

M. J. KIMBER CONSULTANTS PTY. LTD.

6 December 2002

The Hon Warwick Parer
Chairman
CoAG Energy Market Review
GPO Box 9839
CANBERRA ACT 2601

Dear Mr Parer,

CoAG Energy Market Review – Submission on Gas Pipeline Regulation

I wish to congratulate Mr Parer and his colleagues on the Panel for the preparation of an insightful and important review of Australia's energy industry. M.J. Kimber Consultants Pty. Ltd. welcomes the opportunity to provide its views on the draft report of the Council of Australian Governments Energy Market Review "Towards a Truly National and Efficient Energy Market" released on 15 November 2002. M.J. Kimber Consultants Pty. Ltd. wishes to make the following submission in response to the draft report.

1 PIPELINE INVESTMENT

Chapter 7 of the Panel's report appears to establish a link between the so-called "reform" of the gas industry and the construction of some thousands of kilometres of new gas transmission pipeline. However, the list of new pipelines consists almost entirely of those that were developed by entrepreneurial firms with the intention of responding to market opportunities and for which the investment decisions were made prior to the implementation of the Gas Code, or were made in circumstances where the developer proceeded with the investment in the expectation that the pipeline would not be covered by the Gas Code. The Australian Pipeline Industry Association (APIA) made this point quite strongly in one of its submissions to the Panel¹.

It was pleasing to note that the Panel has acknowledged the concerns of the APIA and firms directly involved in gas pipeline investment – *"Despite the significant progress of the natural gas sector in Australia over the past decade, key industry groups are warning of a rapidly changing investment climate for the sector. They contend that the pipeline regulatory arrangements are excessively restrictive and are impeding investment²."*

I wish to address two matters that bear directly on investment in natural gas transmission pipelines in Australia and which, if managed properly by Governments in response to the Panel's comprehensive and thoughtful report, will go some way to encouraging new investments and more intensive use of natural gas in Australia.

¹ APIA, 128.1 *Submission to the CoAG Energy Market Review responding to points raised in a submission by the NCC*, 3 September 2002

² Council of Australian Governments Energy Market Review, *Towards a truly national and efficient energy market*, November 2002

I shall address the management of risk and the inability of the current regulatory regime to accommodate the concept of project risk for pipelines. I also wish to expand on the Panel's proposal to implement so-called "behaviour regulation".

2 RISK

The Panel has acknowledged that regulatory risk is very important for potential investors in pipeline infrastructure. In addition, other risks have to be considered.

Potential and existing investors in natural gas transmission pipelines face a variety of project specific risks, such as:

- volume risk on the downstream markets being serviced
- risk of gas reserve shortfalls
- risk of substitution of gas by other fuels
- expected market growth and probabilities of different scenarios occurring

These risks are long lasting, will change over time and certainly require re-assessment throughout the life of a pipeline. In addition, the developers of new pipelines face shorter term risks associated with construction delays, currency devaluation and interest rate changes.

Unfortunately, the Gas Code fails to recognise most of these risks. The Gas Code requires the use of the capital asset pricing model (CAPM) to determine the cost of capital. CAPM does not recognise these non-diversifiable risks. This approach, together with the Gas Code's requirement for regulatory reset periods of five years makes investors very wary of committing funds to projects that face risks and long project lives – neither of which is addressed by regulators in their application of the Gas Code.

In early 2002, Macquarie Bank was asked by the ACCC to provide the views of a debt or equity provider for greenfields pipelines,³ with particular emphasis on financial risk assessments. Macquarie made it quite clear that project risk, rather than any measure of diversifiable risk was pre-eminent in its assessment.

Macquarie stated⁴, inter alia,

“Market risk is the risk that there will be insufficient usage of the pipeline to generate sufficient revenues to make the project financially feasible. Depending upon the Debt Providers' view on the likelihood of the pipeline entering into further capacity commitments, Equity essentially takes market risk.

Revenue risk relates to the pricing structure - that is the risk that the tariff structure is insufficient to provide the required amount of operating revenue. For a monopoly greenfields gas pipeline, revenue risk is related to regulatory risk which is discussed below.

The Debt Providers will review the terms of any offtake agreements with foundation customers and the obligations of both the pipeline owner and the offtaker.

³ Macquarie Bank, *Issues for debt and equity providers in assessing greenfields gas pipelines*, May 2002

⁴ *Ibid* p15

And.....

The Debt Providers will take account of the percentage of pipeline capacity which is contracted. The higher the contracted percentage, the greater the certainty of project cashflows. A secure revenue stream combined with certainty of operating and construction costs generally means that a proportionately high amount of the total capital cost of the pipeline can be raised using debt finance.

The Debt Providers will also assess the creditworthiness of the offtaker and other potential offtakers to further assess the certainty of the revenue stream. The proportion of the offtaker's total costs accounted for by the purchase relative to its revenues, the potential for cross-contamination from other companies in the corporate structure, the offtaker's market position and the price it is paying relative to other sources, are all key issues.

The Debt Providers will assess the extent of the pipeline's exposure to market risk, that is the uncontracted capacity as at financial close and Equity's forecasts for the timing and volume of future contracts to be entered into.

And⁵

Debt Providers are unlikely to take the risk that the actual project revenue may differ from forecast due to the regulatory determinations. This evidence will be required prior to the Debt Providers committing to fund the project.

The Debt Providers will assess the impact of regulatory resets on the project cashflows. The major issues which will have an impact are the asset base, the cost of capital and interest rates.

Equity may also be unprepared to take regulatory risk for a new development and may require confirmation of the regulatory requirements for the pipeline.

Macquarie's views have been echoed by many pipeline investors since the Gas Code has been in place, particularly in respect of pipelines that have either been privatised or those which have changed hands since late 1997.

3 MODIFICATIONS TO THE GAS CODE ARE LIKELY TO BE IMPOSSIBLE

The Panel's report suggested that the Gas Code should be revised to take into account the investors' concerns. I am of the view that that is not the complete answer, since the current revision process is cumbersome and has been found by pipeline investors, owners, operators and users to be unworkable. States and Territories have also voiced their concerns about the inadequacies of the NGPAC process. On the evidence, a wholesale revision of the Gas Code is not considered to be practical. Perhaps the only practical, but important change to the Gas Code that would be possible is the separation of regulation of gas transmission pipelines from that of gas distribution pipeline systems.

⁵ *Ibid* pp 16-17

The Gas Code requires the use of “cost of service” methods for determination of gas transport prices. Cost of service prices are derived from asset values, O&M costs, depreciation, return on capital and pipeline throughput. Whether dressed up in the cloaks of “net present value” or “internal rate of return”, the regulators throughout Australia persist in using cost of services methodologies, which do not reflect the true costs that confront the pipeline investor, when risk, alternative uses of capital and the value of a productive asset are taken into account. Further, cost of service methodology always results in a pipeline having zero value at the end of its so-called economic life. This approach is contrary to normal business practice where, for example, a factory or petro-chemical plant continues to have productive value, even though its book value has depreciated.

As mentioned above, the Gas Code needs to appreciate explicitly the risks that affect both greenfields and existing pipelines. To achieve appropriate recognition by regulators of risks it would be necessary for the Code to incorporate minimum requirements to which the regulator needs to give consideration. However, the ACCC has rejected this as an option in its *Draft Greenfields Guideline For Natural Gas Transmission Pipelines* published in June 2002, where it stated:

The ACCC will only consider variations to the CAPM that are purely of a systematic type. Specific, i.e. non-systematic, risks associated with a greenfields pipeline should not lead to an adjustment of beta — which reflects systematic risks only. Any such adjustment would be ad hoc and could lead to significant bias⁶.

This is a significant example of regulatory failure, where the regulator is so wedded to a theoretical conception of investment that it cannot permit commercial facts-of-life to shape its decision-making. Thus, rather than make appropriate adjustments to its regulatory approach, the ACCC would prefer to sacrifice sound investment outcomes for administrative tidiness.

It may be possible to re-write the Gas Code to address these issues but it is unlikely that those charged with re-writing the Gas Code will have the necessary background in commercial risk management to do the job. It would be necessary to satisfy the pipeline industry while providing sufficiently explicit instructions to regulators to ensure proper balancing of all parties’ interests.

Rather than attempt to modify the Gas Code to address its serious short-comings, it would be far better to establish a process of “behaviour” regulation. This will provide a new paradigm through which the competing interests can be managed. Behaviour regulation will ensure that all the terms and conditions for access to natural gas transmission pipelines are transparent and able to be supervised, while freeing businesses to undertake socially beneficial investment.

The Panel supported this view:

The Panel believes that there is merit in having minimum market supporting requirements for non-covered pipelines and was informed by the Epic Energy submission in coming to

⁶ ACCC, *Draft Greenfields Guideline For Natural Gas Transmission Pipelines*, June 2002, p12

*this view. The Panel therefore proposes that enforceable minimum requirements be developed by the industry in conjunction with the NER. This should be enabled under the legislation establishing the NER.*⁷

I would submit that behaviour regulation should not be limited to “non-covered” pipelines, but should be applicable, as an alternative to the application of the Gas Code, to all gas transmission pipelines. Regulation of specific gas transmission pipelines would revert to the Gas Code, if the owner or operator did not comply with the principles of behaviour regulation.

4 BEHAVIOUR REGULATION

Since 1997, I have promoted this way of ensuring that pipeline investors are able to manage their risks, yet be subject to the scrutiny of users and governments. In association with Duke Energy International, I set up the framework of agreements and undertakings that underpinned the access arrangements for Duke’s Eastern Gas Pipeline. An attempt was made to have this process ratified by the ACCC through the Undertaking procedures described in S.44ZZA of the *Trade Practices Act*, but the ACCC rejected this approach and ultimately Duke’s appeal to the Australian Competition Tribunal resulted in a determination that the Eastern Gas Pipeline should not be subject to the Gas Code. Despite the absence of regulation, Duke has continued to operate the pipeline and provide access generally in accordance with the principles set out in the proposed Undertaking – that is, non-discriminatory open access for all credit-worthy users, transparency of process, public disclosure of affiliate contracts etc.

The genesis of so-called behaviour regulation in Australia began in 1992, when a committee formed under the auspices of the Australian Gas Association developed an industry code of practice. The introduction to the Pipeline Access Code, that was finally published in February 1994 stated:

⁸At the meeting of the Australian and New Zealand Minerals and Energy Council (ANZMEC) Gas Industry Advisory Group (GIAG) in July 1992, a discussion paper on Open Access to Natural Gas Pipelines was tabled by the Commonwealth Government. The paper canvassed options for providing open access including the application of the existing powers of the Trade Practices Commission (TPC), extensions of those powers, or the development of an industry Code of Practice.

The paper stated:

An alternative approach to Government regulation in relation to the details of open access is one of self regulation under which the gas industry, through the relevant industry associations with input from the gas user sector as appropriate, could take a lead role in establishing an operational framework for open access in Australia.

This could take the form of a Code of Practice which outlines the steps the industry has taken to develop an industry based mechanism to facilitate the development of an effective

⁷ Council of Australian Governments Energy Market Review, *Towards a truly national and efficient energy market*, November 2002 p. 128

⁸ Pipeline Access Code Administrative Committee, Australian Gas Association, *Pipeline access code*, February 1994, p.1

and equitable open access regime in Australia. This option was supported by GIAG's industry representatives as an alternative to increased government regulation of the gas business.

In the event, the Pipeline Code of Practice was rejected by the Commonwealth Government in the light of Hilmer report and subsequent CoAG endorsed Competition Policy Agreements. The Commonwealth and other jurisdictions agreed to set up the Gas Reform Implementation Group (GRIG), which had Allen Consultants prepare the Gas Code.

In July 1997, and in response to requests for public submissions by GRIG, Michael McDanold and I, on behalf of PG&E Australia, suggested a much more sophisticated behaviour regulation process than that contemplated by the Australian Gas Association. The McDanold/Kimber paper⁹ provided a method by which all gas transmission pipelines could be accommodated under the Gas Code, whether market based or cost of service tariffs were used. This paper was summarily rejected by GRIG. It is now relevant to revisit that paper¹⁰. The paper has proven to be accurate in respect of the outcomes of the various decisions by regulators and highlights the way in which the present Gas Code's contents and application are hostile to the development of new gas transmission pipelines.

The McDanold/Kimber paper summarised its approach as follows:

- the Gas Code ignores the objective of promoting free and fair trade in natural gas and concentrates on policing negative behaviour by pipeline operators through highly prescriptive and heavy handed regulation.
- the Gas Code will not work for entrepreneurial pipeline operators and developers because of its pre-occupation with cost of service tariff setting under the watchful eye of a regulator and users with access to detailed financial information about the provision of pipeline transport services.
- the Gas Code will not promote entrepreneurial pipelines to serve developing markets where the proponent is prepared to take long-term market risk with the expectation of long-term rewards.
- in the hands of a service provider with pro-competitive objectives, the operation of the transmission infrastructure can facilitate the market and supply development necessary for significant growth in energy-intensive industries.
- implementing non-discriminatory principles for open access to the transmission system at uniform, published rates for service will send effective and up to date price signals from market to supply

Behaviour regulation is even more relevant now than in the mid 1990s, since ownership changes have resulted in unbundling of the gas supply chain and stand-alone pipeline companies now dominate the natural gas transmission pipeline sector. These companies

⁹ PG&E Australia (M.J. McDanold & M.J. Kimber), *Submission to the Gas Reform Implementation Group on July 1997 Draft of National Third Party Access Code for Natural Gas Pipeline Systems*, 24 July 1997

¹⁰ A copy of the PG&E paper can be made available to the Panel

have no incentive to inhibit access to their pipelines and can prosper only if their pipelines are more intensively used.

Behaviour regulation can be implemented by amendments to the Gas Code that require the pipeline developer, owner or service provider to:

- demonstrate that it is conducting the business of a “Competitive Market” transmission service provider independently of a natural gas producer, major consumer or retailer – this attribute will root out those service providers who have a genuine conflict of interest associated with vertical integration.
- demonstrate that it will provide non-discriminatory open access to all available and developable capacity on the transmission system – this attribute will ensure that all parties are given access to the transmission system on a completely non-discriminatory basis, an essential element to market growth.
- demonstrate that it will offer non-discriminatory tariffs for equivalent services – this attribute will ensure that there will be no arbitrary distinctions in services provided to shippers who are competing in the same competitive markets.
- define its reference tariffs and other terms and conditions to be equal to those that it negotiated with its foundation customers – this will assure the market and governments that the tariffs for all the most popular services are based on those derived from a competitive market environment, when the pipeline developer was seeking customers to underpin its investment.

This approach was endorsed by the Australian Competition Tribunal in its decision in respect of the Eastern Gas Pipeline, where it said:

The EGP is the subject of foundation contracts with ESSO/BHP which take up less than the pipeline’s existing or ultimate capacity. It is the applicants’ case that the EGP is an open access pipeline offering a range of gas transmission services on a non-discriminatory basis. The operator has every incentive to secure contracts for the provision of those services and has published tariffs based on the price negotiated with the Gippsland producers and reflected in the foundation contracts. Those tariffs are available to all customers, regardless of the volume of gas they wish to transport .

- provide real time open access to data and information on tariffs, terms and conditions of service, operations, and available capacity. This on-line information will have a powerful influence on the market, because it will act as a clearing-house for critical commercial information necessary for existing and potential users of the system.
- allow for the development of a secondary market in capacity by allowing shippers to assign contracted capacity on an open access basis. The secondary market will ensure that competitive market forces establish the tariffs and conditions of service applicable to the transmission system.

- provide financial information on individual pipeline investments to the marketplace in accordance with the requirements for a publicly listed company under Corporations Law and Australian accounting standards to enable shippers to engage in meaningful negotiations for tariffs and terms of service.
- agree to a process with the Regulator for dispute resolution and to audit compliance with the access provisions defined by the above attributes.

5 SUMMARY

Changes to the Gas Code to reflect the philosophy described above are essential if Australia is to have a progressive and risk taking natural gas transmission pipeline infrastructure that will continue to serve its energy needs efficiently and encourage a natural gas based energy economy for the benefit of Australians and our environment. There may be some reluctance to change from the gas regulatory “industry” that has built up since 1997.

This proposal does not incorporate the concept of an access “holiday” that has recently been promoted for pipelines and other infrastructure. Access to pipeline services on a non-discriminatory basis should be mandatory, but on commercial terms set by the market, not by a regulator. An access holiday merely defers the implementation of cost of service regulation and imposes long term regulatory risk on the owner of the facility.

The proposed changes to the Gas Code do not spell the death of regulation. Regulators will continue to have a significant role, whether by overseeing the activities of service providers who are content with prescriptive regulation, or by monitoring service providers operating under the behavioural model.

Yours sincerely,



Max J Kimber
M.J. Kimber Consultants Pty. Ltd.
PO Box 121
Garran ACT 2605
mkimber@pcug.org.au
6 December 2002