Discussion Paper:
Gas Issues in Western Australia

June 2007

Economic Regulation Authority
WESTERN AUSTRALIA

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Overview

This paper presents a summary of the findings drawn from a consultation process undertaken by the Authority in late 2006 and early 2007 involving a number of significant gas users, shippers, producers, pipeline owners and relevant government agencies. These findings raise issues relevant to the Western Australian energy market which the Authority considers to be important in the context of its administration of the national third party gas access regime.

Introduction

In late 2006, the Authority decided that in view of the time which had elapsed since the introduction of the national third party gas access legislation, it would be worthwhile to undertake discussions with key stakeholders to determine their views on the effectiveness of the access regime. The purpose of this consultation was to assist the Authority in its future decision making process by providing a better understanding of whether the gas regulatory regime in Western Australian is meeting its primary objectives.

It was recognised, at the time the consultation program was being considered by the Authority, that proposed changes to the existing gas access legislation were being finalised at the national level. However, the Authority considered that stakeholder consultation based on the existing regime was still of value as the proposed new legislation and rules were not substantially different from the existing legislative arrangements.

Forty one organisations consisting of gas users, shippers, producers and pipeline owners together with relevant government agencies were proposed to be included in the Authority's consultation program. Thirty ultimately agreed to be included in this program.

The Authority appreciates the effort taken by those stakeholders who participated in this program and the frankness of these stakeholders in conveying their views to the Authority. This discussion paper seeks to respect the confidentiality of these discussions, while at the same time conveying the overall concerns expressed to the Authority.

Individual meetings with these stakeholders were undertaken by Russell Dumas (Director, Gas and Rail Access) and Peter Rixson (Manager Projects, Gas and Rail Access) over a four month period, from 26 October 2006 to 16 February 2007.

The key areas covered in these meetings were:

- Are the objectives of the national third party gas access regime being met?
- Is the Authority administering the gas access regime in an appropriate manner?
- Are there any other comments stakeholders wish to bring to the attention of the Authority in relation to their particular circumstances?

As set out in the preamble of the Gas Pipelines (Western Australia) Act 1998, the key objectives of the existing national gas access regime are to:

- facilitate the development and operation of a national market for natural gas;
- prevent abuse of monopoly power;

- promote a competitive market for natural gas in which customers may choose suppliers, including producers, retailers and traders;
- provide rights of access to natural gas pipelines on conditions that are fair and reasonable for both Service Providers and Users; and
- provide for resolution of disputes.

Results of Consultation

Natural gas is a fundamental part of Western Australia's energy market and the ability of energy suppliers and major energy users to obtain a gas supply and transport that gas to where it is needed is a key requirement for this State.

The findings from the Authority's stakeholder consultation program indicate that stakeholders have significant concerns in relation both to upstream (gas supply) and gas transport issues. Both gas supply and gas transport issues have the potential to adversely impact on the downstream (gas retailing and trading) markets. As the Authority's functions only relate to gas transportation, it is keen to understand, appreciate and separate the gas supply and transport issues in relation to their impact on downstream markets. The principal concerns expressed to the Authority are outlined below.

Upstream (Gas Supply) Issues

Many stakeholders expressed concerns about the gas supply situation. These concerns were that the gas supply market is very tight and that gas supply contracts are difficult to secure and that long term contracts are no longer available. In some cases, companies noted that they have been unable to obtain gas supply contracts because the gas producers are not interested in small contracts. If users or energy retailers cannot obtain appropriate gas supplies from gas producers then the ability to develop a competitive market for gas is significantly impeded.

It appears from the comments provided by stakeholders that there has been a considerable change in the gas supply situation in the WA market since around mid-2006. Prior to this time, long term contracts (20 to 25 years) for gas supply were available. However, since this time the maximum contract term offered by gas producers has reduced significantly. It is understood that currently, the maximum term available in the market is generally about 5 years. It is also understood that it is not currently possible to obtain gas supply contacts under about 10 TJ/day.

Gas producers commented that they were no longer offering long term contracts due to uncertainty about future gas field development costs in light of the large cost increases currently being experienced. Some of the producers also mentioned that uncertainties in relation to future gas prices and the Government's domestic gas reservation policy were additional considerations.

A number of shippers also commented that it was no longer possible to negotiate better terms and conditions for gas supply contracts with gas producers based on larger volumes, as had been the case in the past.

Some of the stakeholders mentioned that the declaration of force majeure on 28 December 2006 by the Harriet Joint Venture partners (Apache, Tap Oil and Kufpec) in relation to their 20 year, 66 TJ/day gas supply contract with Burrup Fertilisers, was a significant factor in the tightening of the gas supply market. It is understood that the force majeure related to a suspension of a requirement in the sale agreement to demonstrate reserves sufficient to meet a 20 year supply and resulted from well failures in the Harriet gas fields.

It is also understood from stakeholder comments that the Varanus Island gas supply capacity is now close to being fully committed and that little additional capacity is currently available from gas producers using the Varanus Island hub. In these circumstances, it appears that the supply of gas to the Western Australian market is likely to depend largely on NWSG for the next few years, until additional gas fields are discovered, and brought to production, around the Varanus Island hub or elsewhere.

NWSG recently advised the Authority that the upgrading program currently being undertaken on its two domestic gas processing trains had run into technical difficulties. The upgrading program had been intended to increase the capacity of these trains by circa 100 TJ/day to accommodate growing demand and align with pipeline expansions. There is restricted capability to further upgrade these trains once this expansion is completed. The North West Shelf Venture (NWSV), the owner of the gas processing facilities, would require an additional domestic gas processing train to meet any further demand for gas.

As a consequence of the technical problems experienced by NWSV during the upgrading program, further work on the upgrading program has been halted until a detailed diagnostic and technical evaluation of the problem is undertaken. NWSG has suspended marketing of domestic gas and has withdrawn from gas contract negotiations underway at that time. NWSG expects that it is likely to be some months before the technical problems can be identified and a technical solution recommended. No decision will be made until this diagnostic work is completed and assessed, which is expected to occur by about mid-2007. If, after the diagnostic work is completed, the plant's capacity is able to be increased, NWSG will engage with potential gas buyers. Subject to the technical recommendation and financial approval, the upgrading of NWSG's domestic gas processing trains is unlikely to be completed until late 2008.

Should the upgrading of NWSV's gas processing trains proceed, it is estimated that the 100 TJ/day of capacity resulting from the upgrading program will have been taken up by about mid- 2009, beyond which time no more gas will be available from NWSV and companies requiring gas will be dependent on gas from Varanus Island. Given it is currently believed that there is little new gas capacity available from the Varanus Island producers, this has the potential to lead to supply problems in the WA gas market.

It could take up to five years for the NWSV to develop a new domestic gas processing train once the upgraded trains reach capacity, given the time needed to identify sufficient demand to underpin a new train and make a decision on the substantial investment required to design and build the new train. A further constraint could arise in regard to capacity of offshore infrastructure required to provide the additional gas required for a new domestic gas processing train.

Three known potential new sources of gas which may come into the WA market at some stage in the future are the Macedon, Gorgon and Pluto gas fields. However, there is no definitive domestic gas production development timetable for these projects.

The development of Macedon is, at least in part, dependent on BHPBilliton reaching a satisfactory agreement with DBP to put this gas into the DBNGP as the Higher Heating Value (HHV) of Macedon gas does not meet the inlet gas specification under either DBP's

Standard Shipper Contract or the DBNGP access arrangement. Given the agreement required with DBP, the need for BHPBilliton to then make the decision to proceed and a three year construction period to build the infrastructure required, it is unlikely that domestic gas will be available from Macedon within the next four to five years.

Gorgon's construction timetable is uncertain with recent approval delays and cost blowouts affecting the planning for this project. It is doubtful that the earliest timeframe for domestic gas production of end 2012, as outlined in the State Agreement (and subject to a positive economic evaluation by Gorgon in 2010), is now achievable.

While the NWSG and proposed Gorgon LNG projects are both subject to State Agreements, which set out arrangements for domestic gas production, the third proposed LNG gas project off the State's North-West coast (Woodside's Pluto project) does not have a State Agreement but rather has committed to comply with the State's new domestic gas reservation policy. The cornerstone of this policy is to reserve for domestic use the equivalent of 15 percent of gas available from any future offshore development subject to commercial viability. It is understood, that under the arrangement agreed between the Government and Woodside, the Pluto field will be able to export LNG for 5 years (from the time of its first LNG exports expected to begin in late 2010) before Woodside has to carry out an economic evaluation of domestic gas production. The earliest start date for domestic gas production from Pluto (subject to a positive economic evaluation in 2015) would therefore appear to be around 2018 unless Woodside decides to develop Pluto's domestic gas earlier.

It should also be noted that another factor, which could further delay any domestic gas development from the above three potential projects, is the requirement for the DBNGP to be significantly expanded to accommodate these projects. Additional pipeline capacity in the order of 100 to 300 TJ/day would be required for each of these projects. Such expansions will require the DBP Board to come to a commercial decision to proceed with the expansions at the time they are required. Based on experience with the stage 5 expansion, it may take some time for such decisions to be made and DBP may require the Authority to undertake section 8.21 (pre-approval) determinations prior to making such decisions.

It is likely, therefore, that there could be potential problems looming in the supply of domestic gas to the WA market at various periods over the next five to seven years. Beyond 2014, it is probable that either the NWSV would have built a new domestic gas processing train (up to 300TJ/day) and/or Macedon would have been developed (up to 150TJ/day) and/or Gorgon would have developed its domestic gas processing facilities (up to 300TJ/day). Prior to this time, there are likely to be gas supply difficulties from now to late 2008 (when the NWSV's domestic gas processing train upgrading program is completed subject to overcoming the current technical difficulties) and from around mid-2009 until sometime in 2010 (between the additional capacity of 100TJ/day from the NWSV's upgrading being taken up and the Varanus Island producers bringing on stream their current known undeveloped gas fields around the Varanus Island hub (such as the Reindeer gas field owned by Santos)).

It is not known as to whether the undeveloped gas fields around Varanus will be sufficient to provide the gas market requirements over the 2010 to 2014 period or when the gas processing trains on Varanus will reach capacity and require upgrading or additions. Further, it would be expected that any new gas discoveries by Apache would need first to be allocated against its Burrup Fertilisers supply contract reserves. It is also possible that sizable new gas fields could be found onshore or close offshore in the Perth Basin. Such fields could be developed relatively quickly. Alternatively, 'greenfield' areas such as the onshore Canning Basin (in the Kimberley) might yield new large gas fields. However, it would take some time to develop the infrastructure (such as pipelines) required to support the development of such fields.

It is also possible that coal seam methane fields (CSM) could be in production in Western Australia in five years time. CSM has become a large part of the gas market in the Eastern States with its share of this market expected to reach 20% by the end of this year. Companies have recently started exploration work to investigate areas prospective for CSM production within Western Australia (presumably in response to higher domestic gas prices as discussed below).

Associated with concerns about the gas supply, stakeholders in the Authority's consultation process expressed considerable concern about the steep rise in the gas price for new gas contracts over the period since mid-2006.

A rising gas price has the potential to impact on the State's energy market in the following ways:

- On the positive side, a higher gas price encourages potential gas producers (including potential CMS producers) to undertake exploration and develop projects to supply gas to the domestic market. It was noted by at least one of the potential gas producers involved in the Authority's consultation that good returns appeared to be available from domestic gas based on the level to which gas prices had risen. Santos, in its 2006 annual report, mentioned that the sharply higher gas prices in WA will support further gas developments in that State.
- On the negative side, a higher gas price could:
  - Make Western Australia less attractive for industries with high gas usage, resulting in such industries switching investments from WA to the Eastern States (where gas prices are significantly lower) or to overseas locations where gas prices are lower.
  - Make the use of alternative fuels for base load power generation, such as coal, more attractive. This may impact on greenhouse gas emission targets and be impacted on by any carbon trading arrangement introduced in Australia.
  - Put newer energy retailers at a commercial disadvantage in the marketplace in competing against existing retailers having long term gas supply contracts at 'old prices'.

In relation to the gas price, it was evident from the discussions with stakeholders that the gas price had risen significantly over the period of the consultation (October 2006 to February 2007). In particular, there appeared to have been a large rise over the November/December 2006 period.

Information from stakeholders indicates that gas prices in the Western Australian market have more than doubled in the 12 month period since early 2006 to a current level of around $5.50 to $6/GJ. This compares with $2 to $2.50/GJ in early 2006. By contrast, on the East Coast the availability of coal seam methane has driven gas prices down from around $3.50/GJ to about $3/GJ in Victoria and NSW and about $2.50 /GJ in Queensland.

One of the stakeholders consulted estimated that the netback price of domestic gas, based on LNG prices at that time, was about $5.80/GJ. The netback price represents the price at which LNG producers would be getting a similar return on domestic gas and LNG taking into account the relevant infrastructure required to produce these two products. If

LNG prices rise then the netback price would also rise. Over the long term, the ceiling price for domestic gas would be expected to be around the netback price level.

Pipeline Issues

The principal pipelines regulated by the Authority are the Dampier to Bunbury Natural Gas Pipeline (DBNGP), the Goldfields Gas Pipeline (GGP) and the Mid-West and South-West Gas Distribution System.

The key issues of concern raised by stakeholders, in relation to each of these pipelines, are outlined below.

DBNGP

There was a consistent concern expressed by a number of shippers and potential shippers that Alinta's position as a part owner of the DBNGP would enable it, in conjunction with DBP, to inhibit competition in the downstream energy market in order to protect its position as a major energy retailer. No specific examples were provided to support this concern and the Authority is not in a position to comment on the validity of the concerns expressed.

A significant degree of concern was also expressed by shippers and potential shippers over the Standard Shipper Contract (SSC) under which all shippers on the DBNGP operate. The main concerns were that:

- the minimum 15 year contract period under the SSC constrained the ability for energy sellers to buy gas and on-sell energy to businesses when energy sale contracts were generally only up to 5 years;
- the financial hurdles (such as bank guarantees and credit rating) set by DBP to obtain a SSC were difficult for small to medium sized companies to meet;
- administration of the SSC was complex and difficult to manage; and
- DBP could be difficult to deal with in relation to SSC issues, there was little give-and-take in negotiations with DBP and DBP appeared to be under-resourced which made negotiations protracted.

A number of shippers and potential shippers also commented on the absence of a significant gas aggregator in the Western Australian gas market to allow small to medium sized energy retailers or users to readily obtain a gas supply. As noted above, such firms have difficulty in the current market in both obtaining a gas supply contract from the gas producers and a gas transportation contract on the DBNGP and would be assisted by an aggregator able to purchase gas and transport the gas on the DBNGP for on-sale to small energy retailers or users. It was evident from stakeholder comments that those parties which had undertaken some aggregation activities in the past were reducing or discontinuing such activities.

A further concern outlined by shippers and potential shippers was the lack of spare capacity on the DBNGP. This lack of spare capacity forced new shippers onto the SSC, made administration of the SSC more difficult and prevented shippers from readily obtaining additional firm capacity, forcing a wait of up to 30 months for such capacity under the terms of the SSC.

On the possible Alinta influence issue, the Code requires ringfencing arrangements to be in place between DBP and Alinta and the Authority recently exercised its discretion under the Code to require DBP to provide an annual report, from an independent auditor, outlining its compliance with the Code's ringfencing provisions. The Authority approved DBP's 2006 report and is due to receive DBP's next report in October this year. However, shippers and potential shippers expressed the view that the Code's ring-fencing arrangements may not be adequate to prevent Alinta influencing the operation of the DBNGP if it wished to do so.

The other issues outlined above are all commercial matters on which the Authority has no role or influence. In regard to the SSC, the Authority will not have any direct role until 2016 when the SSC tariffs reduce to the access arrangement tariffs and then later in 2019 when the SSC terms and conditions revert to the access arrangement terms and conditions.

Is the Authority making a difference?

If the concerns in relation to the DBNGP as discussed above are valid, it would appear that the Authority is making little difference so far as the operation of this pipeline is concerned at this point in time.

GGP

Shippers and potential shippers were generally satisfied with the operation of the GGP.

All shippers on the GGP have commercially negotiated individual shipper contracts. A number of shippers commented that GGT displayed flexibility and "give-and-take" in negotiations on these contracts.

Is the Authority making a difference?

As for the DBNGP, the Authority has no role in relation to the commercially negotiated shipper contracts. However, a number of shippers on the GGP commented that they had been able to renegotiate or were currently renegotiating their tariffs downwards in light of the access arrangement tariffs put in place by the Authority in 2005. On this basis, it could be said that the Authority has had an impact.

Mid-West and South-West Gas Distribution System

Shippers and potential shippers were generally satisfied with the operation of the Mid-West and South-West Gas Distribution System. All shippers using the Gas Distribution System have shipper contracts based on the access arrangement and the view was that the Code was working for this pipeline system.

Is the Authority making a difference?

In the case of this distribution system, the Authority is playing a direct role in ensuring the pipeline operates in accordance with the Code objectives through the access arrangement.

Transmission Pipeline Owners

An issue of concern, expressed by the transmission pipeline owners was the lack of certainty under the Code in the recovery of capital invested in expanding a pipeline.

These parties considered that there were problems with the new facilities investment section of the Code as the tests under this section did not take into account all the factors relevant to an expansion, such as demand. As a result, these parties considered that the Code failed to facilitate investment in pipeline expansions as there was no certainty that all the capital invested in the expansion could be rolled into the pipeline's capital base.

The Authority is currently preparing a paper on the new facilities investment section of the Code to be considered by the Australian Energy Regulator (AER) and other regulators which is intended to be issued as a discussion paper. While the interpretation of the new facilities investment section of the Code could be improved by having regulators agree on a more consistent approach to its application, the Authority sees merit in the economic principles underlying this section.

If it is found that changes are required to the new facilities investment section, policy makers may in future utilise the rule change process proposed under the new gas law, following appropriate consultation.

Authority's Administration of the Code

Stakeholders were generally satisfied with the Authority's administration of the Code noting that they appreciated the accessibility of the Authority and the level of consultation and discussion with stakeholders carried out by the Authority during the access arrangement assessment processes. A number of stakeholders also specifically mentioned the roundtable discussions that the Authority organised with key stakeholders at the end of last year and said that this was very useful.

A number of stakeholders also expressed support for a front-end consultative approach to future access arrangements processes with early (pre-lodgement) consideration of the information requirements for these access arrangements. The Authority will be developing, in conjunction with the AER, an early consultation program involving both service providers and the public prior to the next round of gas and electricity access arrangements.

Interestingly, some stakeholders considered that the Authority provided too much detail in decisions relating to the approval of access arrangements whereas others considered that too little detail was provided.

The Authority has received some useful suggestions from stakeholders and will take on board those ideas which have the potential to improve the way in which the Authority carries out its regulatory functions and consults with stakeholders in the future.