



11 May 2017

Mr John Pierce
Chair, Australian Energy Market Commission
Level 6, 201 Elizabeth Street
Sydney NSW 2000

Submitted online via the AEMC website

Dear Mr Pierce

RE: Assessment of alternative market designs – Review of the Victorian Declared Wholesale Gas Market (GPR0002)

About ERM Power

ERM Power Limited (ERM Power) is an Australian energy company operating electricity sales, generation and energy solutions businesses. The company has grown to become the second largest electricity provider to commercial businesses and industrials in Australia by load¹, with operations in every state and the Australian Capital Territory. A growing range of energy solutions products and services, including lighting and energy efficiency software and data analytics, are being delivered to the company's existing and new customer base. ERM Power also sells electricity in several markets in the United States. The company operates 497 megawatts of low emission, gas-fired peaking power stations in Western Australia and Queensland.

ERM Power is a gas retailer in the Declared Wholesale Gas Market of Victoria (DWGM), a shipper in the Brisbane and Sydney Short Term Trading Markets and a trading participant at the Wallumbilla Gas Supply Hub.

Alternative Designs for the Victorian wholesale gas market

ERM Power welcomes the release of the AEMC's Alternative Market Designs Paper. With the benefit of learnings gained throughout the review process and reflection on the alternative reform options presented in the AEMC's paper, we are pleased to share our views on the design features for the DWGM that would be most effective at enabling the achievement of the COAG Energy Council's vision.

1. The role of an effective wholesale gas market

We agree that there is a need to review the east coast gas market frameworks and identify changes required to ensure that the COAG Energy Council's vision, in particular, the "*establishment of a liquid wholesale gas market, and consequently, an efficient and transparent reference price for gas that provides market signals for investment and supply*"², can be delivered in the context of a changing and challenging external environment. It is well known that since the commencement of the Queensland LNG export industry, east coast domestic gas consumers have been facing increasing difficulties in accessing gas supply contracts, and or significant price hikes that are threatening the viability of their businesses. The electricity market is also being impacted with rising electricity prices and concerns about system security due to the possible lack of access to gas for electricity generation during peak

¹ Based on ERM Power analysis of latest published financial information.

² AEMC Alternative Market Designs Paper, page 1.

demand periods. Energy users are facing significant uncertainty about the extent to which, and how, these issues will be resolved in the longer term.

These challenges highlight the gaps in the current east coast gas market that urgently need to be addressed. In our view these gaps are – lack of a liquid and transparent wholesale gas market in the north, and in the south, a market (the DWGM) that despite being more liquid and transparent than its northern counterpart, contains risks that cannot be effectively hedged and is excessively complex in many respects. Limited competition in upstream supply and excessive pipeline transportation costs are also major issues that need to be noted to complete the picture (but not discussed in this submission as these topics are outside the scope of this submission).

ERM Power’s view of the ideal east coast gas market is one comprising a mandatory gross pool mechanism (across all regions and covering all major transmission pipelines) operated by an independent market operator such as AEMO, whose role it would be to optimise flows of gas from sellers to buyers based on an economic clearing of bids and offers taking into account physical constraints. All sellers would be required to participate and buyers and sellers would manage their risk exposures through financial markets, similar to the NEM. We believe that such a model would have the greatest potential to maximise liquidity and transparency, and most effectively deliver the COAG Energy Council’s vision for the Australian gas market.³ As discussed further below, our recommendations for the DWGM are aligned with this broader vision.

2. Market carriage and the mandatory gross pool have enabled competition in the DWGM and should be retained

As indicated by stakeholders in submissions, there is a view that while not being perfect, the DWGM on the whole has functioned well and been successful at facilitating retail gas competition and attracting new entrants such as large gas users and traders. Of all the facilitated trading markets in the east coast of Australia, the DWGM comprises the largest number of trading participants with the Victorian retail gas market being the most competitive.⁴ In our view, the following features of the DWGM have been underlying enablers for market entry and competition.

- **Market carriage regime**, where capacity is allocated dynamically with commodity through a competitive and transparent market clearing process. The market carriage regime offers low barriers to entry by enabling participants to operate in the market without having to contract for capacity. This is helpful for small new entrant retailers, whose rate of growth (and hence capacity requirements) can often be uncertain. Under a market carriage model, new entrants cannot be locked out due to a lack of firm capacity available for contracting. The Queensland gas retail market provides an example where two large retailers have long dominated the market due to the capacity on the Roma to Brisbane Pipeline being fully contracted⁵, with prospective new entrants unable to gain access. The current market carriage model also provides participants with flexibility in managing their positions by enabling them to adjust injections and withdrawals throughout the day without needing to have pre-contracted capacity at each point or route. A user pays approach for use of the transmission system is

³ Those opposed to such a model may put forward arguments that it would deter investment in the development of transmission or other physical infrastructure and potentially new gas supplies. However, unless such arguments are substantiated, they should not be used as a basis for dismissing the model proposed for the gas market. We highlight that the NEM comprises physical assets and is also based on a model where sellers are required to participate and AEMO optimises dispatch. The NEM provides evidence that investments in physical assets can occur under such a model.

⁴ The AEMC 2016 Retail Competition Review found that competition in the retail gas market in Victoria is stronger than in other jurisdictions (section 4.5). Based on AEMO data reported in INT 125, there are 14 registered gas retailers in the DWGM.

⁵ Since November 2016, some firm capacity has become available on the RBP, as reported on the Gas Bulletin Board.

transparent and also efficient, as users don't pay for capacity they don't use, and prices are regulated. There are also no issues such as capacity hoarding under a system of market carriage, which can be a real or perceived issue under a contract carriage model.

- **Mandatory gross pool** – requiring all participants who move gas in and out of the Declared Transmission System to submit bids and offers, results in liquidity and transparent prices determined through an economic clearing process. If the DWGM can be enhanced to allow a forward financial market to emerge, this will increase price transparency even further. As we have discussed in our earlier submissions in some detail, a voluntary market (such as the draft model proposed by the AEMC and in some of the alternative models set out in the latest AEMC paper) implemented in an environment comprising a limited number of sellers, is likely to result in the majority of trades being conducted off-market. This may occur for a range of reasons, for example to gain an information advantage or in an attempt to keep one's position undisclosed. A voluntary market could also lead to a reduced number of trades if participants do not focus on optimising beyond the level required for risk management. Such outcomes will reduce liquidity and transparency, and make it even more difficult for users to access gas at prices they can be confident reflect fair market value.

While the DWGM has performed relatively well to date, there is room for improvement. The main areas include improving the ability to manage risks and simplifying the market design. It is opportune to examine the potential benefit from more material changes (further discussed in the section below), for example, prohibiting physical gas contracting at certain locations outside the DWGM and requiring participation in the market by primary sellers (AEMC's Option 3.4), and transitioning the market to one where hedging occurs only through financial products (i.e. not by physical gas or AMDQ).

3. ERM Power recommendations for the DWGM

To create liquid wholesale gas markets and efficient and transparent prices for gas, ERM Power proposes that **the market reforms for the Southern Hub (and in the longer term for the Northern Hub and potentially the overall east coast gas market) should build upon the market carriage and gross pool design**, and require the following -

- **All gas supplied within the region to be bid into the gross pool for sale.** This would maximise liquidity and provide the foundation for the development of a financial derivative market. We would strongly support further investigation into Option 3.4, that is, mandating participation by primary sellers (producers) in the gross pool and not allowing physical trading of gas (at locations to be determined), hence requiring the use of financial products for risk management. Utilising financial products to manage risks, compared to bespoke physical products that require negotiation of detailed terms and conditions and which are often complex and administratively cumbersome, will reduce transaction costs and increase efficiency. Requiring primary sellers to offer their gas into the pool also means that any risks associated with non delivery, injection deviations or off specification gas, will be borne directly by primary sellers, who are the parties best able to manage those risks.⁶

⁶ The limited number of upstream suppliers means that buyers tend to have little negotiating power, particularly with respect to risk allocation clauses in contracts. Risks faced by buyers in the market (arising from delivery failure) may not be adequately passed through to sellers under contractual arrangements. In addition, buyers are not able to control the profile of physical injections and therefore not able to directly manage deviation risk on the injection side. Buyers offering gas into the market currently bear most of the financial risks, despite producers/facility operators being the parties who are best able to manage supply side risks.

- **Spot prices should be “clean”, and embody all price risk** - Pricing and scheduling should ideally incorporate transmission constraints and the impact of “uplift charges” – this keeps the design simple and enables risks to be effectively managed via financial instruments. We are open to retaining the concept of balance of day reschedules to continue to offer participants intraday flexibility and enable AEMO to manage system line pack requirements. We do not believe that balance of day reschedules will deter the use of financial derivatives. Our support for transmission constrained pricing is subject to further evaluation demonstrating that the model will not give rise to opportunities for gaming that could result in materially and consistently higher prices leading to inequitable wealth transfers and increased costs to consumers.
- **Standard financial instruments should be developed by ASX** - day ahead, daily, weekly, quarterly and other tenors consistent with ASX listed electricity derivatives. This will have benefits of aligning the NEM with the gas markets and enable gas fired generators or dual fuel energy users to more easily manage their positions.
- **The market design should avoid unnecessary complexity.** The current system of AMDQ and the uplift cost allocation methodology are prime examples of unnecessarily complex parts of the DWGM design, as well as being administratively cumbersome. There should be no need to have to work through pages of complex algorithms or detailed procedures to understand or quantify a risk exposure (which is the case with the current uplift cost allocation methodology). Further, such complex detailed design elements such as AMDQ are unique and tailored to the DWGM, creating inconsistencies with other markets.
- **The market design should be clear about how participants can manage their risks (financial instruments vs physical products) and avoid inconsistent approaches.** Using AMDQ again as an example, the current market design provides shippers who physically inject gas and who have ADMQ/AMDQ CC at the relevant system injection point, with benefits in the form of a congestion uplift hedge. This mechanism incentivises hedging via physical products, rather than by financial products (i.e. a participant that is buying a financial product and not injecting itself, will face increased risks compared to one that is physically injecting). This has contributed to the lack of uptake of financial derivatives in the DWGM. If an objective of the market design is to encourage the use of financial derivatives to manage risk, the design should avoid inconsistent mechanisms that encourage hedging by other products.
- **Market based signals for investment in the transmission system should come from spot prices** produced by the market. High spot prices caused by a transmission constraint would signal that investment is required in a certain part of the system. AEMO currently investigates significant pricing events in the gas markets, a process that should continue and involve identifying system constraints that contribute to significantly high prices. AEMO’s input could be taken into account by the asset owner in developing its expansion proposals and by the AER in approving any expansions. AEMO, who would have deep knowledge of system constraints impacting the market, could be given a formal planning role similar to its current role for the Victorian electricity transmission network.
- **The existing regulatory process for pipeline expansion approvals should continue with the enhancements described above. The AMDQ regime should be removed.** Under a market carriage model we agree there is little incentive for market participants to underwrite pipeline expansions, however this should not be treated as a weakness to be corrected. The absence of capacity rights available for reservation is an element of the market carriage model where it is bid price that determines who gets scheduled to inject or withdraw. It is this aspect of market

carriage that results in low barriers to entry. This benefit will be reduced by any attempts to create or overlay quasi-capacity rights (e.g. in the form of AMDQ) on a market carriage regime. Such attempts will also increase complexity of the design, and will never be fully effective at encouraging participants to underwrite capacity expansions given the underlying market carriage model. The AMDQ regime should be removed.

While the model that we propose for the DWGM retains two core features of the existing market (market carriage and mandatory gross pool), it does involve material changes from the status quo. Such changes are likely to be met with strong opposition by those whose interests are served by the current lack of liquidity and transparency in the market - at the detriment of Australian gas consumers. We acknowledge that policy makers face a significant task ahead in ensuring that self-interest does not lead to a lost or compromised opportunity to develop a set of reforms that are genuinely in the interests of Australian gas consumers and will have longer term benefit to the overall market and economy.

4. Options in the AEMC's Alternative Market Designs paper

Linking the model above to AEMC's options, we would support development of Options 3.1 and 3.4 (implemented as a package). Options 3.2 and 3.3 are less preferred, although we would be open to exploring these further should genuinely insurmountable issues be found with Options 3.1 and 3.4. As part of a further investigation into Option 3.1, we would recommend that analysis be conducted on pricing and bidding behaviour taking into account market structure, to ensure that the model does not provide opportunities for gaming that could result in significantly and consistently higher prices, unintended wealth transfers and increased costs to consumers.

Should Options 3.1, 3.2, 3.3 or 3.4 proceed (changes to enable financial trading), Options 4.2 and 4.4 (changes to enable physical trading) would not be required. Introducing mechanisms to facilitate physical trading alongside mechanisms to facilitate financial trading, would split liquidity between the financial and physical markets and reduce the effectiveness of those reforms. We strongly oppose Option 4.4 as it also reduces the market to a net pool, which is likely to have detrimental impacts on liquidity and transparency. Noting the variations set out under Option 4.3, we would be open to the concept of AEMO running a forward financial market, subject to outstanding trades not being automatically bid into the market as this would reduce flexibility in managing the financial position and make the design more complex. While we are not opposed to AEMO's proposed involvement, we note that there could be synergies from having a gas and electricity derivative market run by a single exchange such as the ASX. A single platform would also help to minimise transaction costs.

ERM Power does not support the remaining options proposed in the paper (Options 5.1, 5.2, 5.3, 6.1, 6.2, 6.3, 6.4 and 6.5). The options that aim to increase the value of AMDQ/AMDQ CC entrench and exacerbate complexities in the current market design and create inconsistencies with other markets (AMDQ is a Victoria gas market specific concept – not transferable elsewhere). Option 6.3 (zonal pricing) is likely to be complex and costly, with benefits uncertain.⁷ We do not support the attempts by Options 6.4 and 6.5 to convert the DWGM into a system of contract carriage with voluntary trading. Such changes will certainly not promote liquidity nor transparency or efficiency in gas pricing.

Appendix A provides a summary of our views on each of the options in the AEMC paper.

⁷ If an objective of zonal pricing is to optimise flows at particular points (e.g. if injections above the market price can enable increased withdrawals at the same point by shippers willing to pay higher prices), this can be achieved by simpler measures, e.g. a mechanism similar to the pipeline flow directional constraint concept in the STTM.

Please feel free to contact me if you would like to discuss our submission.

Regards

A handwritten signature in black ink, appearing to be 'SK', with a stylized, flowing script.

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Appendix 1 ERM Power views on the options set out in the Alternative Market Designs Paper

Option	ERM position	Comments
3.1 Transmission Constrained Pricing Schedule	Supported, particularly if implemented alongside Option 3.4	<p>Risks and costs captured in clean prices – allows risk management via financial products.</p> <p>Simple to understand – attractive to new entrants.</p> <p>Makes current uplift allocation methodology redundant, thereby removing an overly complex aspect of the current market (which is also arguably inequitable).</p> <p>The overly complex AMDQ regime should be removed.</p> <p>The potential impact on prices should be analysed using historical data (i.e. what would prices have been if the Operating Schedule had been used to determined prices?) Bidding behaviour (and its impact on prices) should also be considered, taking into account market structure.</p> <p>Price limits may need to be reviewed (e.g. Max Market Price, Administered Price Threshold and Administered Price Cap).</p> <p>When implemented with Option 3.4, most likely to provide the foundation for a liquid wholesale gas market.</p>
3.2 Simplified Uplift	Open to exploring further but not first preference	<p>Better than status quo. If upon further investigation, Option 3.1 is found to be likely to give rise to consistently and extremely higher or more volatile prices, then Option 3.2 could be considered as an alternative.</p> <p>Unclear whether there can be a single price faced by buyers and sellers in the event of gas being called out of merit order, assuming that only sellers providing ancillary services would be paid for their out of merit order gas rather than all sellers.</p>
3.3 Discrete Schedules	Open to exploring further but not first preference	<p>Not convinced that this option would be better than Option 3.1.</p> <p>Need to understand any factors that may limit the benefits from this option e.g. can participants make nominations to their supplier or facility operator in intervals that align with the market? Underlying commercial and operational structures need to be able to support the design.</p> <p>Regarding the proposal for AEMO to buy and sell linepack, we question how the market design would ensure that AEMO buys when the price is low and sells when the price is high, with the</p>

Option	ERM position	Comments
		outcome of a positive settlement residue. How will AEMO's performance be measured in this area and its obligations enforced?
3.4 Prohibiting Physical Contracting	Supported. Should be considered alongside Option 3.1.	<p>Challenging to implement, however could result in significant benefits for gas consumers by establishing a genuinely strong foundation for the development of a liquid and transparent wholesale market for gas. Forcing all gas to be bid into the pool (including by producers) will ensure that there is volume available at a transparently determined price.</p> <p>Buyers and sellers would face incentives to manage their risks through financial contracts, similar to the NEM.</p> <p>Would render obsolete existing aspects of the DWGM that are administratively cumbersome or complex - buyers would no longer have to apply and gain accreditation at injection points or enter into allocation arrangements, and the overly complex AMDQ and uplift charges regime could be discarded (if implemented with Option 3.1).</p> <p>Would increase alignment with the NEM, reducing complexities and transaction costs for participants who operate in both the NEM and gas markets, and lower barriers to entry.</p>
4.2 Forward physical trading outside the DWGM	Not required if the "financial trading" options are implemented	Not required if risks can be managed through financial products.
4.3 Forward physical trading within the DWGM	Open to this option only to the extent that it involves the introduction of a financial forwards market, and does not involve automatic bidding of net trades into the pool.	<p>While we don't oppose the idea of AEMO running such a market, an ASX run market could be beneficial as it could leverage off the existing electricity derivative market. There could be synergies from having a gas and electricity derivative market run by a single exchange.</p> <p>AMDQ regime should be dismantled as it is overly complex, administratively cumbersome, incentivises physical hedging hence undermining the value of financial derivatives as a tool for managing risk, and creates a barrier to entry.</p>
4.4 Forward Trading with a net daily gas market	Not supported	<p>Involves the conversion of the gross pool into a net pool, which is likely to result in a loss of liquidity and transparency.</p> <p>Adds complexity.</p>
5.1 AMDQ signals prior to capacity expansions	Not supported	AMDQ regime should be dismantled as it is overly complex, administratively cumbersome, incentivises physical hedging hence undermining

Option	ERM position	Comments
		the value of financial derivatives as a tool for managing risk, and creates a barrier to entry. High spot prices should signal constraints and hence the need for investment.
5.2 Improve ADMQ allocation and trading	Not supported	AMDQ regime should be dismantled as it is overly complex, administratively cumbersome, incentivises physical hedging hence undermining the value of financial derivatives as a tool for managing risk, and creates a barrier to entry. High spot prices should signal constraints and hence the need for investment.
5.3 Exit AMDQ	Not supported	AMDQ regime should be dismantled as it is overly complex, administratively cumbersome, incentivises physical hedging hence undermining the value of financial derivatives as a tool for managing risk, and creates a barrier to entry. High spot prices should signal constraints and hence the need for investment.
6.1 Improving scheduling priority (through AMDQ)	Not supported	AMDQ regime should be dismantled as it is overly complex, administratively cumbersome, incentivises physical hedging hence undermining the value of financial derivatives as a tool for managing risk, and creates a barrier to entry. High spot prices should signal constraints and hence the need for investment.
6.2 Firmer financial rights (through AMDQ)	Not supported	AMDQ regime should be dismantled as it is overly complex, administratively cumbersome, incentivises physical hedging hence undermining the value of financial derivatives as a tool for managing risk, and creates a barrier to entry. High spot prices should signal constraints and hence the need for investment.
6.3 Zonal pricing with settlement residues	Not supported	Complex and likely to be costly.
6.4 Entry Exit with a net residual capacity market	Strongly oppose	Unwinds the gross pool mechanism and market carriage model – unlikely to promote the development of a liquid wholesale gas market or an efficient reference price. Transparency will be reduced.
6.5 Point to point firm rights	Strongly oppose	Unwinds the gross pool mechanism and market carriage model – unlikely to promote the development of a liquid wholesale gas market or an efficient reference price. Transparency will be reduced.