></tr> <tr><td>7.00</td><td>50</td></tr> <tr><td>8.00</td><td>20</td></tr> <tr><td>9.00</td><td>10</td></tr> <tr><td>10.00</td><td>10</td></tr> <tr><td>11.00</td><td>10</td></tr> <tr><td>12.00</td><td>10</td></tr> <tr><td>13.00</td><td>10</td></tr> <tr><td>14.00</td><td>10</td></tr> <tr><td>15.00</td><td>10</td></tr> <tr><td>16.00</td><td>10</td></tr> <tr><td>17.00</td><td>10</td></tr> <tr><td>18.00</td><td>10</td></tr> <tr><td>19.00</td><td>10</td></tr> <tr><td>20.00</td><td>10</td></tr> <tr><td>21.00</td><td>10</td></tr> <tr><td>22.00</td><td>10</td></tr> <tr><td>23.00</td><td>10</td></tr> <tr><td>24.00</td><td>10</td></tr> </tbody> </table> </div>	Price Difference (\$)	Frequency	-\$2.00	0	-\$1.00	0	0.00	1050	1.00	800	2.00	100	3.00	100	4.00	150	5.00	200	6.00	100	7.00	50	8.00	20	9.00	10	10.00	10	11.00	10	12.00	10	13.00	10	14.00	10	15.00	10	16.00	10	17.00	10	18.00	10	19.00	10	20.00	10	21.00	10	22.00	10	23.00	10	24.00	10	Price Difference (\$)	Frequency	-\$2.00	0	-\$1.00	0	0.00	950	1.00	880	2.00	100	3.00	100	4.00	120	5.00	200	6.00	100	7.00	50	8.00	20	9.00	10	10.00	10	11.00	10	12.00	10	13.00	10	14.00	10	15.00	10	16.00	10	17.00	10	18.00	10	19.00	10	20.00	10	21.00	10	22.00	10	23.00	10	24.00	10	
Price Difference (\$)	Frequency																																																																																																																	
-\$2.00	0																																																																																																																	
-\$1.00	0																																																																																																																	
0.00	1050																																																																																																																	
1.00	800																																																																																																																	
2.00	100																																																																																																																	
3.00	100																																																																																																																	
4.00	150																																																																																																																	
5.00	200																																																																																																																	
6.00	100																																																																																																																	
7.00	50																																																																																																																	
8.00	20																																																																																																																	
9.00	10																																																																																																																	
10.00	10																																																																																																																	
11.00	10																																																																																																																	
12.00	10																																																																																																																	
13.00	10																																																																																																																	
14.00	10																																																																																																																	
15.00	10																																																																																																																	
16.00	10																																																																																																																	
17.00	10																																																																																																																	
18.00	10																																																																																																																	
19.00	10																																																																																																																	
20.00	10																																																																																																																	
21.00	10																																																																																																																	
22.00	10																																																																																																																	
23.00	10																																																																																																																	
24.00	10																																																																																																																	
Price Difference (\$)	Frequency																																																																																																																	
-\$2.00	0																																																																																																																	
-\$1.00	0																																																																																																																	
0.00	950																																																																																																																	
1.00	880																																																																																																																	
2.00	100																																																																																																																	
3.00	100																																																																																																																	
4.00	120																																																																																																																	
5.00	200																																																																																																																	
6.00	100																																																																																																																	
7.00	50																																																																																																																	
8.00	20																																																																																																																	
9.00	10																																																																																																																	
10.00	10																																																																																																																	
11.00	10																																																																																																																	
12.00	10																																																																																																																	
13.00	10																																																																																																																	
14.00	10																																																																																																																	
15.00	10																																																																																																																	
16.00	10																																																																																																																	
17.00	10																																																																																																																	
18.00	10																																																																																																																	
19.00	10																																																																																																																	
20.00	10																																																																																																																	
21.00	10																																																																																																																	
22.00	10																																																																																																																	
23.00	10																																																																																																																	
24.00	10																																																																																																																	

Benefit	Proposed Package	Change Proponent
	<p>AGL views these outcomes as irrational, and often surprising. Whilst AGL would likely support regional nodes at a national level (in a similar manner to the NEM), AGL is not supportive of a nodal market within the DWGM - mainly due to the lack of supply sources within the DWGM and the likelihood of supply contracts only being sold 'at the gate' rather than one regional price to cover all areas of demand/consumption.</p> <p>Taking the difference between the OS and the MS one step further, looking at the implications visually, on a demand/supply chart, a clearer view of the issues can be demonstrated. Whilst the intersection of the supply and demand curve (the equilibrium point) should reflect the physical price of gas [point A], the market schedule is being solved at a higher level of demand because it completely ignores physical constraints. This results in a higher market price [point B], yet the gas offered between the two is not being scheduled [point C]. This outcome clearly creates clear market inefficiencies.</p>  <p>The chart illustrates a supply and demand model. The vertical axis is labeled 'PRICE' and the horizontal axis is 'QUANTITY'. A downward-sloping blue line represents the demand curve, and an upward-sloping red line represents the supply curve. Their intersection is point A, corresponding to 'OS PRICE' and 'OS QTY'. A higher price level is marked as 'MS PRICE', which intersects the supply curve at point B and the demand curve at point C. The quantity at this higher price is 'MS QTY'. A shaded triangular region between the supply and demand curves from OS QTY to MS QTY is labeled 'C', representing gas that is not scheduled. Point A is also labeled 'A' and point B is labeled 'B'.</p> <p>AGL considers that this is a fundamental flaw in the DWGM that diminishes market efficiency and must be addressed as a priority.</p> <p>Specifically, schedule alignment would likely help resolve AMDQ concerns, as participants would be more confident that a '\$3' offer to supply gas would either be scheduled if the price came out at or above their offer, or if it wasn't scheduled, that the price would be below \$3. It is reasonable to expect that confidence in the price would allow the market to return to more rational bid/offer behaviour.</p>	



Benefit	Proposed Package	Change Proponent
<p>Facilitate trade to & from adjacent markets</p>	<p>AGL is broadly supportive of the creation of exit rights, such as AEMC option 5.3 for exit AMDQ.</p> <p>AGL considers that these rights could facilitate network investment - with exit rights only allocated when augmentation to the network is funded. The key is defining the framework to the rights so that private capital investment can weigh up the cost of providing funding in a market carriage market model.</p> <p>For example, the investor could be rewarded with “X” years rights to all or a portion of the additional capacity.</p> <p>AGL considers further that such rights should be based on a post development assessment, and be measured against existing transport capacity. Specifically, the investor should bear all relevant risks associated with delivering the expansion - so as to provide appropriate incentives in its delivery.</p> <p>AGL has not assessed whether establishing this type of framework would also require APA to release information on the operation of the DTS to enable participants to make these decisions.</p>	<p>AEMC (Item 5.3)</p>
<p>Additional avenues to liquidity</p>	<p>AGL supports the implementation of AEMC options 4.2 and 4.3 to enable short term forward trading inside the DWGM.</p> <p>AGL suggests trading could be conducted on an existing platform such as the exchange or possibly Trayport, however work would be required to develop exchange agreements.</p> <p>AGL suggests that the products should:</p> <ul style="list-style-type: none"> • be financially based (i.e. no physical obligation). AGL considers that the compulsory nature of the bid/offer stack (and therefore inherent depth) within the DWGM will enable a financial product to trade and this would reduce allocation/delivery risk to participants; • settle at the 6AM price; and • remain exclusive from the current bid/offer stack. Hence products could occur from day ahead (D+1) to a three-month outlook (M+3), and that on the day trades would occur through the DWGM. <p>Whilst AGL is speculating on exactly why the exchange has failed to trade. Price risk and product duration are often mentioned. Hence a realignment of the OS/MS would restore confidence in any price risk, and providing shorter term products may provide participants</p>	<p>AEMC (Items 4.2 & 4.3)</p>



Benefit	Proposed Package	Change Proponent
	<p>comfort to actually start trading. AGL notes that monthly products trade infrequently on the GSH, but daily and weekly products trade with some regularity.</p>	
<p>Manage Volume Risk</p>	<p>AGL considers that the ability for facility operators to constrain the market under SDPC should be removed, noting that AEMO has tools available to keep the market secure, for example, ad hoc schedules.</p> <p>Whilst this may create concern for AEMO operationally, AGL takes the view that only physical restrictions on the pipelines should justify a constraint.</p>	<p>AGL</p>
<p>Transparency to manage price and volume risk</p>	<p>Whilst AGL do not propose any changes to the 5 intraday schedule windows. AGL does consider more frequent 'pre-dispatch' schedules would be beneficial. This is an aspect of the National Electricity Market (NEM) that participants rely upon when completing forward planning and is an aspect missing from the DWGM.</p> <p>Specifically, AGL considers that prior to the start of the gas day, a provisional schedule should be published every four-hours. Followed by a pre-dispatch schedule every two hours within the gas day.</p>	<p>AGL</p>
<p>Manage volume risk</p>	<p>AGL supports AEMC option 5.2 to make the trading of AMDQ and AMDQCC more straightforward. However, AGL suggests that where AMDQ is trading, it should be confined to the same close proximity point (CPP).</p> <p>AGL considers that AMDQ's are created in proportion to the physical capacity of the network. Hence the ability to 'move' AMDQ between locations may create perverse outcomes (i.e. if everyone moved Longford AMDQ to Culcairn this would create too many credits).</p>	<p>AEMC (Item 5.2)</p>
<p>Understand price and volume risk</p>	<p>AGL supports consideration of measures to simplify uplift charges, but AGL also considers that with the realignment of the OS/MS much of the uplift being seen in the market may be removed.</p> <p>Specifically, AGL supports the use of surprise uplift for participants in the next schedule for failing to meet their prior scheduled demand. To support this risk, AGL considers AEMO should announce the linepack adjustment they plan to make, at least 30 minutes before nomination cut off, to enable participants to adjust their offers and manage their volume/price risk.</p>	<p>AGL</p>



Benefit	Proposed Package	Change Proponent
	<p>AGL considers that congestion uplift is playing a role in preventing a derivative market from developing, but with the operating and pricing schedules alignment, congestion uplift will be reduced significantly as participants will no longer need to 'bid at zero' to ensure that they are scheduled.</p> <p>Finally, common uplift (typically peak shaving) should be allocated on a causer pays basis if a causer is identified. Where no causer is identified, these charges should continue to be shared amongst all market participants.</p>	

Section 3 – The benefits of Market Carriage and the existing DWGM

In Section 2 above, AGL identifies its view on the reform options that it considers would achieve a DWGM that best reflects the vision of COAG, and is aided by the fact that the current DWGM is comprised of many elements that shape an ideal wholesale gas market. AGL reiterates its strong support for the retention of these elements in any modified DWGM design, particularly:

- ‘Open access’ provided by market carriage;
- The gross pool market design with mandatory participation;
- Commodity and capacity being combined in one market, pooling liquidity;
- Defined schedules of Intra-day bidding and clearing which, importantly, provides market participants the ability to move gas between regions, providing the necessary flexibility for owners of gas fired generation to manage these assets into a 30-minute NEM; and
- AEMO’s role as the operator of the market.

AGL’s submission to the ACCC’s East Coast Gas Inquiry noted that second only to increasing the supply of gas, access to economic and tradeable transmission capacity is fundamental to an efficiently operating gas market, promoting the efficient delivery of available gas supplies. In other words, the market should operate efficiently and with sufficient flexibility, allowing gas to be moved in multiple directions to where it is valued most. AGL considers that moving east coast gas markets to a market carriage model would drive the necessary market liquidity and efficiency. The DWGM already offers these benefits when compared to relatively opaque contract carriage markets.

Nevertheless, and as noted above, AGL acknowledges that the existing DWGM has some shortcomings and would like to see these resolved through the current review. AGL’s preferred reform options, outlined in Section 2 above, seek to address shortcomings.

AGL is concerned that the DWGM lacks strong investment mechanisms, as only ‘entry’ rights are supported, with no corresponding mechanism to invest in augmentation to gain exit rights. Further, the DWGM does lack transparency compared to the NEM and the Short Term Trading Markets (STTMs), but this isn’t a failing of the current market design, it is a limitation of the information available to participants.



For example, pipeline capacity is not published in advance in the DWGM as it is in the STTMs, and with respect to confidence in pricing, AGL notes that the gas market provides provisional, or pre-dispatch, schedules far less frequently than the NEM and that this information may provide comfort to the participants trading in the DWGM and allow facility operators to flag their concerns around upcoming schedules earlier.

Section 4 – The argument against full or partial contract carriage

AGL acknowledges that the contract carriage model has delivered substantial private sector investment in gas transmission infrastructure in the eastern Australian gas market (outside of the DWGM) most of this was before the inception of the east coast markets, and today there is a market reform working group considering how to better make a contract carriage framework accessible for more market participants (work being completed by the GMRG).

As previously noted, AGL does not consider that the AEMC's review has clearly demonstrated that there is a definitive problem with pipeline investment in the DWGM - to warrant the significant move to a contract carriage market. As outlined in this submission, AGL considers pipeline investment can be driven within a market carriage model and that perhaps the network investment framework is the issue that requires attention, rather than the market framework itself.

AGL highlights that contract carriage instils a responsibility for security of supply with the capacity owner, which may make capacity owners risk averse and possibly less willing to trade spare capacity. A gross pool market carriage model does not present the same risks to competition and efficiency. Liquidity is also not improved as a result of the voluntary nature of the contract carriage model proposed by the AEMC for the DWGM - as there is no requirement to offer up capacity or commodity.

In conclusion, should the entry/exit model be pursued for the DWGM, and ultimately implemented, the AEMC's framing will need to ensure that participants can manage long term pipeline capacity that aligns with supply contracts. The inability to do so would create significant risk for participants. Separate trading of entry/exit rights versus commodity is also likely to increase transaction costs, market complexity and be counterproductive in achieving COAG's 'Vision'. Finally, AGL notes that existing AMDQ rights and credits would have to be dealt with through appropriate grandfathering arrangements, should a contract carriage model be pursued for the DWGM.

AGL greatly appreciates the AEMC's work in conducting this review and the numerous opportunities offered to stakeholders to participate in determining a way forward.

If you have any queries about the submission or require further information, please contact Liz Gharghori at lgharghori@agl.com.au or on 03 8633 6723.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Simon Camroux'.

Simon Camroux
Manager Wholesale Markets Regulation



Attachment – Consideration of alternative market designs

1. Transmission Constrained Pricing Schedule (3.1)

The AEMC describes this option as a move to a single operating and pricing schedule where the market price is set taking transmission constraints into account.

AGL suggests that the AEMC fast track its consideration of the pending rule change on the application of constraints in the declared transmission system (DTS) (GRC0039). The proposed rule change seeks retention of both the operating and pricing schedules, but with DTS constraints reflected in the pricing schedule, as had been done up until 2015.

AGL considers that making the proposed rule will help to correct several issues in the current market. Under current arrangements, the pricing schedule is developed using an unrepresentative picture of demand; this results in a higher gas price that does not reflect the state of the DTS. AGL considers this to be an irrational outcome, but one easily corrected by moving forward on the proposed rule.

2. Simplified uplift payments (3.2)

The AEMC has proposed the introduction of a common uplift, smearing costs across all market participants with a single unit price paid to sellers and charged to buyers. This would remove surprise and congestion uplift, and is therefore intended to assist market participants to better hedge against risks.

AGL supports the simplification of uplift charges, but does not support socialising costs amongst market participants. AGL considers that a causer pays principle - where the cause can be attributed - should continue to underlie uplift payments to encourage participants to; forecast correctly, procure supply in favourable locations, and offer in line with the expected supply of their facility.

AGL considers that AEMO could investigate whether procedures can be made clearer to provide greater transparency around how uplift charges are incurred, and how they can be mitigated by participants.

3. Discrete intra-day schedules to manage system balancing (3.3)

The AEMC proposes retailing multiple schedules throughout the gas day, but with each schedule period continuing only up to the next schedule (that is, the schedules would be discrete and not be balance-of-day).

AGL does not support the adoption of discrete intra-day schedules. AGL considers this option poses a security of supply risk. While it may encourage derivatives trading by removing the current multiple balance of day pricing schedules. Currently the DWGM is settled on the day and revised in each schedule - whilst there is the ability to 'swap' gas throughout the day AEMO are still scheduling the full gas day. AGL understand that the DWGM has a limited 'survival time' and that in planning supply out just a few hours (and not the entire gas day) there is a risk that physical operation of the market would become too volatile/risky.

Prohibiting physical contracting for gas outside of the DWGM (3.4)

Under this option, producers and their counterparties would be prohibited from entering physical contracts outside the DWGM, with all physical gas trading taking place within the DWGM and AEMO acting as intermediary.



Taking the DWGM as it is, AGL does not discount this approach as an option in the future. AGL considers that by creating some of the trading products mentioned herein, that participants would be able to move to this option. However, given the implications and complications of grandfathering legacy contracts, AGL does not consider this option is required to achieve the goals of the COAG ToR. Therefore, in line with the aims of the COAG, AGL does not consider this option should be included in this reform.

4. Forward physical trading outside the DWGM (4.2)

Option 4.2 involves adopting several measures to reduce transaction costs and improve the liquidity of shorter-term or low value physical trades outside of the DTS. These measures could include non-compulsory standardised shorter-term gas contracts, improving the gas allocation process at DTS injection points, or more substantially, introducing one or more facilitated gas trading platforms at points outside, or on the edge of, the DTS.

AGL supports the adoption of measures to facilitate short term commodity trading, AGL considers it would be beneficial to allow day-ahead forward financial trading, and has moderate support for both option 4.2 and 4.3, but prefers option 4.3.

The complications in physical delivery obligations and the bid/offer that this would encourage in the DWGM (with a delivery obligation, a buyer would bid at the price cap, and the seller would offer at the price floor) suggest that progressing trading within the DWGM around a financial product would be the best way forward. Under a financial product the buyer and seller aren't required to physically ensure delivery, but they do have price certainty. AGL considers that the DWGM as a compulsory market has sufficient 'depth in offers' to ensure that the risk of failing to physically deliver is very low.

5. Forward physical trading within the DWGM (4.3)

Option 4.3 is based on retaining the current market model, but introducing a voluntary, net pool exchange on which market participants can trade ahead of the gas day, enabling participants to agree price, quantity, and delivery date. On the day trades would be made through the DWGM.

As noted above, AGL has moderate support for options 4.2 and 4.3, but believe this single trading location (4.3) would be preferably settled on a financial basis off the 6AM price.

AGL considers that implementation costs for option 4.3 would be low, given day-ahead trading could be conducted on an existing platform, such as Trayport, while on the day trading would be conducted as it currently is within the DWGM.

6. Forward trading with a net daily gas market (4.4)

Option 4.4 would allow market participants to trade gas on a voluntary, net exchange prior to a 'gate closure' at some point before the start of the gas day. After gate closure, a voluntary net market would apply. The AEMC describes this option as pairing with the introduction of firm entry and exit rights, which are proposed in option 6.4.

AGL does not support this option. AGL's submission on the AEMC's Draft Final Report outlined its concerns regarding continuous balancing and the separation of commodity and balancing relying on bids and offers that may not be there. Continuous balancing potentially reduces liquidity in the market, and AGL is not confident that this is addressed by introducing a mandatory component for bids and offers on the day.



The current market allows out of order gas to be scheduled and AEMO has the tools to apportion costs accordingly. Under this option, it is unclear to AGL how this option might work in the case of, for example, peak shaving LNG where there are no offers due to the voluntary nature of the market and how the common uplift charges may then need to be spread across participants.

7. AMDQ signals prior to capacity expansion (5.1)

Option 5.1 would require AEMO to undertake the AMDQCC allocation process prior to pipeline capacity expansions or extensions having occurred.

AGL does not support this option without further detail of how it could be applied, as providing firm AMDQ prior to capacity expansion could upset the market, should the capacity developed be more, or less, than anticipated.

It is AGL's view that capacity allocation should come after expansion, and that the risk of reduced capacity should be borne between the developer and the market/participant. This encourages appropriate modelling and further investigation.

However, the framework to allow participants to assess how their investment may lead to AMDQ should be developed. Clearly outlining how AMDQ rights would be apportioned (for example, the investor would obtain X percent of total new capacity created, for an X year period) may increase the willingness of participants to invest in pipeline capacity expansion.

8. Improve AMDQ allocation and trading (5.2)

Option 5.2 proposes the introduction of an electronic trading platform allowing market participants to anonymously post bids and offers to transfer all or part of their portfolio of financial and/or physical benefits associated with holding AMDQ, to other DWGM participants.

AGL supports this option to improve AMDQ and AMDQCC allocation and trading. AMDQ rights include a degree of risk, so enabling easier trading of such rights will allow participants the opportunity to better manage these risks.

Additionally, AGL considers that simplifying AMDQ allocation and transfer, including simple tradable services, could promote secondary trading. AGL supports transfer of AMDQCC ownership, but accepts the AEMC's position that for authorised MDQ only the benefits are tradeable.

9. Exit AMDQ (5.3)

Option 5.3 would allow AMDQCC to be created with a different withdrawal point to the reference hub, with two sub-options proposed:

- i. Allowing for the creation of AMDQ rights between any injection point and any withdrawal point.
- ii. Creating exit AMDQ rights to mirror existing AMDQ entry rights, so that rights would be locational.

AGL supports the creation of exit AMDQ rights, but only those that are locational.

AGL considers that point-to-point AMDQ rights would decrease liquidity and be less efficient where injections and/or withdrawals occur at multiple points. For example, the South West Pipeline can receive flow from both Longford and Culcairn, hence AGL questions, how would two sets of point-to-point/pathway AMDQ be created without also creating a conflicting interaction unless you also inefficiently allocate AMDQ? Point-to-point AMDQ would also leave a participant locked into an exit right on one route only,



where this does not seem necessary in a gross pool market. AGL considers that this reflects a contract carriage approach and is not fit for the DWGM.

AMDQ is a tie-breaking right, and therefore provides an incremental improvement to firmness, which helps participants manage market risks. AGL considers that this option should be implemented, but that exit AMDQ only be issued as an investment signal and therefore only be allocated to participants who commit to network augmentation and the creation of new exit points (i.e. no exit AMDQ would exist at the time of enactment of this scheme, this scheme would only create the framework to support private investment which over time would enable the creation of exit AMDQ as participants' fund network augmentation).

10. Improved scheduling priority (6.1)

Option 6.1 proposes that rights holders (participants with AMDQ) would be scheduled in preference to non-rights holders, if the rights holder's offer (or bid) price is less (or more) than the market price.

AGL does not support this option. AGL considers it likely that participants will lift offers to the clearing price, leading to less efficient pricing and skewed market outcomes. Participants with AMDQ would be scheduled if offers are under the clearing price, which would create an incentive for participants to try to be the "marginal gigajoule". This option appears to draw parallels to a "paid as bid" system, which does not currently apply in the DWGM, the STTM, or the NEM.

AGL also considers the proposed scheduling priority would make it difficult for participants to manage the risk of not being scheduled (where does one 'bid' when there is no information to enable a participant to see where they sit next to AMDQ offers). AGL considers further that AEMO would need to publish the bid/offer stack after each schedule to enable a participant to have some method to manage this risk.

11. Firmer financial capacity rights (6.2)

Option 6.2 proposes translating the existing AMDQ mechanism into firmer financial rights by introducing different tariffs for use of the DTS depending on whether the market participants hold financial capacity rights or not, and/or compensation paid from market participants that do not hold financial capacity rights to those that do if financial capacity rights holders are constrained off.

In line with the view of market carriage for the DWGM, AGL does not support this approach.

12. Zonal pricing with settlement residues (6.3)

Option 6.3 proposes to retain the market carriage model for physical access to the DTS, but would introduce several wholesale gas pricing zones across the DTS, along with the introduction of financial capacity rights between zones.

AGL does not support the introduction of zonal pricing in the DWGM.

AGL acknowledges that a nodal market is an economically pure solution, however AGL considers it unnecessarily complex, particularly where there are not enough entry and exit points on the DTS to facilitate a nodal market. This option also presents the particularly undesirable outcome of split liquidity, with the lack of central reference price likely to further stifle the uptake of derivatives. In keeping with the ToR of the review, AGL considers that a single regional price for the DTS best facilitates liquid financial market trading.



AGL considers further that one limitation in a nodal pricing market is that participants who 'sell' are only likely to sell to the gate, with the buyer then required to take on any intra-zonal price risk. Such an outcome may make the purchase of a nodal based contracts relatively fruitless, where the participant still carries exposure between zones. Additionally, the DWGM may not have enough facilities to make a nodal market work effectively, and it is conceivable that a single participant could have a degree of market power given the relatively few production zones within the DTS.

An illustrative example is of a business using gas in Melbourne, but finding the best priced gas at the Iona node, and then having to shoulder the burden of buying a product at Iona (where a producer is likely to sell the product, as to sell in Melbourne would carry additional risk to move the gas to).

Finally, AGL suggests the AEMC consider the difference between the NEM and the New Zealand Electricity Market (NZEM). Where the NEM is relatively liquid and regional, New Zealand's nodal market has been cited as a barrier to the development of a liquid trading market.

As an alternative to zonal pricing, AGL suggests adoption of a pipeline flow direction constraint price, as applies in the STTMs. The pipeline flow direction constraint price comes into play when more gas is withdrawn from the hub than is supported by the hub price, as it is used to compensate shippers who increase flows to the hub. AGL considers that this acts as a useful pricing signal and leads to efficient market outcomes.

13. Entry-exit with a net residual capacity market (6.4)

AGL understands option 6.4 to involve moving to a contract carriage model, where parties obtain firm entry and exit rights and have scheduling priority for flows associated with these firm rights. Any spare entry or exit capacity to the DTS would be allocated through a voluntary, net gas market which would schedule gas based on bids and offers put forward by market participants, considering the remaining available capacity on the DTS.

AGL does not currently support an entry-exit model with net residual capacity market. AGL would encourage the AEMC to allow the GMRG to develop the options to trade capacity. This working group has a wide range of industry stakeholders and is looking at several options, including the day-ahead auction, a trading platform, and how to standardise any exchange agreement.

14. Point to point contract carriage on the DTS (6.5)

Option 6.5 proposes a shift to a contract carriage model, with three potential sub-options:

- i. point-to-point contract carriage on some pipelines of the DTS while retaining market carriage for DWGM participants; or
- ii. point-to-point contract carriage on all constituent pipelines of the DTS that retains market carriage for DWGM participants; or
- iii. point-to-point contract carriage with potential balancing markets.

AGL does not support transitioning the DTS to a point to point contract carriage model, on any of the three potential models in the Paper. AGL understands the attraction of this model in that it would likely improve incentives for market-led investment in the DTS, tackling the free-rider issue, which the AEMC has referred to throughout the DWGM review process.



AGL considers that the disadvantages of contract carriage far outweigh the benefits. The AEMC has identified some of the disadvantages in its Paper – notably the complexities associated with having two system operators, potential inefficient use of capacity, and decreased fungibility of gas.

AGL's key concerns with contract carriage are that it introduces an additional step in the trading process, with reduced transparency, particularly for price and volume discovery. These disadvantages reduce overall market liquidity, which AGL considers is not in line with the aims of the DWGM review.

AGL acknowledges that contract carriage provides some participants with haulage certainty, but in AGL's view the main aim of the wholesale gas market should be to ensure that those who value the commodity the most, are those who obtain the commodity. In other words, haulage is an enabler to trade, but it should not become the facilitator of trade.

Finally, AGL considers that the AEMC's review has identified issues with the existing DWGM that are not as material as the AEMC has construed them to be. AGL suggests that implementing a full or partial contract carriage model is a significant response to address issues that AGL isn't confident exist. As AGL has noted previously, there is greater benefit to be delivered by pursuing incremental changes to the existing, mostly well-functioning, DWGM. AGL refers to its previous submissions to the DWGM review along with the detailed analysis completed by Seed Advisory in support of this point.

15. Additional alternative options

AGL has also considered the additional options in Chapter 7 of the Paper, which the AEMC has described as potential DWGM issues that do not fall strictly within the Victorian Government ToR.

7.1. Change the market floor price or market price cap to address bidding behaviour during times of constraints

AGL does not have a strong view on the issue of scheduling during constraints, but agrees with the AEMC that any changes to the market floor price or market price cap will require detailed consideration of potential implications.

AGL notes that the current price cap is significant if it applies to an early schedule. In the NEM, 7.5hrs of VoLL is the trigger for the CPT. However, if \$800/GJ was applied at 6am schedule in the DWGM, an entire 24hrs worth of volume would be settled on this price.

7.2. Review the market clearing engine algorithm and inputs

AGL does not support a review of the market clearing engine algorithm and inputs as part of the current DWGM review, as reviewing the clearing engine would be a large task, while the results of a review could lead to significant changes to the market.

7.3. Publication of linepack adjustments

AGL supports the proposal from other stakeholders that more frequent supply and demand information in the DWGM should be provided by AEMO, and agrees that this would enable participants to adjust their bids and offers for the next schedule as required. AGL considers this change could be made as part of the current DWGM review.



7.4. Provision of more timely market data

In principle, AGL is supportive of measures to provide customer consumption and allocation information to participants in a timelier manner, but questions whether it is possible for this to occur given infrastructure limitations and the potential for inaccuracies that the AEMC notes in the Paper. Could these obstacles be circumvented or overcome, AGL would support this issue being addressed within the scope of the current DWGM review.

7.5. Recentralise market demand forecasts

AGL supports the stakeholder suggestion that AEMO prepare and publish an estimated mass market demand forecast. AGL considers that AEMO is best placed to undertake this task, and while many incumbent participants will continue to create their own internal forecasts, AEMO providing a mass market forecast reduces barriers to entry for new participants who may not initially have the resources to do their own.

7.6. Descheduled gas

AGL considers that the issue of being de-scheduled due to a constraint is a fundamental risk in a physical market. Whilst amending the OS and MS schedule should restore participant's confidence in the price outcomes (and the corresponding schedule that results). The next issue would be around providing information to allow participants to mitigate the risk of a constraint. This could be achieved by providing more frequent provisional schedule outcomes (a 'pre-dispatch', like the NEM), and more timely market data on pipeline or facility limitations before the schedule cut-off. However, the fundamental risk of taking on supply from one source and then relying on capacity on one pipe should not be removed from the market.