INFORMATION

Taking stock of Australia's east coast gas market

Gas market scoping study report and next steps

The Australian Energy Market Commission today released a report on the current state of the east coast gas market. It provides an overview of changes in the east coast gas market, and identifies areas of potential improvement in the market and regulatory arrangements.

Gas market scoping study

Australia's eastern gas market is experiencing a structural increase to demand and supply in response to the establishment of a liquefied natural gas (LNG) export industry. Although LNG exports will not commence until late-2014, the domestic market is already feeling the effects of greater competition for gas. This has resulted in upward pressure on gas prices and a greater focus on the efficiency of the gas supply chain.

In response to these changes, and in our role as rule maker and market developer for Australia's energy markets, the Australian Energy Market Commission (AEMC) initiated the gas market scoping study. The purpose of the study was to:

- provide an overview of the changes underway in the eastern gas market; and
- identify areas of potential improvement in the market and regulatory arrangements that may benefit from future market development work, prioritise their importance, and identify who may be best placed to take the work forward.

K Lowe Consulting, with Farrier Swier Consulting, was engaged to assist the AEMC in undertaking the study and to prepare a report that addressed the above terms of reference.

The Commission would like to thank all stakeholders who participated in the consultation process. Stakeholder engagement is an important aspect of the AEMC's rule making and market development work, which allows us to learn from industry participants and consumer groups and provides stakeholders with an opportunity to contribute to the market development process.

Study is focussed on gas markets and pipeline regulation

The scoping study is focussed on the downstream sector – from when gas enters the pipeline system for delivery to end users.

The Commission recognises that a study of this nature will not address the upstream physical supply-side issues currently affecting the eastern gas market. This is because questions around the physical supply of gas relate to areas outside of the AEMC's functions. These supply-side issues are being examined through processes such as the joint Department of Industry and Bureau of Resources and Energy Economics domestic gas market study.

Nonetheless, we recognise the importance of the means of exchange used in gas markets and pipeline regulation to the efficiency of the natural gas supply chain. As the market changes, the AEMC considers it prudent to take stock of the current arrangements and consider the extent to which they are likely to continue to promote the national gas objective.

The AEMC will continue to work with SCER, the Australian Energy Market Operator (AEMO), the Australian Energy Regulator (AER), industry stakeholders and consumer groups on a pathway to support the development of Australia's gas markets.

AUSTRALIAN ENERGY MARKET COMMISSION LEVEL 5, 201 ELIZABETH STREET SYDNEY NSW 2000
T: 02 8296 7800 E: AEMC@AEMC.GOV.AU W: WWW.AEMC.GOV.AU

Gas market scoping study findings

Before examining the potential for further market development, the AEMC notes that the existing gas market and regulatory arrangements have served us well. Over the last 10 years there has been substantial investment in transmission pipelines, with the eastern gas market now fully integrated. Increased trading flexibility and information transparency has also occurred through initiatives, such as the Short Term Trading Market (STTM), Bulletin Board and Gas Statement of Opportunities.

A key finding of the gas market scoping study is the need for a strategic plan to assist the industry in developing a mature and well-functioning market.

When reviewing the existing gas market and regulatory arrangements, the Commission has been mindful of the reform that has occurred to date. Nonetheless, given the establishment of an LNG export industry on the east coast of Australia, it is important to consider whether the gas market arrangements are expected to continue to promote the national gas objective.

Strategic plan for gas market development

A key finding of the gas market scoping study is the need for a strategic plan for market development within which the industry can work towards achieving a more mature and well-functioning market. There is little disagreement among participants that the eastern gas market is experiencing a period of significant change. Uncertainty exists around what these changes mean and the direction that gas market development should take over the next 10 to 15 years.

This gap could be filled through a review that examines the role of trading markets, such as the STTM, Victorian declared wholesale gas market (DWGM) and the Wallumbilla gas supply hub, in eastern Australia. The review would examine the mix and location of trading markets, the size of the market and types of participants, and the costs and benefits. Any finding from the review that there is a need to develop financial risk management products would then require consideration of the need to attract sufficient liquidity to support this development.

In addition, criteria to guide future gas market development would be included in this plan. These criteria would cover matters such as the assessment framework to be used when deciding to implement a new market, the circumstances around which it might be appropriate to deploy particular types of facilitated markets, and how a market should be designed to minimise costs and risk exposure, and provide a basis for financial hedging products.

Design of the facilitated markets

Following the development of a strategic gas market development plan, the Commission sees merit in considering whether improvements to the existing STTM and DWGM designs could be made.

An important aspect of this process will be recognising the role and objectives of these markets when undertaking future market development work. For example, if it is determined that the Wallumbilla gas supply hub currently under development will be the key point of price discovery, liquidity and financial derivative trading, then this will influence the evolution of the STTM and DWGM. These existing markets could remain as balancing markets.

Clarity on the role and objectives of each of the facilitated markets will ensure that future development work is appropriately targeted. It will also mean the markets are developed with a greater chance of meeting the commercial and practical needs of participants. A further benefit is the potential for harmonisation of prudential requirements and other aspects of the STTM and DWGM, which may lead to decreased costs of participation.

Rule changes

During the scoping study consultation process some participants expressed concern about the time taken to develop, review and implement STTM and DWGM rule changes. That is, there may be some duplication of process between AEMO and the AEMC.

The Commission acknowledges that when a rule change request originates from an AEMO consultative forum, the consultation undertaken by AEMO may seem very similar to the AEMC's subsequent legislated rule change process. The Commission will discuss options to streamline this process with AEMO. However, we note that market participants do have the option of submitting an STTM rule change proposal directly to the AEMC.

With respect to DWGM rule changes, there is currently a requirement that these be submitted to the AEMC by the Victorian Minister for Energy and Resources or AEMO.

An issue subject to substantial debate is whether there is efficient use of existing pipeline capacity. First, the materiality of the issue should be determined.

There may be scope to realise efficiencies in the rule making process by removing this restriction, allowing other parties to propose DWGM rule changes. The AEMC will consult with the Victorian Department of State Development, Business and Innovation on this issue.

Pipeline investment and capacity trading

An issue currently subject to substantial debate is whether contract carriage pipelines are being efficiently utilised and if regulatory intervention is required to promote trading of unused capacity. SCER is examining this question through a Consultation Regulatory Impact Statement, while AEMO is also looking at this issue in the context of the Wallumbilla gas supply hub.

It is the Commission's view that, given the lack of publicly available data on the level of secondary trading and quantum of unmet demand for this product, it is difficult to determine how significant an issue this is. A separate piece of work by an organisation with appropriate information gathering powers may be warranted to obtain the quantitative evidence needed to achieve consensus on the materiality of this issue.

Noting the above limitations, the gas market scoping study identified some relatively low cost measures that could be introduced to decrease transaction costs that might be limiting short term trades of pipeline capacity. These include:

- developing and publishing standardised contracts for shippers (existing contract holders of pipeline capacity) to use; and
- developing a new section on the Bulletin Board (in line with rule 176 of the NGR) that can be used by participants seeking to trade spare capacity.

A related issue arising from the scoping study consultation process was the timeliness and efficiency of investment in the Victorian Declared Transmission System (DTS) (which is operated under a market carriage approach rather than the contract carriage approach applying elsewhere). Although a significant amount of investment has recently been approved by the AER and exports from Victoria are increasing, the Commission considers there is merit in examining the regulatory process and market design issues raised by stakeholders.

We note that, given the increasing interconnectedness of the eastern gas market – underlined by reports of participants looking to transport gas from Victoria to Queensland – it will be important to consider any changes to the DTS in the context of the overall integration of the eastern gas market.

If requested, the AEMC will work with SCER and the Victorian Department of State Development, Business and Innovation to address participants' questions about pipeline capacity trading and the operation of the Victorian DTS.

Other matters

The gas market scoping study identified a number of other issues that might benefit from future market development work. Some of these include:

- Improving information transparency around the operation of the gas emergency arrangements.
- Assessment of whether greater consistency between market parameters in the National Electricity Market and the STTM and DWGM is appropriate, given the presence of gas-fired electricity generation.
- Whether improvements can be made to the quality and accessibility of existing STTM, DWGM and Bulletin Board data.
- Whether any additional operators should be designated Bulletin Board facility operators.

While the gas market scoping study concluded that there was limited urgency in addressing these issues, the AEMC will brief SCER officials on the analysis behind the recommendations.

How is the gas market changing?

Natural gas produced in the eastern market has historically been utilised domestically, with prices set based on local supply and demand conditions. From 2014 this will change, as

From 2014 the east coast gas market will be linked to international energy markets through three LNG export projects currently under construction in Queensland.

the east coast of Australia is linked to international energy markets through three LNG export projects under construction in Queensland.

Supply and demand

Reports suggest that domestic gas market conditions have begun to tighten and will continue to do so as the LNG projects are brought online. This is due in part to the following factors:

- While the three LNG proponents have dedicated gas reserves and pipeline infrastructure, unforeseen difficulties in developing some of the gas fields has resulted in gas supply contracts being signed with domestic producers, reducing reserves that may have been available for the domestic market.
- During the period over which the LNG projects will become fully operational (late - 2014-2018), a number of long term domestic gas contracts are due to expire. This looks to be placing the market under additional pressure as domestic users compete for gas reserves that are capable of being developed in a relatively short timeframe.
- Changes in environmental and land access policies may be restricting the development of potential new sources of supply.

Trading of gas and pipeline capacity

Gas in eastern Australia is predominately sold under medium to long term contracts, which are entered into on a bilateral basis between producers and retailers and other large users. Buyers enter into gas transportation agreements with the owners of pipelines to deliver the gas to their delivery point, such as a distribution network or production facility. These contracting arrangements provide certainty to producers, pipeline owners and end users.

Long term contracts are a result of the capital intensive and specific nature of the assets, and the needs of large end users (such as manufacturers) who also require certainty of supply to secure finance for their own activities. A positive feature of these arrangements is that the risk associated with investment in gas infrastructure is appropriately borne by the investor, who is best placed to manage it.

However, the widespread use of contracts, which are usually confidential, limits gas pricing transparency. Even where the gas price within a contract is made public, it is difficult to compare with other publicly available information because the terms and conditions of different contracts can vary significantly and this will impact the price. Limited price transparency around the details of gas supply agreements for those outside of the market may be contributing to concerns among some consumers and governments during this period of adjustment.

As the eastern market has matured and grown producers and pipeline owners have recovered a significant proportion of their initial investment and have been willing to enter into shorter term contracts. A limited amount of trading also takes place on spot markets; however, this is primarily for the purpose of participants managing daily gas imbalances between expected and actual consumption.

Long term contracts are expected to continue to be a feature of the industry. Bringing new sources of supply online will require a significant capital outlay to fund production and pipeline infrastructure, and will therefore need to be underwritten by foundation contracts. A move towards investment decisions being taken solely on the basis of forward price signals in trading markets is unlikely to be a feature of the gas industry for some time.

An increase in the use of facilitated markets to undertake short term trades of gas and pipeline capacity is an attribute of mature and well developed gas markets around the world. However, given the size of the eastern Australian gas industry, it is not yet clear how many trading markets can be efficiently supported, while providing the liquidity and depth that supports credible prices signals and financial hedging products.

Prices

A tightening in the gas supply and demand balance has led to reports of rising prices. As the trade of gas is predominately through medium to long term contracts, which are generally bespoke and irregularly negotiated, measuring price trends is difficult. Information reported to the ASX indicates that prices in recently negotiated gas contracts have risen and, in some cases, are being linked to an international oil price benchmark. The Commission notes that a rise in gas prices should act to provide a signal for producers to bring forward investment in exploration and gas production, with recent announcements by producers indicating that this has started to occur.

Gas pipeline utilisation and flow direction is likely to be affected by the changing market dynamics.

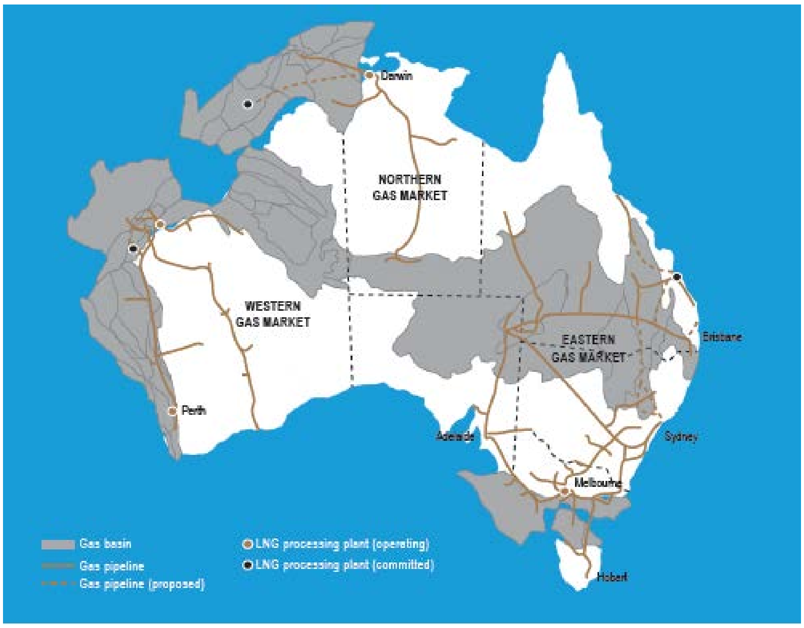
Changing utilisation of pipelines

Gas pipeline utilisation and flow direction is likely to be affected by the changing market dynamics. As a significant proportion of existing production from the Cooper and Surat basins will be diverted to the LNG facilities over the next few years, it is expected that additional gas will be supplied from Victoria into the northern states until new supplies are brought online. Developments like this will have broader implications for pipeline utilisation and investment in eastern Australia. Gas storage may also begin to play a more influential role in managing variations in supply and demand.

The gas supply chain

Australia's gas industry consists of three geographically independent regional markets – the eastern, western and northern markets (Figure 1). The eastern gas market is an interconnected network of over 20,000 kilometres of transmission pipelines stretching from Queensland through to South Australia and Tasmania.

Figure 1: Australia's gas markets



The natural gas supply chain can be broken into four main parts:

1. **Production** – gas producers explore for and develop natural gas reserves. Wholesale gas prices are negotiated between producers and large buyers (such as gas retailers and gas-fired electricity generators) on a commercial basis.
2. **Transmission networks** – are large diameter pipelines that operate under high pressure transporting gas from production facilities to distribution networks and large industrial customers. Transmission pipeline tariffs are mostly unregulated in the eastern gas market.

3. **Distribution networks** – are small diameter pipelines that operate under lower pressures than transmission pipelines and deliver gas directly to households and commercial customers. Most distribution network tariffs are regulated by the AER.
4. **Retailers** – deliver gas to small-to-medium size consumers and negotiate and enter into contracts with producers and pipeline owners on behalf of their customers. Most gas retailers are also electricity retailers and gas prices are unregulated in all jurisdictions, except New South Wales.

For information contact:
AEMC Chairman, **John Pierce** (02) 8296 7800
AEMC Chief Executive, **Paul Smith** (02) 8296 7800

Media: Communication Manager, Prudence Anderson 0404 821 935 or (02) 8296 7817
Date: 27 September 2013