



2 December 2016

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

Submitted online: www.aemc.gov.au

Dear Mr Pierce

Review of the Victorian Declared Wholesale Gas Market – Draft Final Report

Origin Energy Limited (Origin) welcomes the opportunity to provide comments on the Australian Energy Market Commission's (AEMC) Review of the Victorian Declared Wholesale Gas Market (DWGM) Draft Final Report.

There is currently a strong focus on ensuring wholesale gas market arrangements remain fit for purpose on the east coast of Australia. In particular, that the existing framework governing wholesale trading arrangements and pipeline access provide market participants with sufficient flexibility to manage the risks associated with changing gas market dynamics.

As noted by the AEMC, the DWGM has largely achieved its objectives of supporting retail competition and encouraging diversity of supply and upstream competition. But it is clear there are opportunities for improvement. While the DWGM provides an effective mechanism for managing short-term trading positions, avenues for managing pricing risk are limited. Signals and incentives for investment in pipeline capacity could also be improved to facilitate more market-led outcomes.

With the above in mind, Origin supports the intent of the AEMC's reform package, which is consistent with the COAG Energy Council's vision for enhanced market efficiency. We do not, however, agree with the AEMC's approach to the reform process as it disregards the current state of the market. A majority of submissions to the AEMC have highlighted that while the market is not perfect, it continues to perform well in a number of areas. To minimise the cost of transition to energy consumers and industry, and to maximise net benefits to the market overall, policy makers should build on the aspects of the DWGM that work well while looking to address the areas that are deficient. The case for completely dismantling the existing framework has not been made, and is sub-optimal under the current circumstances. It must be recognised there is a key distinction between choosing a design at market start and transitioning an existing market to a completely new framework. With respect to the latter, there should be a significantly high threshold if an existing market is to be abandoned.

Targeted reforms that build on the existing market framework could deliver better outcomes

Notwithstanding the issues with respect to risk management and investment signals, the current DWGM model contains a number of valued features. In particular, the gross pool and market carriage framework aids liquidity and is conducive to new market entry and promoting competition. The centralised approach to balancing in the DWGM is also highly efficient and adequately incentivises market participants to remain in balance while also ensuring system security.

Origin has identified a suite of alternate reforms that are consistent with preserving the benefits of the current market while also ensuring the wholesale trading and associated pipeline transportation arrangements are improved this approach. These are noted below.

1. Maintain the gross pool but simplify the pricing mechanism by removing ancillary payments and associated uplift charges. A single auction schedule that optimises bids and offers subject to all transmission pipeline constraints would provide a 'cleaner' market price and assist with facilitating the development of financial derivatives to manage risk.
2. Establish a voluntary trading platform for trading day-ahead and longer-term products. This is consistent with a key element of the AEMC's model and would allow market participants to trade longer dated products on the exchange ahead of the mandatory daily auction. It would also provide greater consistency with the Wallumbilla Gas Supply Hub (GSH), hence improving opportunities for trade between the two markets.
3. Replace AMDQ(cc) with firmer capacity rights that guarantee access when there is congestion. This would assist with facilitating more market-led investment in the Declared Transmission System (DTS).
4. Separate the DTS into four distinct trading zones and establish capacity rights between those zones. This would provide more locational specific price signals and assist with identifying (and potentially addressing) congestion within the market, and also compartmentalise the cost of congestion, which could ultimately facilitate the development of financial products.

Origin believes Reforms 1 to 3 above could be implemented as an initial reform package, with further consideration given to the merit of Reform 4 after the market has been given sufficient time to adjust, and the impact of reforms 1 to 3 is determined.

A potential path forward

Consideration should be given to a staged approach to the reform process. This would assist with minimising any costs of transition and adverse impacts on market participants and also allow for adjustment to changing market dynamics over time. It also allows for an examination of success/failure, which is essential when pursuing a fundamental market reform program. The reform package proposed above is consistent with this approach.

More detailed views on the AEMC's proposal and opportunities for market reform are provided in Attachment 1. These views should be considered alongside the supplementary report prepared by Seed Advisory on behalf of market participants, which has been submitted as a separate item.

If you wish to discuss any aspect of this submission further, please contact Shaun Cole at shaun.cole@originenergy.com.au or on 03 8665 7366.

Yours Sincerely,



Steve Reid

Manager Wholesale Regulatory Policy

Reforming the Victorian Declared Wholesale Gas Market

Assessment of the AEMC model relative to the existing DWGM

Origin has provided an assessment of the AEMC's proposed model relative to the existing DWGM framework. In particular, consideration has been given to how both models perform (or would likely perform) in six key areas that are tied to the characteristics of a well-functioning gas market, as noted below.

1. Market liquidity
2. Market competitiveness
3. Timely and efficient infrastructure investment
4. Risk management
5. System security and balancing
6. Facilitating flows across the east coast

Given the magnitude of the change being considered, the views presented below focus principally on fundamental elements of the AEMC's proposal rather than specific technical design elements (noting these issues would need to be considered as part of the detailed design/implementation phase).

1. Market liquidity

Key point(s):

- The characteristics of the Victorian Gas market are fundamentally different to key European gas markets and less well suited to voluntary trading arrangements utilised in those markets.
- The existing DWGM facilitates market liquidity and aids price discovery by providing maximum visibility of all gas within the system. Transitioning to a voluntary trading exchange will ultimately impede market transparency and is unlikely to facilitate the level of liquidity required to justify the reform.

The success of the AEMC's model is largely predicated on the development of a highly liquid trading market that can underpin the development of a meaningful reference price and financial derivatives to manage risk. Market outcomes observed at the National Balancing Point (NBP) in the UK and Title Transfer Facility (TTF) in the Netherlands are frequently cited in this regard. But there are fundamental differences between these markets and the DWGM that will ultimately constrain the level of market liquidity that can be achieved under a voluntary market framework and undermine the case for reform.

The Victorian gas market exhibits fundamentally different characteristics to key European markets

European markets were largely developed alongside active bilateral and over-the-counter commodity markets and have generally exhibited lower levels of supply concentration relative to Victoria.

European gas market participants have therefore historically benefited from the ability to access gas supply from alternate sources and through alternate mechanisms.

This supply-side diversity is complemented by significant levels of interconnection between regions and a level of demand far in excess of that observed in Victoria – around 200 PJ/a in Victoria relative to 1,600 PJ/a in the Netherlands and 3,270 PJ/a in the UK. High system linepack and access to storage also increases the level of flexibility to manage imbalances within the European markets, which is important from a risk management perspective (discussed in further detail in section 5). In this respect, it is worth noting that the development of the TTF was initially impeded by a range of structural factors, including a lack of import infrastructure and storage facilities and poor utilisation of transport infrastructure.

Given these relative differences, the level of liquidity that could potentially be realised in the Victorian gas market is likely to be limited relative to the aforementioned European markets.

The mandatory gross pool model better promotes price discovery and liquidity

The current market framework promotes liquidity by requiring all market participants to trade through a gross pool. While a significant proportion of the gas transacted through the daily auction (approximately 80 per cent) is by market participants offering gas to the market and at the same time bidding to have it back, this should not be viewed as a significant shortcoming of the market. These bids and offers can equally be accessed by third parties. Further, as discussed above, the assumption that liquidity will be improved under the AEMC model appears unlikely and is not supported by any evidence or robust analysis.

Regardless of the proportion of pure buy/sell orders, a key benefit of the mandatory trading mechanism is that it provides maximum visibility of all gas that is potentially available for supply and demand for withdrawal within the system. This includes the value of flexible LNG supply, which is typically bid into the market to balance a participant's exposure in the event of a supply disruption and/or high-priced event. This 'all in' approach improves price discovery within the market and facilitates access to balancing gas, which along with the open access regime is highly conducive to new market entry. It was also a key reason as to why market participants relied heavily on the DWGM to acquire additional volumes of gas during the volatile trading period observed in July 2016.

The AEMC's proposed model will be unable to replicate this level of information transparency and by extension liquidity. A possible outcome is that market participants may rely more heavily on GSA's to manage their underlying positions given an inability to efficiently price gas within the market and concerns around self managing balancing requirements.

2. Market Competitiveness

Key point(s):

- **The DWGM's gross pool and market carriage framework is conducive to new market entry and participation by small market participants, since it provides open access to pipeline capacity and wholesale gas supply. The AEMC's approach will create additional risk and operational burden for this group of market participants, the impact of which will be exacerbated if liquidity in the voluntary exchange is limited.**
-

The DWGM is highly conducive to new market entry and promoting retail competition. The daily auction and market carriage elements of the DWGM provide market participants with access to spot gas and transportation capacity independent of an underlying gas supply agreement (GSA) or gas

transportation agreement (GTA). As such, retail competition in the Victorian gas market is generally considered to be effective, with low market concentration and high customer activity – two new retailers entered the market in 2015, bringing the total number to 10.

According to the AEMC, the proposed model will also encourage participation by small retailers and not impose any additional barriers to entry. The participation of small retailers in many of the European markets that have well developed entry/exit gas systems is noted in this regard. But despite the circumstances observed internationally, relative to the existing market it is difficult to see how this statement holds true. Southern Hub model is likely to increase market complexity and create additional trading risk for market participants. These issues are discussed in further detail below, and Table 2 provides a comparison of relevant factors to consider for new market entry under both the existing framework and the AEMC’s model.

Voluntary trading and continuous balancing may impede access to supply and increase trading risk

Origin does not believe the proposed model will be able to replicate the level of market liquidity facilitated through the current gross pool model. The ability of market participants to rely purely on spot gas is therefore likely to be diminished and may require new entrants and smaller retailers to obtain an underlying GSA, which is not currently the case.

Continuous balancing also imposes additional financial risk and operational burden on market participants. These issues are likely to be particularly acute for smaller retailers and new entrants that may have limited operational capacity to continuously monitor balancing requirements and a lack of portfolio flexibility to physically respond. These issues are discussed in further detail in *Section 6*.

Entry/exit capacity arrangements create an additional hurdle

One of the key enabling factors for new market entry in the DWGM is that a GTA is not required, to participate in the market. The requirement to purchase entry/exit rights therefore introduces an additional hurdle for market participants. While a key benefit of this arrangement is that market participants will have greater certainty around pipeline access, how this balances with the removal of the open access nature of the market remains unclear.

Table 2: Entering the DWGM as a new market participant – model comparison

Current DWGM	AEMC model
<p><i>Develop internal business case for market entry</i></p> <ul style="list-style-type: none"> ▪ Negotiate and execute a small gas supply agreement and / or use the spot market to manage supply during the initial entry period. ▪ Where contract flexibility is limited, potentially manage imbalances through the spot market. 	<p><i>Develop internal business case for market entry</i></p> <ul style="list-style-type: none"> ▪ Negotiate and execute a small gas supply agreement. Coordinate acquisition of gas supply agreement with the purchase of entry/exit rights, potentially across multiple locations. ▪ Where a supply contract cannot be obtained, potentially rely on purchases from the voluntary exchange, noting liquidity may be limited. Business case for acquiring firm entry/exit rights in the absences of firm supply may also be limited. ▪ Where supply contract flexibility is limited, rely on the voluntary exchange to manage

	imbalances, noting the risk of residual balancing.
--	--

3. Timely and efficient infrastructure investment

Key point(s):

- Significant investment has occurred in the DTS under the existing framework, though incentives for market-led investment could be strengthened.
- The introduction of firm entry/exit rights under the AEMC's model addresses this issue to some degree, but may give rise to additional issues.
 - Careful balance would need to be struck between setting baseline capacity and interruptible capacity levels to provide investment certainty while also minimising the risk of congestion.
 - Coordinating commodity and pipeline capacity purchases (potentially across multiple points and at different time) increases market complexity and risk.
 - Investment within the DTS is unlikely to be materially improved relative to the existing framework.

The existing market carriage framework has facilitated investment in the DTS

Significant market-led investment has occurred in the DTS in recent years, in part driven by changes to the Australian Energy Market Operator's (AEMO) procedures that link AMDQ(cc) rights at points of interconnection with a market participant's capacity rights on the other side of the pipeline (i.e. outside of the market). Under these new procedures, APA GasNet was able to underwrite several developments through contracts for additional capacity with a number of shippers, increasing export capacity at Culcairn from 46TJ to 57TJ prior to winter 2014 and to 118TJ prior to winter 2015. Subsequent investment supported further capacity expansion of the New South Wales - Victoria Interconnect to around 150TJ/day.

Outside of these recent investments, the AEMC notes there has not been any privately funded expansion of the DTS to support general demand growth. Origin does not believe this is necessarily an indication the current framework does not adequately support market-led investment within the system. Rather, it may be a reflection of the fact that market participants are confident the regulatory framework will facilitate the required level of investment. But it is clear there are opportunities for improvement. While AMDQ and AMDQcc play an important role in providing tie-breaking rights at times of congestion, a lack of exclusive access rights potentially weakens incentives for market participants to directly underwrite investment and relieve constraints within the system (i.e. away from points of interconnection).

The AEMC model improves incentives for market led investment at entry/exit points

The proposed entry/exit regime addresses this issue to some degree by providing market participants with the ability to purchase firm capacity rights at those points. But there is still a risk that investment signals emerging from this model may not be any more precise than under the existing framework,

since congestion could still occur within the DTS regardless of observed price signals at entry/exit points. Should this occur, investment within the system would likely continue to be led by the regulatory framework given the highly meshed nature of the DTS.

The entry/exit regime also introduces a range of additional factors that will influence investment decisions. As noted by the AEMC, under an entry/exit model it is critical to strike a balance between maximising pipeline utilisation and minimising congestion risk. There may be an incentive for the pipeline operator to establish the baseline level of capacity as high as possible to maximise revenue certainty. If this was to occur, it would lead to a greater likelihood of the system operator having to apply constraints to maintain the integrity of the pipeline network, which would create uncertainty for market participants and potentially undermine the value of the firm capacity. The tools available for the system operator to manage congestion and maximise system utilisation (e.g. selling interruptible capacity, buying back capacity, and performing residual balancing) would also be diminished. The Australian Energy Regulator would therefore have an important role to play in ensuring baseline capacity is set at an appropriate level.

Conversely, setting the baseline too low or requiring market participants to relinquish capacity they have already purchased risks undermining the value of firm capacity and weakens signals for investment. This would also diminish revenue certainty for the system operator. To this end, it is understood that in the UK there has been a reduction in the uptake of longer term capacity, with the system operator viewing long-term auctions as no longer providing a definitive signal of a shipper's intention to flow. The Netherlands has also had to initiate an additional planning report due to a lack of commitment to book binding long term capacity through auctions. There are indications this regional dynamic is due to an uncertain future for long term gas contracts. While this may be the result of a gradual reduction in European gas consumption since around 2009, it is essential to better understand these issues in the Victorian market context prior to implementing such arrangements.

The absence of locational price signals is problematic under both models

A key function of an effective wholesale market is managing congestion. This is particularly important in the DTS where various kinds of congestion can arise as a result of the highly variable retail load and physical constraints in the system. Typical forms of congestion are: pipeline capacity congestion (where pipelines are overbooked); and linepack capacity congestion (caused by extreme demand, where flat profiled injections are insufficient to maintain minimum pressures during peak periods).

These forms of congestion will be present regardless of the market model adopted and create uncertainty and risk for market participants. The mechanism for managing the impact of congestion on the wholesale gas market is therefore very important. But so too is the ability for market participants to efficiently identify and potentially address these congestion issues through additional investment.

In this regard, both the existing framework and Southern Hub model fail to provide meaningful and transparent price signals to identify constraints within the system. This is a symptom of having a wholesale market framework that delivers a single commodity price regardless of the existence of constraints within the system.

4. Risk management

Key point(s):

- The DWGM is not conducive to the development of financial risk management products in its current form, with market participants largely reliant on underlying GSA's to manage trading risk. This is unlikely to change under the AEMC model, with expected low levels of liquidity
-

impeding the development of a meaningful reference price.

As noted by the AEMC, market participants are only able to hedge long term price risks within the current framework by trading gas bilaterally outside of the market (e.g. with producers at injection points). The lack of successful financial management products is partly reflective of the fact that not all trading risk is captured in a single commodity price – due to separate uplift and deviation charges, hedging the commodity price can still expose traders to other price risks. Market participants can also observe that ancillary payments have been made for the entire market, though there is no direct link as to why they have been made and what portion of the DTS was constrained.

A voluntary exchange has the potential to deliver a ‘cleaner’ price signal upon which financial products could be based relative to the existing market design. But given the liquidity issues expected under the voluntary trading framework, market participants are likely to continue to manage price risk through underlying GSA’s. Where this is the case, prices observed on the voluntary exchange may not be cost-reflective and therefore not provide a meaningful point of reference for use in forward contract or financial derivative products.

Further, the proposed model actually introduces additional market complexity by moving away from the gross market model (splitting capacity and commodity) and requiring market participants to now manage the sale/acquisition of multiple products across multiple points. Given the relationship between market complexity and risk, an argument can be made that this increase in complexity doesn’t actually lower the overall risk profile of operating within the market.

5. System security and balancing

Key point(s):

- The current centralised approach to balancing in the DWGM is highly efficient and adequately incentivises market participants to remain in balance.
 - The physical characteristics of the DTS will likely undermine any benefits associated with continuous balancing and drive increased system operator intervention. This would be particularly problematic for smaller market participants and new entrants that may have a limited capacity to manage their own imbalances. It may also give rise to near-term price volatility, which could present a risk for gas-fired generators.
-

The proposed continuous balancing regime provides for a more market-led approach to balancing. Key purported benefits of this approach are: maximising use of system line pack; minimising the role of the system operator by maximising incentives to remain in balance; and potentially lowering barriers to entry for small retailers and large industrial customers. The continuous balancing regime is also expected to be a key driver of liquidity on the voluntary exchange.

Many of these benefits have been observed in the Netherlands gas transmission system. But given relative differences in market characteristics, Origin is not convinced continuous balancing will deliver the same benefits in the Victorian gas market. Further, a shift away from the efficient, centrally coordinated approach to balancing currently in place will ultimately enhance the complexity and risk of participating in the market, the impacts of which will fall disproportionately on small market participants.

The DTS has limited capacity to ‘wear’ imbalances

The benefits of a continuous balancing regime are largely tied to more flexible use of system linepack – market participants can add to, or draw on system linepack as required and may only face residual balancing costs when the system as a whole moves out of balance. While the AEMC's preliminary analysis suggests the level of linepack flexibility may be comparable with that in the Netherlands system, the flexibility afforded to market participants is ultimately a function of other factors. Key factors that reduce the DTS' ability to rely on system linepack to 'wear' imbalances are noted below.

- Spare capacity and quick-response storage is relatively limited in the DTS – the LNG storage facility is typically the only balancing tool available for quick response.
- Supply sources in the DTS are distant from the main demand centre in Melbourne, with gas from Longford and Iona taking up to 8 hours to reach Melbourne from the time it is injected.
- Winter retail demand in the DTS can be in excess of 70 per cent of total demand. This compares with around 24 per cent in the Netherlands system, where demand is typically made up of flat export demand through system border points and therefore similar in profile to industrial demand.

Under the continuous balancing mechanism, these factors will likely mean market participants are required to operate within tighter bounds relative to the Netherlands system. This significantly increases the likelihood of system operator intervention in the market and undermines the value of the reform.

Balancing requires portfolio flexibility or access to exchange-traded products

Under continuous balancing, market participants will be aware of their imbalance position in near real time and theoretically be able to choose whether to act on that information or not, hence reducing barriers to entry. But this assumes market participants also have the flexibility within their portfolios to actually act on the information.

Tools to manage on the day risk are largely physical – access to flexible supply and accurate forecasting is required. Participants with retail customers are unlikely to be able to effect a demand-side response to an imbalance position. This means any response to a balancing signal needs to be driven by a capability to quickly change the participant's supply position. This could be achieved through having access to LNG, a flexible supply contract at Longford or a storage contract with flexibility at Iona.

But a smaller market participant or new entrant may not have access to LNG or flexible supply contracts. As such, their ability to respond to any balancing signal is likely to be limited. Ultimately, these participants can either accept the balancing price (which will be determined by bids in the voluntary commodity market) or attempt to purchase/sell gas through the voluntary market or bilaterally prior to the system operator entering the market. For a smaller player therefore, their ability to manage on-the-day risk will largely depend on the liquidity and efficiency of the voluntary market. To the extent liquidity is limited, this will expose small market participants and new entrants to prices that are not reflective of underlying supply costs.

The continuous nature of the balancing model also has the potential to be more administratively burdensome than the current market, with participants having to continuously monitor their imbalance position as well as the commodity market. This burden will disproportionately impact small retailers and industrial users.

6. Facilitating the flow of gas across the east coast

Key point(s):

- Greater market alignment across the east coast is desirable where possible, but the DWGM design does not impede interregional trade.
- The splitting of capacity and commodity under the AEMC model will actually increase the complexity and risk of building a supply path to/from the Victorian market.

The AEMC's assessment of the existing market framework suggests a lack of consistency between market arrangements across the east coast may inhibit trading between regions. Greater consistency between markets is desirable where possible. In particular, the ability to trade the same forward product at the Wallumbilla GSH and Victorian gas market would offer transparent opportunities for arbitrage between the two regions. But Origin does not believe this presents a material barrier to importing/exporting gas to/from the DTS. Further, the coordination issue that arises under the Southern Hub model could actually create additional impediments.

Consider a scenario where a market participant is looking to acquire gas at Longford for export into NSW (via Culcairn) on a longer term basis. As shown in Table 2 below, under the Southern Hub model the ability for market participants to build a supply path out of the DTS is contingent on precisely aligning a larger number of variables, thereby increasing the risk of participation in the market. This is in addition to the likely increased operational and financial burden of continuous balancing.

Table 2: Approach to building a supply path and flowing gas from Longford to NSW (via Culcairn) – model comparison

Current DWGM	AEMC model
<p><i>Build supply path</i></p> <ul style="list-style-type: none"> ▪ Simultaneously negotiate and execute a GSA for injection at Longford and GTA for pipeline capacity on the NSW-Victoria Interconnect. ▪ Purchase AMDQcc at Longford and Culcairn to manage any risk of congestion, noting that access to these credits is contingent on having contractual rights outside of the market. <p><i>Flow gas</i></p> <ul style="list-style-type: none"> ▪ Submit bids to inject and offers to withdraw in the gross pool. ▪ Ability to purchase additional gas from the gross pool on an intraday basis if required. 	<p><i>Build supply path</i></p> <ul style="list-style-type: none"> ▪ Acquire entry capacity at Longford and exit capacity at Culcairn through the auction process ▪ Precisely align entry/exit rights with the acquisition of a GSA at Longford and GTA on the NSW-Victoria Interconnect. <p><i>Flow gas</i></p> <ul style="list-style-type: none"> ▪ Nominate entry/exit capacity flows. ▪ Continuously monitor balancing requirements. ▪ Ability to purchase additional gas from the exchange if required, but this is contingent on liquidity in that market. Additional commodity purchased will also have to be aligned with exit capacity rights.

Alternate market reform options

Based on the above assessment, Origin believes the current market framework has a range of valuable attributes. Critically, the gross pool and market carriage framework aids liquidity and is conducive to new market entry and promoting competition. The centralised approach to balancing in the DWGM is also highly efficient and adequately incentivises market participants to remain in balance while also ensuring system security.

But it is clear there are opportunities for improvement. While the DWGM provides an effective mechanism for managing short-term trading positions, avenues for managing pricing risk within the current framework are limited and potentially constrain further market development. Signals and incentives for investment in pipeline capacity could also be improved to facilitate more market-led outcomes.

A prudent approach to market reform is one that assists with preserving the benefits of the current market framework while also ensuring the wholesale trading and associated pipeline transportation arrangements remain fit-for-purpose in light of changing market dynamics. Origin has identified a suite of alternate reforms that are consistent with this approach, as noted below.

Reform options

1. Maintain the gross pool but remove ancillary payments and associated uplift charges

Origin believes there is merit in simplifying the pricing mechanism by removing ancillary payments and associated uplift charges. The removal of ancillary payments and uplift charges would effectively internalise their cost in the market price (i.e. there would be a single auction schedule that optimises bids and offers subject to all transmission pipeline constraints). This approach may result in more volatile and higher prices than currently observed in the market, while also effectively socialising the cost of constraints. But the trade off is that it would provide a 'cleaner' market price upon which complimentary financial products could be developed, thereby improving the ability of market participants to manage their risk profile.

2. Establish a voluntary exchange trading platform for trading day-ahead and longer-term products

The Commission notes it is unconvinced that adding exchange-based trading to the DWGM on a forward basis would be notably more successful than the current ASX derivative product. While this may be the case, reforming the wholesale market framework in the manner described above would overcome this issue. This approach would ensure the benefits of the mandatory daily market are retained, but participants would also have the confidence to trade longer dated products on the exchange. This would also achieve greater consistency with the Wallumbilla GSH, hence improving opportunities for trade between the two markets.

3. Replace AMDQ(cc) with firmer capacity rights that guarantee access when there is congestion

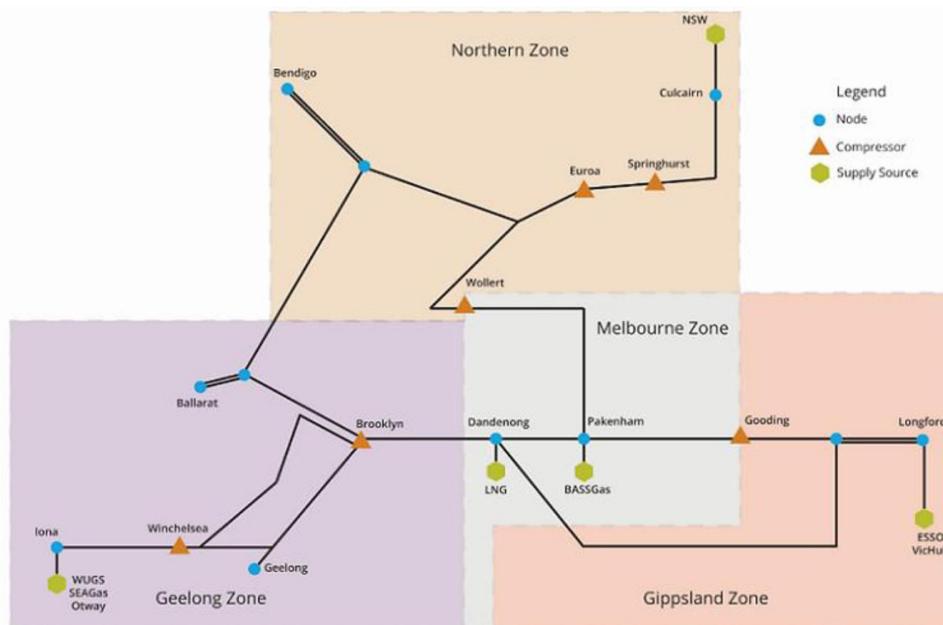
As discussed above, AMDQ(cc) can be used to provide tie-breaking rights at times of congestion, but does not guarantee firm access. Consideration should therefore be given to replacing AMDQ(cc) with some form of firmer capacity right. This would assist with incentivising market-led investment in the DTS any complement the proposed simplification of the market pricing mechanism (Reform 1).

4. Separate the DTS into four distinct trading zones and establish capacity rights between trading zones

The absence of more granular pricing signals gives rise to a range of issues in the DWGM. In particular, it impedes investment signals within the market and also provides less meaningful price signals to market participants, who have limited visibility of the actual value of gas at different locations across the DTS.

Origin believes these issues could largely be addressed by implementing four distinct trading zones, largely as defined by the AEMC in its earlier discussion paper, and introducing capacity rights between those zones.

Figure 1: AEMC representation of four potential DTS zones



AEMO's market pricing algorithm already optimises on a locational basis to reflect the physical realities of the DTS and ensure demand is met. Establishing pricing zones across the DTS would provide greater market transparency, better signal where constraints occur and also assist with compartmentalising the cost of congestion within a single trading zone. Where price variations between zones occur due to congestion, capacity rights between trading zones would provide a market determined price for usage of the system by users without such rights, and therefore a signal for investment. Consideration would need to be given to how the capacity rights are acquired and defined, but we expect they would operate in a manner similar to inter-regional settlement residues in the National Electricity Market (NEM).

As noted by the AEMC, capacity rights would only relate to inter-zonal congestion and a separate process would be required to govern investment within zones. But Origin considers the existing regulatory approach would likely be sufficient for this purpose.

Importantly, it should be recognised that in providing more meaningful price signals to market participants, a trading zone approach is also more likely to lead to the development of a meaningful reference price and will not detract from the evolution of financial products. Because market participants will have greater confidence in the pricing outcomes observed at each zone, financial derivative products could emerge and evolve in such a way that they reference trading outcomes within a single, more liquid zone, or even the weighted-average of prices observed across the market.