# Australian Energy Market Commission – East Coast Wholesale Gas Market and Pipeline Frameworks Review – Pipeline Capacity Discussion Paper

Submission by Department of Economic Development, Jobs, Transport and Resources

State Government Victoria

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# 1. Introduction

The Department welcomes this opportunity to comment on the Australian Energy Market Commission (AEMC)'s discussion paper on pipeline capacity rights. This is a crucial part of the AEMC's review of east coast gas markets, and this review in turn is a once-in-twenty-years opportunity to reshape the gas sector to deliver on the future challenges of an export-linked gas market.

As the AEMC rightly acknowledges, the ability to access and trade pipeline capacity is foundational to the construction of a market for the open trading of gas as a commodity – a key objective of the COAG Energy Council's vision. That vision included a key outcome which was:

> **Outcome 7**: Access to regional demand markets through more harmonised pipeline capacity contracting arrangements which are flexible, comparable, transparent on price, and non-discriminatory in terms of shippers' rights, in order to accommodate evolving market structures (COAG Energy Council, 2014).

It is only when pipeline capacity entitlements can be valued on the market and freely traded by market participants that a transition from a market based on long-term, locked-in, customer and location specific gas prices to one where arbitrage and open exchange (allowing the collective management of gas price risks though the broader market) becomes possible. In the absence of harmonised, transparent, flexible and non-discriminatory trading arrangements shippers are likely to face significant barriers to moving gas across regions to those locations where it is valued the most.

At a time when the east coast gas market is undergoing a major transformation in response to LNG exports it is critical that gas can be transported through east coast gas networks flexibly. Importantly, the export of substantial quantities of gas is likely to lead to circumstances where shippers may seek to take advantage of domestic trading opportunities – for example, to trade surplus gas into the east coast domestic markets. It is therefore important that transportation arrangements do not create barriers to new innovations and opportunities that could enhance competition in east coast markets and therefore benefit consumers.

Barriers to the trading of gas introduced by inflexibility in the gas transportation and capacity arrangements ultimately leads to market fragmentation and the inability or unwillingness of shippers to trade, and the incomparability of prices across regions despite their interconnection by pipelines.The AEMC has found – consistent with many industry participants' perceptions – a range of problems with the way pipeline access is dealt with in Australia. These include:

1. high search and transaction costs in the market for transmission capacity, particularly for shorter-term trades;
2. the lack of incentives to provide access by shippers that hold capacity; and
3. the lack of incentives to facilitate access by pipeline owners (Australian Energy Market Commission, 2015a).

These are legitimate problems with far reaching consequences, and the AEMC should propose solutions which are holistic and practical in remedying these problems.

# 2. Victoria's interests

Victoria is the state most exposed in its domestic economy to gas prices, and most dependent upon gas supplies for heating for comfort and wellbeing. Given the expectations that the advent of Liquefied Natural Gas exports from Queensland will place upward pressure on domestic gas prices over the long term, and that these prices will filter through to the rest of

the eastern gas market, Victoria must manage a range of impacts without necessarily benefiting from these exports. Victoria must also ensure that changes in the market do not imperil security of supply.

As the AEMC notes, export linkage is expected to introduce more volatility and unpredictability into the domestic gas market in addition to placing generally upward pressures on prices. At the same time, this volatility and unpredictability works against the use of the traditional mechanism for managing gas price risk in Australia – long term gas supply contracts – as suppliers are evidently less willing to offer these under the new conditions. This is problematic for industrial customers, gas retailers, and the domestic and small business customers served by those retailers.

Hence, market reform, and importantly, transparent and efficient gas transportation arrangements that facilitate the movement of gas across regions through short, medium and longer term contracts is critical to enabling effective risk management and ensuring that competition is maximized for Victorian industrial, business and residential gas users.

A reformed market where gas can be competitively traded across regions, allocated efficiently by the market, and giving rise to transparent price signals for further investment, conservation and demand response, offers the prospect of better tools for management of gas price risks by consumers and retailers. Efficiency and security of supply are best delivered by such a market. But the current state of the eastern gas market is far from this ideal, as the AEMC's review documents make clear.

Victoria's interests therefore can be summarised as:

- Ensuring the continued security of supply to Victorian customers
- Ensuring competition in the production and retailing of gas to limit price pressures on Victorians
- Development of transparent market signals resulting in efficient demand response and better ways to manage gas price risks for Victorian customers
- Efficient utilisation of the Victorian principal transmission system in service of the above
- Ensuring interstate trade of gas is efficient to the mutual benefit of Victoria and the other states and territories

It is with these in mind that the Department comments upon the AEMC's paper on pipeline capacity regulation and trading.

## 3. The Commission's proposals

The AEMC notes a number of problems with the current situation regarding the trading of pipeline capacity. These problems include restrictive contract terms, the time taken to negotiate gas transport agreements (GTA), incentives for contractual congestion, bespoke and non-comparable GTAs, and the patchwork of covered (full access regulated), covered (light regulated) and non-covered pipelines. The Department agrees with the AEMC's assessment that these are real and material problems for the gas market.

The AEMC has proposed three categories of response to the problems identified, these being:

- Approach A – facilitate trading between parties
- Approach B – improve the incentives of capacity holders in the provision of capacity
- Approach C – improve the incentives of pipeline owners in facilitating access to capacity

As the Commission notes, these are not mutually exclusive approaches, and which of them are chosen (and what mechanisms are chosen to progress them) depends in part on the

diagnosis of where the problem lies in the current system. The AEMC has noted trade friction, monopoly pricing and bargaining power, and incentives to hoard all as potential problems.

To better understand the nature of the problem, the Department has been concerned to learn lessons from jurisdictions that have successfully tackled the process of gas market reform. Of these, the United States is the world leader, with trade in natural gas futures at Henry Hub forming one of the world's most liquid commodity markets. This success in stimulating futures trading of gas is enviable for Australia given the role of futures trading in managing commodity price risk over the long term (Grossman, 1977, Kellard, Newbold, Rayner, & Ennew, 1999). Given the conditions of substantially greater risk, facilitating the management of that risk is a natural priority for governments.

The Department commissioned analyses by NERA consultant Dr Jeff Makholm into the facilitation of pipeline capacity trading, which was a significant focus of the Federal Energy Regulatory Commission (FERC) during the United States' long process of gas industry restructuring from the 1980s to the 2000s. In this process, the FERC and pipeline industry undertook a number of important actions, including:

1. Pipeline companies accepted the principle of "open access" to their lines by third-party gas sellers.
2. To operationalise "open-access", greater physical specification of contractual capacity rights was undertaken under regulatory supervision.
3. The FERC required that pipeline companies could participate in gas commodity markets but not own title to the gas shipped in their own pipelines.
4. Contractual capacity rights were put on a predictable cost basis, giving purchasers certainty about the liabilities they were acquiring with the capacity.
5. New capacity projects were made subject to "incremental pricing" (supporting their separate incremental cost pools for new capacity projects).
6. Each pipeline company created a mandatory web based method to list all available capacity and which capacity was re-sold to others (including when, for what term, and at what price). (Makholm, 2012)

Dr Makholm's contention, outlined in his own writings on the subject, is that the sum total of these actions was that across the pipeline industry, contracts for carriage were turned into "valuable and tradeable" *property rights* that formed the basis of a market in those rights.

The terms of reference for NERA's research for the Department included:

1. Setting out criteria which can be used to determine whether a pipeline capacity product or methodology constitutes "valuable and tradeable property";
2. Analysing examples of actual Australian capacity products or methodologies against these criteria.

NERA's analysis against these tasks is attached for the information of the AEMC and stakeholders. NERA's contention is that Australia's various regulatory treatments for pipeline capacity are wholly inadequate for the development of a market in that capacity. In each of the covered (contract carriage), covered (market carriage) and non-covered sectors, significant shortcomings exist which keep the allocation of capacity at the level of procedural allocation or service agreement with significant opportunities for pipelines to affect the manner in which capacity is used.

It is noted that the Victorian principal transmission system has issues regarding pipeline capacity rights which are due to the unique market carriage arrangement under the declared wholesale gas market (DWGM). As the AEMC is pursuing a separate inquiry into the DWGM for Victoria with its own issues paper, the Department will not make further comment on those issues in this paper but concentrate on the issues for the broader east coast market.

In a number of ways, NERA has found and reaffirmed what the AEMC and Australian Competition and Consumer Commission (ACCC) have already discovered in their respective reviews – trade friction, market power, a lack of transparency, an asymmetry of bargaining power between shippers and pipelines. But the analysis by NERA goes one step beyond these to point out that the sum total of these problems is one fundamental problem for the market – that no true property right to pipeline capacity has been created through contractual and regulatory action, and the lack of recognisable property rights explains the failure of any market to arise in the trading of pipeline capacity. This goes a long way to answer the challenge by pipeline companies that there is no current problem with capacity trading arrangements (Chambers, 2013). The mere fact that there is a mechanism for exchanging title to pipeline capacity does not mean that there is a product around which a market can develop. Regulatory action should flow from this principle.

With this principle in mind, the Department makes the following comments on the AEMC's proposed approaches.

## 3.1. Approach A – Facilitate trading between parties

The Commission's approach in this respect is sound. Standardisation of rights would ensure that valid comparisons can be made between rights at different prices and at different locations. It would also ensure that rights can be more easily transferred and traded between parties, facilitating competition and ensuring that gas can be transported to where it is valued the most.

Standardisation of contracts should also be supported by uniform governance arrangements – for example a uniform network or access code – which is agreed by all shippers and network businesses. This would underpin the standardisation in the pipeline capacity contract. Such a code could be independently administered with all parties being able to raise code changes for assessment and determination by this independent party.

The AEMC needs to keep in mind the benefits of uniformity of approach across the market to the development of pipeline capacity trading. The current patchwork of coverage and non-coverage in eastern Australia is not conducive to this goal. Ultimately, a form of access regulation – for example, in the form of a code as noted above - may need to apply to all major transmission pipelines before the Council's goal of an integrated market can be realised. This would clearly not be trivial to implement, but the AEMC is in the unique position of being able to contemplate far-reaching changes to parameters of access regulation which have not been opened for 20 years. This is an opportunity that should not be passed up.

As NERA's work for the Department makes clear, the approach to pipeline regulation in the successful US market has been one where fairly uniform approaches to access are taken across the continent. Regulators have made interventions to ensure that all pipelines support this framework, regulating the terms and conditions of carriage to ensure that rights are tradeable.

The release of spare capacity through an auction mechanism with fair and well understood rules would help to ensure that spare capacity is made available on a non-discriminatory basis between shippers (in line with the COAG Energy Council Outcome 7 cited above) and does not favour incumbents.

Consistent with the approach outlined by Dr Makholm, the provision of information on the quantity, price and terms and conditions of all firm and non-firm capacity available on the their pipelines is also important. As the AEMC notes, this should promote trading and reduce transaction costs, as well as assisting market participants in assessing the market value of the capacity product.

## 3.2. Approach B – Improve the incentives of capacity holders in the provision of capacity

Given the existing issues with lack of transparency in pipeline capacity arrangements it is difficult to determine the extent to which shippers are engaging in hoarding activities. Standardisation of rights and increased transparency should help in determining whether shippers are hoarding.

The AEMC has noted a range of approaches to address hoarding, including use-it–or–lose-it, oversell and buy back mechanisms as well as reserving capacity for trading in the short term. In outlining these mechanisms, the AEMC has outlined concerns that the measures often impact on existing property rights and may undermine incentives for securing and financing long term investment in pipeline infrastructure.

It should however be noted that options exist to address hoarding which do not impact on existing holders rights. For example, use-it-or-lose-it interruptible capacity could be released by the pipeliner on a short-term daily basis, based on comparisons between capacity holdings and usage over recent days. The release of interruptible capacity would neutralize any economic rents from hoarding, but would not ultimately prevent the holders of firm capacity rights from flowing their gas. Such an approach would avoid risks associated with undermining existing capacity rights and incentives to invest in pipeline capacity.

Oversell and buy back right arrangements have been applied successfully in other jurisdictions. However, whilst they have merit, they have fundamental implications for the regulatory framework. For example, as the AEMC has noted, regulatory involvement would be required in determining the level of capacity to be sold at each location, as well as to the regulatory allowances and incentives provided to pipeline businesses to buy back capacity rights in the event of physical congestion on the network and to do so in a least cost manner.

There is likely to be considerable merit in prohibiting contractual provisions that limit pipeline capacity trading by pipeline owners. It is important that pipeline owners should be able to release spare unused capacity to the market so as to ensure that gas can flow to those locations where it is valued.

## 3.3. Approach C – Improve the incentives of pipeline owners in facilitating access to capacity

The AEMC has noted that the existing third party access framework that applies in gas might not be effectively targeted at market failures in the gas transmission sector that lead to the inefficient under-utilisation of pipeline capacity, particularly if it is being offered for sale at monopoly prices.

Action in this space is likely to be unavoidable if pipeline capacity rights are to be strengthened to the point where they will be freely traded. The power of pipelines to overrule, restrict or affect the market value of pipeline capacity rights is clear from the evidence the AEMC has gathered. As NERA's work for the Department shows, the actions of the FERC have systematically strengthened the rights of rightsholders, whilst respecting the commercial pressures that face pipeline investors. A form of price regulation is applied too, albeit one which is lighter handed and designed to ensure the value of pipeline entitlements is maintained, rather than seeking to eliminate all monopoly pricing power.

There are examples within the east coast gas market of as available capacity being released at a premium to pre-booked firm capacity. This is concerning and appears on its face to reflect pricing that would not be consistent with what would occur in a competitive market environment. For example, were competitive forces prevailing, it is likely that spare capacity would be released at prices closer to the short run marginal cost of pipeline capacity, as opposed to being sold at a premium.

Viewed in this context, careful consideration needs to be given to the need for regulatory intervention to ensure that pipeliners release short term capacity at genuinely cost reflective prices, or even auctioned at a zero reserve price so that the market for capacity can clear. It is also unclear as to whether such a requirement would undermine incentives for future investment in pipeline capacity - for example, it is difficult to credibly consider that certain market participants would rely on accessing short-term capacity of this nature to manage their full gas portfolio requirements.

# 4. Concluding remarks

Of the various components of the AEMC's review, the pipeline capacity issue is likely to be the most important for further market development, and also the most difficult to solve. None of the market designs put forward by the AEMC in its wholesale gas markets discussion paper (Australian Energy Market Commission, 2015b) are likely to be viable without significant reforms to pipeline regulation and trading arrangements. It is noted that making changes will be difficult to do while respecting the commercial imperatives of pipeline investors and shippers, but it has not proved to be beyond the ability of international regulators and those regulators have made creation of regulated property rights for pipeline capacity the foundational reforms for broader reforms of their markets. The AEMC should not shy away from recommending significant changes to the NGL if those changes are necessary to progress the market towards the COAG Energy Council's vision for the market.

## References

Australian Energy Market Commission. (2015a, sep). *Pipeline Regulation and Capacity Trading* (Discussion Paper No. GPR0003).

Australian Energy Market Commission. (2015b, aug). *Wholesale gas markets discussion paper* (Tech. Rep.).

Chambers, M. (2013, oct). *APIA rejects UK call for audit.*

COAG Energy Council. (2014, dec). *Australian Gas Market Vision.*

Grossman, S. J. (1977, oct). The Existence of Futures Markets, Noisy Rational Expectations and Informational Externalities. *The Review of Economic Studies*, *44*(3), 431–449.

Hilmer, F. C., Taparell, G., & Rayner, M. (1993, aug). *National Competition Policy Review report, The Hilmer Report, August 1993* (Tech. Rep.). Australian Government Publishing Service. (Published: On The Web)

Keating, P. (1995, jul). *Statement by the Prime Minister, The Hon PJ Keating MP - Gas Reform Task Force.*

Kellard, N., Newbold, P., Rayner, T., & Ennew, C. (1999). The Relative Efficiency of Commodity Futures Markets. *Journal of Futures Markets*, *19*(4), 413 – 432.

Makholm, J. D. (2012). *The Political Economy of Pipelines: A Century of Comparative Institutional Development*. University of Chicago Press.

Productivity Commission. (2004, jun). *Review of the Gas Access Regime* (Inquiry Report No. 31).

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