



This conference comes at a very opportune time for the gas industry in northern Australia.

Just two months ago AGL announced it had started preliminary engineering and design work on the \$4.5 billion natural gas pipeline from Papua New Guinea to east Australia.

A decision to build is due in mid-2006 and if it proceeds, the PNG pipeline, with expected capacity of around 200PJ a year, will be one of the largest pipelines that Australia has seen in recent times.

On completion, it may even satisfy most of the additional demand for gas and probably result in no new major pipeline developments to service the eastern Australian gas markets, for some considerable time.

But the benefits of the pipeline extend way beyond just bringing gas from PNG on to the east coast of Australia; it also has the potential to spur on development of other more marginal gas fields in Queensland, through the construction of spur lines to the PNG pipeline.

Crucial to the success of such projects would of course be the access regime that applied to the pipeline. I want to talk about this in more detail later, but first, I think it is worth putting this issue into its wider context.

### **The Australian gas industry**

Australia possesses very large reserves of natural gas. Known reserves could meet domestic demand for more than 100 years at current consumption levels.

However, while the vast majority of Australia's population is in the south-east, nearly 90 per cent of these gas reserves are located at the exact opposite end of the country in basins off the north-west coast of Western Australia.

These basins are not currently connected to south-east Australia and are instead being developed mostly to supply export markets with liquefied natural gas (LNG).

The gas reserves in south-east Australia that supply the major population centres are modest, but sufficient to meet demand for the next decade.

Reserves in the traditional sources of Gippsland, Cooper-Eromanga and Bowen-Surat basins have been supplemented by recent discoveries in the

Otway and Bass basins and exploration is currently underway in a number of other areas.

Gas production is highly concentrated, with a few gas producers dominating the eastern Australia market. In order to diversify exploration and production risk, gas producers have traditionally set up joint marketing arrangements for the sale of their gas. In addition to the joint marketing arrangements, there is extensive common ownership across gas basins.

It's expected that market concentration will decrease slightly as smaller gas fields are developed in coming years.

In addition to the traditional gas sources, Australia has massive reserves of Coal Seam Methane (CSM). These reserves are 10 times greater than all the conventional natural gas reserves in eastern Australia combined and have the potential to be a substantial source of gas in the future.

While CSM production is more costly and technically difficult than traditional gas production, it has the great advantage of being available close to the major population centres with fields being developed in the NSW and Queensland coal fields.

So there appear to be four major options for providing the new gas supplies that will be required to meet demand in south-east Australia beyond 2012:

- 1) The discovery of new reserves in south-east Australia;
- 2) The commercial development of coal seam methane;
- 3) The connection of the massive northern gas reserves to south-eastern Australia via the construction of new pipelines and
- 4) And, of course, the proposed PNG pipeline, with expected capacity of around 200PJ per year.

Ultimately the market will decide which option (or combination of options) is able to deliver the gas in the most efficient manner.

At this stage substantial new government intervention does not seem necessary in order to ensure continued gas supply to the south-east. However, it is important that the underlying policy settings ensure that the option or options that proceed are in the best interests of gas customers.

Investment decisions in the gas sector have long lead times.

Generally, (that is, except in the unlikely circumstances of unconstrained market growth), one large project's advancement can mean another project's deferral.

That is why intervention to facilitate one option over another needs to be carefully considered.

Australia's relatively low energy and gas prices provide industry with a strong competitive advantage. This has been boosted by increasing competition in the gas market over the past decade, but competition remains immature. Some segments of the gas market will not be subject to effective competition for many years.

So the best approach to maintaining Australia's low energy prices is to continue to facilitate competition where this is feasible. Where competition is not feasible, effective regulation should be applied to restrain monopoly positions and mimic effective competition. This is where the Australian Competition and Consumer Commission comes into the equation.

### ***National Access Regime***

There are three general approaches to facilitating third party access to essential facilities established in Part IIIA of the *Trade Practices Act 1974*.

1. *Effective State and Territory Access Regimes (Certification)*
  - A State or Territory Government can apply to the National Competition Council (NCC) to have an access regime 'certified' as effective. Most State gas access regimes have been certified. A service cannot be declared if it is subject to an effective State or Territory access regime.
  - To be 'certified' as effective the regime must comply with clause 6 of the Competition principles agreement which contains guiding principles that ensure State and Territory regimes reflect the underlying policy objective of enhancing effective competition.
  - The State or Territory applicant can seek review of an adverse decision by the Tribunal.
2. *Declaration/Arbitration*
  - An access seeker can apply to the NCC for declaration of a service. Once the NCC makes a recommendation, a final decision is made by the 'designated Minister'.
  - If an access seeker and service provider cannot agree on terms and conditions of access to a declared service, either party may notify an access dispute to the ACCC.
3. *Access undertakings*
  - A service provider can submit an access undertaking to the ACCC.
  - Once the undertaking is accepted, the service cannot be declared, but the provider is bound to comply with the undertaking, and the ACCC can apply to the Federal Court to enforce it.

The Government has introduced into Parliament a Bill to amend Part IIIA of the Trade Practices Act with the aim of facilitating investment in infrastructure. Features of the amendments include, among other things;

- The inclusion of an objects clause and pricing principles which the ACCC must have regard to when making decisions concerning arbitration, undertaking and access code decisions.
- An amendment to the declaration criteria from 'promote competition' to 'would promote a material increase in competition'.
- The ACCC can grant immunity from declaration for services to be delivered by government-sponsored infrastructure where the ACCC approves a competitive tender process.
- Provisions for the NCC and ACCC to use best endeavours to make decisions within a certain timeframe (eg, 6 months for access undertakings and arbitrations)
- Decisions on access undertakings and access codes will now be subject to review by the Australian Competition Tribunal.

### ***A specific access regime for gas pipelines***

In 1997 the Council of Australian Governments (CoAG) established a specific access regime for gas pipelines. Each jurisdiction passed legislation applying the National Gas Pipeline Access Law and the national access Code.

The Gas Code, as it is known, aims to:

- facilitate the development and operation of a national market for gas
- prevent abuse of monopoly power
- promote a competitive market for gas in which customers may choose suppliers, including producers, retailers and traders
- provide a right of access to gas pipelines on fair and reasonable terms for both pipeline owners and those seeking access, and
- provide for resolution of access disputes

The Commission's aim when administering the Gas Code is to achieve the same sort of outcome in terms of access prices and quality of service that would occur in a competitive market.

Accordingly, the Commission determines benchmark tariffs at levels that generate adequate returns to the infrastructure owner while enabling access seekers to compete effectively in related markets, and, provide for maintenance and improvement of facilities while not compensating for inefficient operations.

### ***Two tier regulatory approach for gas pipelines***

The national gas access regime as certified by the NCC is a two tier approach. First, the NCC upon an application being made undertakes a coverage assessment.

### *NCC evaluation*

The coverage criteria as applied by the NCC (and Tribunal, if the matter is referred to it) first evaluates whether the facility exhibits natural monopoly characteristics.

If answered in the affirmative then the assessment turns to whether the pipeline is able to exercise market power in a dependent market. Thereafter, it investigates the benefits that would accrue if the pipeline was constrained from exercising its market power.

Evidence on the application of the coverage test to date suggests that it has operated as an effective filter for determining the need for regulatory intervention.

The processes provide the opportunity for interested parties to test whether regulation is appropriate in the case of a particular pipeline.

Second, once the need for regulation for the relevant network asset has been established by the NCC and the Minister decides to cover a pipeline then an access arrangement is required. The regulator assesses the access arrangement in accordance with the law.

### **The outcomes of gas access regulation**

A consultancy undertaken by ACIL Tasman found that access regulation in the gas and electricity sectors has delivered substantial net economic benefits to the Australian economy and will deliver even greater net economic benefits in the future.

Over the 15 year modelling period, access regulation is likely to increase Australia's GDP (on a cumulative basis) by between \$2.2 billion and \$11.0 billion. ACIL Tasman estimates that approximately 10 per cent of these benefits can be attributed to the gas access regime. This substantial benefit arises due to lower prices which stimulate greater usage of electricity and gas and greater activity in upstream and downstream industries. Approximately 80 per cent of the net economic benefits over the full 15 year period arise in the next 10 years.

ACIL Tasman has determined that access regulation stimulates increased consumption of gas by between 248 PJ and 1,104 PJ over the period depending on the price assumptions used. This equates to an average annual increase in consumption of between 16.5 PJ per annum and 73.6 PJ per annum.

The stimulus to gas consumption increases steadily over the next 10 years as existing contracts reach their expiry and are replaced by contracts made in reference to regulatory determinations. For example, in the final year (2012-13) consumption of gas is increased by between 44.1 PJ per annum and 157.3 PJ per annum.

The substantial increase in gas demand under access regulation is largely driven by gas fired electricity generation. These loads tend to be reasonably price sensitive owing to competition from coal fired generators. Any increase in tariffs in the absence of access regulation will significantly affect the viability of gas fired generation.

#### *Low net costs*

The direct costs of access regulation are low compared to the net economic benefits. These costs relate to administration and compliance costs. Employing aggressive estimates of direct costs, the total avoidable direct cost of gas and electricity regulation over the 15 year period has been estimated to have a net economic cost of \$0.185 billion. This translates to approximately \$12 million per annum compared to gas and electricity turnover of \$32.4 billion per annum (that is, 0.04 per cent).<sup>1</sup>

Consumers have also benefited. The price of delivered gas would have been higher without regulation. ACIL Tasman estimates that without access regulation the price for transmission and distribution services could have been 25 per cent higher.<sup>2</sup>

#### ***Can the current regulatory regime handle greenfields investment?***

The Productivity Commission, in its review of the gas access regime, generally concluded that there has been impressive growth in the pipeline industry under the access regime but that it has the potential to deter investment in the future. Whilst the future potential to deter is underpinned by theoretical justification, the evidence supports a conclusion that the regime as applied is facilitating and could continue facilitating new pipeline development.

#### *Evidence of new pipelines*

Although the PNG project is by far much larger than what has been developed, major new pipelines have been built under the regime.

- Eastern Gas Pipeline (\$450m, 795km)
- Tasmanian Gas Pipeline (\$440m, 730km)
- SEA Gas Pipeline (estimated \$500m, 680km)
- North Queensland Pipeline (\$160m, 390km Coal Seam Methane from Moranbah to Townsville)
- Telfer Gas Pipeline (estimated \$114m, 442.5km from Port Hedland to Telfer).

*Moody's Investor services* observe that compared to overseas regulators, Australian regulators are: (1) more generous in cost allowances; (2) have allowed appropriate levels of return for transmission and distribution

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<sup>1</sup> The analysis does not attempt to estimate indirect costs that might arise through deterrence of investment, but does observe that there is no significant shortfall in current investment levels.

<sup>2</sup> Ed Willet September 2005, New Zealand gas industry speech

businesses; and (3) have provided greater certainty for regulatory outcomes at future resets.<sup>3</sup>

Similarly, Standard and Poor's commented on the 'supportive and transparent regulatory regimes', while Fitch Ratings stated 'the current regulatory regime appears relatively supportive for transmission entities'.

There are also a number of mechanisms currently available to provide regulatory certainty:

- A service provider could seek an up front opinion from the NCC whether the pipeline would meet the coverage criteria. This is a non binding opinion.
- A service provider seeking upfront regulatory certainty could provide the ACCC with an access undertaking under the provisions of Part IIIA.
- The gas code provides for the service provider of a proposed pipeline to voluntarily apply to the regulator to have its access arrangement approved.
- The ACCC's Draft Greenfields Guideline for Natural Gas Transmission Pipelines outlines the gas code's flexibility to address specific issues associated with greenfields investment.

#### **Queensland's gas access regime certification<sup>4</sup>**

The Queensland Government applied to the National Competition Council in September 1998 to recommend on the 'effectiveness' of the State's access regime for gas pipeline services (Queensland Regime). The Council forwarded its recommendation on the effectiveness of the Queensland Regime to the Commonwealth Minister for Financial Services and Regulation in February 2001.

Subsequently, the Minister notified the Council that he had received a substantial amount of new material from the Queensland Government and the owners of four gas pipelines subject to derogations under the regime. The Minister sought the Council's advice as to whether this material raised new issues of relevance to his consideration of effectiveness. To ensure that all relevant material was properly reflected in its advice to the Minister, the Council withdrew its February 2001 recommendation so as to forward a fresh recommendation once it had given full consideration to the new material. The Council forwarded its final recommendation on certification of the Queensland Gas Access Regime to the Minister on 21st November 2002.

The Minister decided that, on this occasion, he would release the Council's recommendation prior to making a decision. He issued a press release and requested that the Council make its recommendation available on its website.

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<sup>3</sup> Moody's Investors Service, *Special Comment: Australian/NZ electricity and gas industry 2004-05 outlook*, 2004, p.3.

<sup>4</sup> NCC, <http://www.ncc.gov.au/publication.asp?publicationID=72&activityID=31> viewed 16 11 2005

The Council's final recommendation was that the access regime not be certified.

### ***History of the PNG pipeline***

The PNG Gas Project is one of the biggest resource developments ever contemplated for Papua New Guinea. It is intended to tap vast quantities of natural gas in PNG's Southern Highlands and transport the gas via a pipeline over 3,000 kilometres to customers in Australia.

The pipeline would be the longest in the Southern Hemisphere and has the potential to not only generate significant national wealth and new industries in PNG but to create a new energy supply for a large part of eastern Australia.

The pipeline would be a significant engineering and construction job, travelling over 3,000 kilometres from its source in the PNG highlands, across the Gulf of Papua, 165 kilometres across Torres Strait and then down the Queensland coast.

In 1998 the Queensland government ran a competitive tender process and the outcome was that the AGL–Petronas Consortium (APC) emerged as the preferred pipeline developer.

APC submitted access principles to the relevant minister in late 2002, but then withdrew their submission in September 2003. As a consequence of this the transitional provisions under the Queensland Act ceased to have any affect and the regulator for any future access arrangement for the PNG pipeline is now the ACCC.

### ***Benefits of the PNG gas project<sup>5</sup>***

Currently the ACCC is evaluating an application for the authorisation of joint marketing by the PNG gas producers. The applicants' submission includes the following as benefits of the PNG project:

#### *Greater gas interconnectivity*

- The project will facilitate greater inter basin competition through an expansion of gas pipelines and interconnectivity.
- The benefits of greater gas interconnectivity as also noted by the Productivity Commission include;
  - Facilitation of competition in upstream and downstream markets
  - Reduced barriers to entry and increased contestability
  - Improved allocative efficiency by enabling gas to be transported to where it is most highly valued
  - Enhanced security of supply.

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<sup>5</sup> Allens Arthur Robinson, Submission accompanying the PNG Producers application for Authorisation , December 2004



### *Potential for additional gas supply sources and wider penetration of natural gas*

- Once the project is established, other potential PNG gas producers may be able to develop their resources utilising the PNG pipeline infrastructure. This could lead to other competitive supplies of PNG gas in Australia.
- The PNG pipeline may facilitate development or expansion of gas reserves in Queensland through the construction of spur lines to the Australian pipeline.
- The potential increase in gas sources would facilitate increasing penetration of natural gas to lower energy costs and improve energy service, particularly in regional Australia.

### *Downward pressure on gas prices*

- The introduction of PNG gas into the eastern Australian market will exert competitive pressure on gas supplied from other existing and developing eastern Australian basins. This pressure is estimated to put downward pressure on gas prices.
- Modelling done by ACIL concludes that, at the end of the period the average delivered wholesale price of gas in Eastern Australia is estimated to be \$0.15 to \$ 0.20/GJ (in real terms) and in Queensland \$0.25/GJ (in real terms) below the prices expected in the absence of the PNG project gas.

### **Conclusion**

Australia's gas access regulatory regime has delivered significant benefits for gas producers, pipeline owners, consumers, and the economy as a whole.

There has been a significant increase in pipeline construction in Australia under the gas Code, gas now makes up a much greater proportion of our energy mix, and consumers and business have benefited from lower prices.

The PNG gas project has the potential to deliver further significant benefits, particularly to the PNG, Australian and Queensland economies. It will provide a valuable source of power for much of north and central Queensland that has the potential to promote the development of other gas fields and mining and industry which will benefit from lower prices.

The pipeline also has the potential to be a very powerful source of competition for existing gas sources and pipeline owners.

But Australia will only maximise these benefits if the access regime for the pipeline properly takes into account the rights of all parties involved in the project, including third parties who wish to gain access to the pipeline, in order to promote further economic development.