# Final Recommendation

## Application for Revocation of Coverage of Parts of the Moomba to Sydney Pipeline System

September 2000

National Competition Council

# Introduction

This document contains the National Competition Council's Final Recommendation regarding an application for revocation of Coverage of parts of the Moomba to Sydney Pipeline System under the provisions of the NSW, SA, Queensland and ACT gas pipelines access regimes. The application was made by East Australian Pipeline Limited (EAPL) as owner and operator of the pipeline system.

The Moomba to Sydney Pipeline System carries gas from Moomba in SA to Wilton in NSW, delivering gas into NSW and the ACT and joining with the Interconnect which carries gas between NSW and Victoria. EAPL is seeking revocation of Coverage for a portion of this System, comprising the main pipeline running from Moomba to Wilton and the transmission pipelines branching off it to Culcairn (the Young to Culcairn pipeline) and Canberra (the Dalton to Canberra pipeline).

The Council has engaged in wide public consultation in arriving at the views contained in this Final Recommendation. The Council called for public submissions, met on one occasion with EAPL and obtained legal advice, including in respect of parts of the task common to this application and the application for Coverage of the Eastern Gas Pipeline (for which the Council released a Final Recommendation on 30 June 2000). Much of the consultation undertaken by the Council in relation to the application for Coverage of the Eastern Gas Pipeline was also relevant to this application.

The Council advertised for submissions on 8 May 2000 in *The Australian* and the *Australian Financial Review*. These advertisements also extended the date for close of submissions to 6 June 2000, and for release of the Draft Recommendation to 18 July 2000. The period for release of the Draft Recommendation was further extended by advertisement in *The Australian* to 22 August 2000. The Draft Recommendation was released on 11 August 2000.

The Council received eight submissions in response to its advertisements. Given the similarity of issues involved, the Council has also taken into account submissions received on the application for Coverage of the Eastern Gas Pipeline. The parties that made submissions are listed in Appendix 1.

The Council commissioned a consultancy by the Brattle Group on the international experience in pipeline regulation for comparative purposes to assist in its consideration of both the Moomba to Sydney Pipeline System application and the Eastern Gas Pipeline application.

In the context of the Eastern Gas Pipeline application, but also relevant to this application, the Council took into account legal advice received from Duke and AGL, as well as advice from the Council's legal advisers on the proper interpretation of the Coverage criteria. The Council also received separate legal advice regarding aspects of this application.

The Council's Final Recommendation is that Coverage under the National Code of the Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline should not be revoked. The Council is satisfied that all four criteria in section 1.9 of the National Code are met for the whole of each of the three pipelines.

Following this introduction and the Executive Summary comes the main body of the Final Recommendation, which is divided into three parts.

Part A explains:

- the legislative background to the National Gas Access Regime;
- the concept of Coverage under the regime; and
- details of the application, including specification of the relevant pipelines.

Part B examines the structure of the natural gas industry in Australia and the state of competition in South East Australia.

Part C contains the Council's detailed consideration of the criteria against which Coverage of the three pipelines for which revocation is sought must be assessed. The full text of the criteria is at Appendix 2.

# Abbreviations and glossary of terms

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| ABARE | Australian Bureau of Agricultural and Resource Economics |
| ACCC | Australian Competition and Consumer Commission |
| Access Arrangement | Arrangement by owner or operator of a Covered Pipeline setting out the terms and conditions and tariffs on which third parties may seek access to the services of the pipeline. Access Arrangements must be approved by the relevant regulator as complying with the requirements of the National Code. |
| AGA | Australian Gas Association |
| AGL | The Australian Gas Light Company, or an associated company (with the exception of EAPL) |
| AGUG | Australian Gas Users' Group |
| APIA | Australian Pipeline Industry Association |
| Bass Strait producers | Esso and BHP, the joint venture producers at the Gippsland Basin in the Bass Strait. |
| BCA | Business Council of Australia |
| COAG | Council of Australian Governments, constituted by the Commonwealth Government and the eight State and Territory Governments. |
| (the) Council | National Competition Council |
| Covered Pipeline | A pipeline Covered by the provisions of the National Code. |
| Duke | Collective reference to Duke Eastern Gas Pipeline Pty Ltd, DEI Eastern Gas Pipeline Pty Ltd, and Duke Australia Operations Pty Ltd, or any one of these three companies. |
| EAPL | East Australian Pipeline Limited, the owner of and service provider for the Moomba to Sydney Pipeline System. |

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| EMRF | Energy Markets Reform Forum |
| FAC | Federal Airports Corporation |
| FERC | Federal Energy Regulatory Commission, the US regulatory agency charged with regulation of infrastructure including natural gas pipelines. |
| Gas Access Acts | The Acts in each State and Territory which provide for third party access to the services of natural gas pipelines. The Acts apply the GPAL and National Code as law in those jurisdictions. |
| GGT | Goldfields Gas Transmission Pty Ltd |
| GJ | Gigajoule, a unit of measurement for measuring the energy content of natural gas or other energy sources. |
| GPAL | Gas Pipelines Access Law, which in conjunction with the National Code and the Gas Access Acts, set out provisions of the regime for third party access to the services of gas pipelines. |
| GRIG | Gas Reform Implementation Group |
| (the) Interconnect | The pipeline between Wagga Wagga and Albury/Wodonga connecting the NSW and Victorian gas networks. The portion between Wagga Wagga and Culcairn in NSW is owned by EAPL, and the portion running from Culcairn to Barnawartha in Victoria (which crosses the border) is owned by GPU GasNet. |
| IPA | Institute of Public Affairs |
| LECG | Law and Economics Consulting Group (consultants to Duke) |
| (the) National Code | National Third Party Access Code for Natural Gas Pipeline Systems |
| NCC | National Competition Council |
| NECG | Network Economics Consultancy Group (consultants to Duke and EAPL) |
| NERA | National Economic Research Associates |

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| NIEIR | National Institute of Economic and Industry Research |
| Part IIIA | Part IIIA of the Trade Practices Act, which deals with access to the services of essential facilities. |
| PIAC | Public Interest Advocacy Centre |
| PJ | Petajoule (equal to 1,000,000 GJ or 1,000 TJ) |
| PL | Pipeline Licence |
| SACL | Sydney Airport Corporation Limited |
| SA Unit | South Australian Unit Producers, based at the Moomba gas fields in the Cooper Basin, and led by Santos. |
| SIA | Sydney International Airport |
| TJ | Terajoule (equal to 1,000 GJ) |
| TPA | Trade Practices Act |
| (the) Tribunal | Australian Competition Tribunal |
| Undertaking | A form of voluntary regulation providing for access to a service. Undertakings are provided for under Part IIIA of the Trade Practices Act and must be approved by the ACCC. |

# Executive Summary

## *The Council's Approach*

Under the National Code, in determining whether to recommend revocation of Coverage, the Council must consider whether the pipeline meets the Coverage criteria in section 1.9. The Council must recommend revocation of Coverage of a pipeline if that pipeline does not satisfy all of the criteria.

The appropriate test for the Council is that it must be 'affirmatively satisfied' of the matters set out in clause 1.9. In doing so, it is required to comply with the duties imposed upon it under the general principles of administrative decision-making. Provided that an administrative decision maker reaches a decision within these general principles, the way in which an administrative decision maker is to approach a particular decision is not otherwise prescribed by the law.

In interpreting the Coverage criteria, the Council has used general principles of statutory interpretation. In the particular context of this application, it has had regard to the following specific matters: the purpose sought to be achieved in enacting the Gas Access Acts of NSW, SA, Queensland, ACT and the Commonwealth; the introduction and overview to section 1 of the National Code; and decisions of the Australian Competition Tribunal (the 'Tribunal') in relation to applications for declaration under Part IIIA of the TPA.

## *The Relevant Pipelines and the Services Provided by those Pipelines*

This application seeks revocation of Coverage of three main transmission pipelines within the Moomba to Sydney Pipeline System:

- the Moomba to Wilton pipeline;
- the Young to Culcairn pipeline; and
- the Dalton to Canberra pipeline.

'Service' is defined broadly in the National Code to mean a service provided by means of a Pipeline including (without limitation) haulage services (such as firm haulage, interruptible haulage, spot haulage and backhaul), the right to interconnect with the pipeline and ancillary services. The Council considers that for the purposes of considering this

Coverage application, it is not necessary to define every possible type of gas transportation service.

There are two possible approaches to defining the geographic scope of a gas transportation service. The first involves defining the relevant service in terms of both the start and end points (or regions) of the service. The second involves defining the service by reference to the destination or the market it serves, without reference to the pipeline's origin.

The Council considers that a point to point approach to service definition is more consistent with the language of the National Code and the approach to service definition more generally under Part IIIA of the TPA.

The Council concludes that, consistent with this approach, the services of the three pipelines for which revocation is sought may be described as follows.

- The Moomba to Wilton pipeline provides gas transport services from Moomba to Wilton and destinations en route, as well as transportation services from Moomba to the lateral pipelines branching off it.

- The Young to Culcairn pipeline provides gas transport services from Young to Culcairn, to destinations en route and to the Burnt Creek to Griffith pipeline.

- The Dalton to Canberra pipeline provides gas transport services from Dalton to Canberra, Queanbeyan and the Yarrowlumla Shire.

## *The Markets in which the Pipelines Provide Services*

### In Which Markets do the Application Pipelines Operate?

The Council considers that the markets for the services of the three pipelines are as follows.

- The Moomba to Wilton pipeline provides services in the market for gas transport services from Moomba to Wilton, to markets en route and to the lateral pipelines branching off it.

- The Young to Culcairn pipeline provides services in the market for gas transport from Young to Culcairn, to markets en route and to the Burnt Creek to Griffith pipeline.

- The Dalton to Canberra pipeline provides services in the market for gas transport from Dalton to Canberra, Queanbeyan and the Yarrowlumla Shire.

## The Potential for Substitutability Between Different Services

The Council has considered the potential for substitutability between services from different points of origin. In the present context, this requires consideration of whether the services of the Eastern Gas Pipeline are provided in the same market as the services of the Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline.

### *Moomba to Wilton Pipeline*

While for some users the Eastern Gas Pipeline might be considered to provide competing transmission services for the services of the Moomba to Wilton pipeline, for many people wanting to use the Moomba to Wilton pipeline, the Eastern Gas Pipeline will not be a ready substitute because:

- for the producers in each basin, the two pipelines do not provide substitute services;
- for gas users with contracts with particular producers the two pipelines may not provide effective substitute services. This is because gas supply may be available from a producer in one basin on more favourable terms than from producers in the other basin; and
- gas users' ability to switch between suppliers of both gas and gas transmission services are limited by contractual arrangements.

The Council concludes that the services of the Eastern Gas Pipeline are not effective substitutes for the services of the Moomba to Wilton pipeline.

### *Young to Culcairn Pipeline*

The Eastern Gas Pipeline will provide some potential for alternative routes of gas supply to those provided by the Interconnect system (which includes the Young to Culcairn pipeline). In particular, the Eastern Gas Pipeline may provide a substitute service for those users wishing to transport gas from Longford to Sydney.

The bulk of the services provided by the Interconnect system, however, relate to the supply of gas to regional areas. For these services, the Eastern Gas Pipeline will not provide a substitute service.

The Council concludes that, while the Eastern Gas Pipeline will provide some services which could be viewed as competing with those of the Young to Culcairn pipeline, it will not do so to a sufficient extent to undermine the Young to Culcairn pipeline's natural monopoly characteristics.

*Dalton to Canberra Pipeline*

Were a lateral to be built from the Eastern Gas Pipeline to Canberra, consideration of revocation of the Young to Culcairn pipeline would raise issues similar to those noted for the Moomba to Wilton pipeline. In particular, for some parties the Eastern Gas Pipeline will not be an effective substitute as it cannot be used to transport gas from the Cooper/Eromanga Basin to the ACT.

## *Consideration of the Pipelines Against the Coverage Criteria*

**Criterion (a)** **that access (or increased access) to services provided by means of the pipeline would promote competition in at least one market (whether or not in Australia), other than the market for the services provided by means of the pipeline.**

The Council's approach to this criterion is to:

- verify that the market or markets in which competition is said to be promoted is/are separate from the market for the service; and (if so) then
- determine if access (or increased access) would promote competition in this separate market or markets.

### Are the Markets for the Pipelines' Services Separate from the Markets in Which Competition May be Promoted?

The relevant other market must be delineated in terms of its product, functional, geographic and temporal dimensions.

The Council considers that the product dimension of the relevant other market is natural gas. While other energy sources, such as electricity, provide some competitive discipline on the sale of natural gas, the field of rivalry between these energy products is not so close as to integrate the markets.

The Council considers that the functional dimension of the relevant other market is sales between natural gas producers and users/consumers, including intermediaries and aggregators (market for gas sales). There is some question whether there is a retail market separate from a wholesale market, but the Council does not consider that anything turns on this question.

The Council considers that the geographic dimension of the relevant gas sales market is South East Australia. The Council notes that, in some regions, the delineation of the geographic dimension of the market turns on the availability of, and access to, pipeline infrastructure. Whether Coverage of a pipeline under the National Code is needed to ensure appropriate access and thereby integrate the geographic dimension of the natural gas market is a central question for the consideration of this criterion.

The Council considers, therefore, that the relevant other market, separate from the markets for the transportation services of the three pipelines for which revocation is sought and where access to those services may promote competition, is the market for the sale of natural gas in South East Australia.

### Promotion of Competition

The notion of promoting competition in criterion (a) involves the idea of creating the conditions or environment for improving the state of competition compared with that which would otherwise exist. Put another way, the Council must examine whether the opportunities and environment for competition with access to the three pipelines for which revocation is sought are better than they would be without access.

In applying the with and without test endorsed by the Tribunal, the Council compares the market conditions which would prevail if the pipeline were not Covered under the National Code with those that would prevail if it were Covered under the National Code.

### Would Access Promote Competition in the South East Australian Gas Sales Market?

Before the Eastern Gas Pipeline became a reality, there was limited competition between gas producers. The question for the Council is whether the existence of the Eastern Gas Pipeline will, of itself, lead to a competitive market in gas sales in South East Australia.

Given that the Council has found that the pipelines are in different markets, there can be no assumed competition between the services provided by the pipelines. Therefore the incentives facing the pipeline owners must be examined.

The Council considers that EAPL and Duke face little risk in the long term of entry by a third pipeline because of: slow market growth; the relatively low cost of expanding existing pipelines; and the significant limitations on the ability of the Interconnect to compete.

As a result, the Eastern Gas Pipeline, as the new market entrant, may be able to execute a strategy of pricing capacity above competitive levels in anticipation that EAPL will follow a similar strategy. Particular features of the market place would assist this strategy.

- The fact that the investment in the Eastern Gas Pipeline is sunk means it cannot be forced out of the market, making accommodation more likely.

- EAPL and Duke will have significant bargaining power in negotiations with producers and gas users.

- The ability of EAPL to respond in the short to medium term will be constrained by its available capacity and pre-existing contractual commitments at established tariffs. On the other hand, the Council notes that EAPL could increase the capacity of the Moomba to Wilton pipeline.

- As there are only two pipelines, and pipeline pricing is relatively transparent (particularly if one or both pipelines are Covered by the National Code), monitoring by either party of a pricing agreement would be relatively easy.

- Given the huge disparity between current prices (which are near average costs) and marginal costs, the consequences for either pipeline of a price war, where price is driven towards marginal cost, would be disastrous.

- The contractual framework for gas purchase, transmission, distribution and sale to end users is complex, with medium to long-term contracts common and significant take or pay components to contracts at several stages. A gas retailer wishing to switch from one pipeline to another would face the necessity of also switching sources of gas supply from Moomba to Longford, or vice versa. These contractual complexities may make it more difficult for one pipeline to suddenly to drop its price and rapidly pick up market share.

- The pipelines' customers are likely to shop around for the best price and would, in the process, keep each pipeline informed of what pricing is being offered by its competitor.

*Capacity*

The Council has considered the argument that surplus transmission capacity into NSW and the ACT will lead to behaviour by EAPL and Duke that would enhance competition in the sales gas market. It appears to the Council that a number of factors are likely to militate against such an effect in this case.

- Whilst there will initially be some excess capacity, it is likely to be absorbed somewhere between 2005 and 2010.

- EAPL appears to have both interest and influence in gas distribution in NSW through its relationship with AGL, which may impact on the availability of surplus capacity.

- The goal of the two pipelines is not to maximise the throughput of gas but to maximise profits. Evidence suggests that the increase in throughput from a tariff cut is likely to be smaller than the loss in revenue, due to the relatively inelastic nature of demand for gas.

- Even before commencing operation, the proportion of capacity that was contracted on the Eastern Gas Pipeline was already around that of the Moomba to Sydney Pipeline.

*Parallel Pricing*

The existence of only two sources of supply in the gas sales market, coupled with high barriers to entry for any prospective sources of competition, is inherently unlikely to lead to vigorous competition. This market structure may well lead to a parallel pricing strategy between the pipeline owners.

To date Duke's entry does not appear to have had a significant impact on EAPL's conduct. EAPL's current tariffs (even with the recent reduction) appear to have a monopoly element. Duke's proposed tariff under its Undertaking to the ACCC, which has not been accepted, appeared to be largely in accordance with or above EAPL's tariff.

The Council has considered arguments suggesting that a parallel pricing strategy may break down. It considers that 'punishment' may not be necessary both because the prices reached in such a price war are not sustainable and because such a price war would result in major losses to any party that engaged in it. This means prices may self-correct to equilibrium levels above competitive levels relatively quickly and without the need for punishment. The disastrous consequences of such a price war would discourage both parties from ever engaging in it. The Council considers that this joint optimal pricing strategy is consistent with EAPL's recent tariff reduction.

Further, the Council notes that:

- no upstream or downstream party supported revocation of Coverage, and the majority explicitly supported Coverage, a trend which was also evident for the Eastern Gas Pipeline application; and

- the LECG submission said Coverage of both the Moomba to Sydney Pipeline and the Eastern Gas Pipeline might eliminate allocative costs

associated with parallel pricing behaviour of about $21.2 million for a net benefit from Coverage (after deduction of regulatory and indirect costs) of $9.8 million.

The Council has considered whether the information disclosure provisions of the National Code may facilitate parallel pricing behaviour by letting each pipeline know the pricing strategies of the other. On balance, the Council considers that the benefits of information disclosure, notably the promotion of a better-informed market, are likely to outweigh any costs associated with the increased potential for parallel pricing behaviour.

The Council is firmly of the view, based on consideration of the available evidence, that there is a real danger or likelihood of parallel pricing behaviour between EAPL and Duke in the absence of Coverage.

## Conclusion

Having considered the South East Australian gas sales market with and without Coverage, the Council is firmly of the view that Coverage of each of the pipelines would promote competition in the South East Australian gas sales market.

In this regard, the Council notes that:

(a) the Moomba to Wilton pipeline is the sole means of supplying gas to regional areas along its route including Goulburn, Marulan, Moss Vale and Bowral;

(b) as a component of the Interconnect system, the Young to Culcairn pipeline assists in providing gas transportation services from Moomba to Victoria and from Longford to Sydney;

(c) the Young to Culcairn pipeline is the sole means of supplying gas to regional areas along its route including Young, Cootamundra, Wagga Wagga and Culcairn. It is also the only means of supplying gas to the Burnt Creek to Griffith pipeline which runs off it;

(d) the Dalton to Canberra pipeline is the sole means of supplying gas to regional areas along its route, including Queanbeyan and Yarrowlumla Shire;

(e) in the absence of the proposed lateral from the Eastern Gas Pipeline to Canberra, the Dalton to Canberra pipeline will be the sole supplier of gas to Canberra.

Coverage of each of the pipelines will provide access so as to integrate fields of rivalry and thereby promote competition.

It is the Council's view that, where there are no alternative sources of competition, removal of the impediments is likely to promote competition, even though the actual increase in competition may not be large. By providing gas transmission services on appropriate terms and conditions to regions where there are currently no means of supply natural gas, access will remove a barrier to entry in the supply of gas to the regions served by each pipeline by integrating those regions into the broader South East Australian gas sales market and thereby promoting competition in that market.

The Council therefore concludes that criterion (a) is met for the Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline.

### Criterion (b) that it would be uneconomic for anyone to develop another pipeline to provide the services provided by means of the pipeline.

Criterion (b) would appear to be designed to identify for Coverage pipelines where the development of competing pipelines would be inefficient. The Council's approach to this criterion is to determine whether it would be uneconomic for anyone to develop another pipeline to provide competing services.

#### Would it be Economic to Develop Pipelines to Provide the Services of the Three Pipelines for Which Revocation is Sought?

The Council's analysis of criterion (b) involves consideration of whether new or existing pipelines do, or could, provide competing services to the whole, or part, of the three pipelines for which revocation is sought.

Each of the three pipelines for which revocation is sought is characterised by high construction costs and low operating costs such that the marginal cost of transporting a unit of gas is low. Moreover, up to the point of fully expanded capacity in the three pipelines, the average costs of transporting an additional unit of gas could be expected to decline. In addition, the high sunk costs of constructing another pipeline serve as a barrier to the entry of a new pipeline as does the existence of spare capacity.

The Council considers that it would not be economic for any party to build a new pipeline to provide the services of any of the three pipelines for which revocation is sought at current and reasonably anticipated levels of future demand.

In its consideration of the markets in which the three pipelines provide services, the Council has determined that the services of the Eastern Gas

Pipeline are not provided in the same market as the services of the three pipelines.

### Conclusion

The Council concludes that it is not economic to develop another pipeline to provide services to compete with the Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline and therefore that criterion (b) is met for each.

### Criterion (c) that access (or increased access) to the services provided by means of the pipeline can be provided without undue risk to human health or safety.

All evidence available to the Council suggests that access (or increased access) could be provided safely to the services of the three pipelines for which revocation is sought. No submissions provided a contrary view.

The Council concludes that the Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline each meet criterion (c).

### Criterion (d) that access (or increased access) to the services provided by means of the pipeline would not be contrary to the public interest.

The Council's analysis of this criterion included the following issues:

- the policy arguments for regulation under the National Code compared to regulation under an Undertaking, including the effect of regulation under the National Code on new investment, tariff innovation, and entrepreneurial risk-taking;
- the costs and benefits of regulation; and
- the policy arguments for and against symmetrical regulation of the Moomba to Sydney Pipeline System and the Eastern Gas Pipeline.

### Regulation under the National Code Compared to Regulation under an Undertaking

The Council considers there are strong policy justifications for the view that all natural gas pipelines that meet the Coverage criteria should be regulated under the relevant Gas Access Acts and the National Code. Further, the Council considers that the criticisms of the National Code

have not been substantiated, and that the National Code can facilitate many if not all the commercial objectives sought by pipeline owners.

Support for the view that all pipelines which meet the Coverage criteria should be regulated under the National Code can be found by examining the TPA, the preambles to the Gas Access Acts, and from the Introduction to the National Code.

The clear intention that can be drawn from the preambles and the Introduction to the National Code is:

- that governments intended a uniform system of regulation to apply to all pipelines that met the Coverage criteria; and
- where pipelines are subject to Coverage under the Coverage criteria, then the provisions of the National Code should apply in respect of the services of those pipelines to the exclusion of alternative systems of regulation.

The Council does not accept that the National Code has the effect of stifling innovation and is ill-equipped to regulate 'entrepreneurial' pipelines. The Council considers that many of the criticisms levelled against the National Code have not been substantiated and that the National Code has sufficient flexibility to consider the circumstances of individual pipelines.

The Council recognises that inevitably any regulatory model would have some shortcomings that would cause it to fall short of the results achieved in a competitive market, but that regulation of a pipeline is justified where the results under regulation would improve on the results without regulation.

### Whether EAPL's Proposed Undertaking Would do More to Promote Competition than Coverage under the National Code

The Council understands that EAPL has not yet submitted a draft Undertaking to the ACCC, although its application signals its intention to do so. Without details of EAPL's proposed Undertaking, it is very difficult for the Council to assess what impact it may have on competition. The Council is not satisfied that Coverage under the National Code would be contrary to the public interest by reason of EAPL's proposal to submit a draft Undertaking to the ACCC.

### Costs of Regulation of the Pipelines

The Council recognises that there are costs associated with regulation under the National Code, and that these can be significant. However, the Council considers it reasonable to assume that the costs of legitimately

regulating monopoly infrastructure were taken into account by COAG in its decision to develop the National Code. It also notes that, were the three pipelines for which revocation is sought not Covered, their owner would face not insubstantial costs in negotiating individual contracts with customers.

Overall, the Council considers that the benefits of regulating the three pipelines under the National Code will outweigh the costs. The benefits of Coverage of the three pipelines are likely to be large, given the size of the market in which competition will be promoted (the market for gas sales in South East Australia).

### Symmetrical Regulation

The Council considers that the criteria for Coverage set out in the National Code should be applied independently to each application for Coverage or revocation brought before it. Where pipelines have similar characteristics it is likely that its processes will result in similar recommendations.

The structure of the National Code is such that its ring-fencing and other provisions could be expected to deal with pipeline owners having relationships with parties engaging in other gas-related activities (e.g., gas distribution). However, given the imperfect availability of information to regulators, this issue cannot be ignored. That said, it is not the central focus of decisions about Coverage.

### Conclusion

The Council concludes that access (or increased access) to the services of the Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline would not be contrary to the public interest, and therefore that criterion (d) is met for each.

## *Recommendation*

The Council recommends that Coverage under the National Code of the Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline not be revoked, as it is satisfied that all four criteria in section 1.9 of the National Code are met in respect of the whole of each of the pipelines.

# Part A – Revocation of Coverage under the Gas Access Regime

## Application for Revocation of Coverage of Parts of the Moomba to Sydney Pipeline System

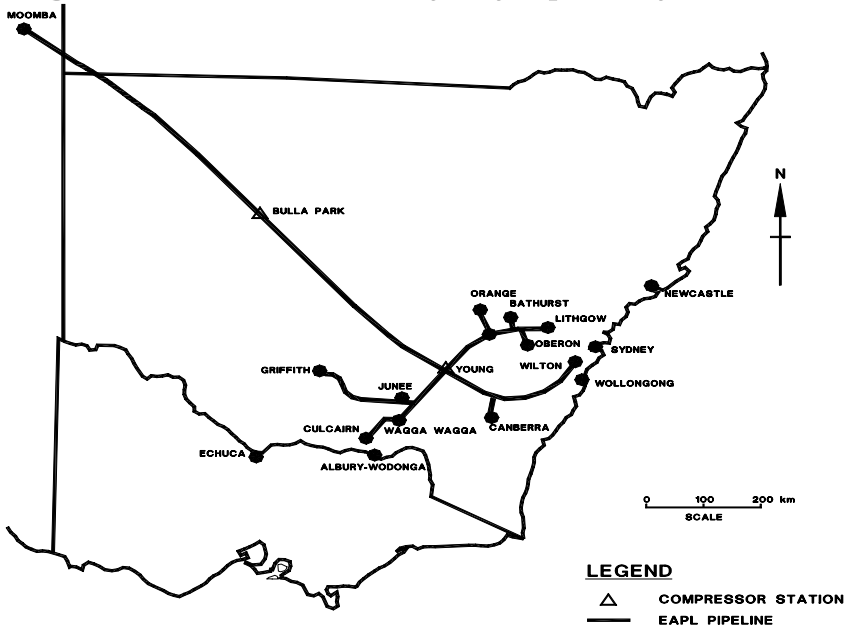
On 28 April 2000, the Council received an application to revoke Coverage of a portion of the Moomba to Sydney Pipeline System. The application was made by East Australian Pipeline Limited as owner and operator of the System.

The Moomba to Sydney Pipeline System carries gas from Moomba in SA to Wilton in NSW, delivering gas into NSW and the ACT and joining with the Interconnect which carries gas between NSW and Victoria. The application seeks revocation of Coverage of a portion of the Moomba to Sydney Pipeline System, comprising the main pipeline running from Moomba to Wilton (on the outskirts of Sydney) and the transmission pipelines branching off it to Culcairn (the Young to Culcairn pipeline) and Canberra (the Dalton to Canberra pipeline). The Young to Culcairn pipeline includes a portion of the Interconnect.

EAPL has not sought revocation of Coverage for the Young to Lithgow lateral (and associated spurs), the Junee to Griffith lateral, or any distribution systems.

The route of the Moomba to Sydney Pipeline System is illustrated in Diagram 1 below.

**Diagram 1: The Moomba to Sydney Pipeline System**




Source: EAPL Application.

Table 1 provides details of the pipelines within the Moomba to Sydney Pipeline System for which revocation of Coverage is sought. The Council considers that the numbered pipelines constitute three major pipelines, each with a distinct purpose. It has therefore accepted EAPL's application on the understanding that it constitutes an application for revocation of Coverage of three separate pipelines.

**Table 1: Pipelines for which Revocation is Sought**

| Pipeline Licence | Location/Route | Owner/ Operator | Length (km) | Pipe Diameter (mm) | Regulator |
|---|---|---|---|---|---|
| SA:PL7 | Moomba to Queensland border | East Australian Pipeline Limited | 111 (incl. 10km loop at Moomba | 864<br>660 | ACCC |
| Qld:PPL21 | SA border to NSW border | | 56.2 | 864 | |
| NSW:16 | Qld/NSW border to Wilton | | 1142 | 864 | |
| NSW:19 | Young to Wagga Wagga | | 131 | 324/89 | |
| NSW:19 | Cootamundra Spur | | 2.7 | 89 | |
| NSW:21 | Dalton to ACT border | | 52 | 273 | |
| | ACT/NSW border to North Watson | | 6 | 273 | |
| NSW:23 | Wagga Wagga to Culcairn | | 88 | 457 | |

The primary source of gas for the Moomba to Sydney Pipeline System is gas collected in the Cooper/Eromanga Basin, which is processed at the Moomba processing plant. Gas from the Cooper/Eromanga Basin is jointly produced and marketed by the South Australian Cooper Basin Unit Producers (SA Unit), in which Santos has a majority interest.

In the longer term, the Moomba to Sydney Pipeline System may carry gas from other places (such as North West Australia), perhaps via interconnect pipelines.

The Moomba to Sydney Pipeline System transported approximately 115 PJ of gas in 1999, supplying over 95 per cent of NSW's natural gas requirements. The System currently has available capacity of 172 PJ per annum, and has the potential to be expanded to carry a maximum of around 290 PJ per annum.

The Council understands that a significant proportion of the capacity of the Moomba to Sydney Pipeline System is committed under the Gas Transportation Deed between EAPL and AGL Wholesale Gas Pty Ltd. Under this Deed EAPL transports gas from Moomba to Wilton, facilitating AGL's 30 year take-or-pay arrangement with the SA Unit. AGL then distributes the gas, mainly through its distribution network in Sydney.

A portion of the gas transported by the Moomba to Sydney Pipeline System goes to users in regional centres along its route and to the laterals (also serving regional areas) which run off it. Again, in the longer term, the location of users supplied by the pipeline may change as the Moomba to Sydney Pipeline System interconnects with other pipelines.

This revocation application follows an application for Coverage of the Eastern Gas Pipeline, owned by Duke Energy International, which has recently become operational and supplies gas from Longford in Victoria to Sydney and other markets along its route. The Council's Final Recommendation on the Eastern Gas Pipeline application, which recommended Coverage, was released on 30 June 2000. Given the similarity of issues involved, the Council has attempted to coordinate the two processes as far as possible and has taken submissions from both processes into account in its consideration of EAPL's application.

## EAPL Proposes to Submit a Part IIIA Undertaking

Part IIIA of the Trade Practices Act (TPA) provides three forms of access regulation of natural monopoly facilities: under access regimes established by the States and Territories (explained further below); through declaration of services provided by those facilities; or under a voluntary Undertaking approved by the ACCC.

In its application, EAPL indicates that it intends to submit a Part IIIA Access Undertaking (an 'Undertaking') to the ACCC as soon as practical. (Duke has submitted such an Undertaking for the Eastern Gas Pipeline, which the ACCC has not accepted.) EAPL states that such an Undertaking would provide the guarantee of third party access on reasonable terms which is currently provided by the National Code. In order to address any concerns about possible delays, EAPL states that it is investigating mechanisms whereby it can commit to a form of interim Undertaking to apply until such time as a formal Undertaking is lodged for consideration.

The Council understands that EAPL has not yet submitted a draft or interim Undertaking to the ACCC.

## Legislative Background to Revocation Application

NSW, SA, Queensland and the ACT have enacted gas access regimes to provide parties with a method for seeking access to the services provided by natural gas transmission and distribution pipelines located in those States.

The regimes are contained, respectively, in the *Gas Pipelines Access (NSW) Act 1998* (the NSW Gas Access Act), the *Gas Pipelines Access (SA) Act 1997* (the SA Gas Access Act), the *Gas Pipelines Access (Queensland)*

*Act 2000* (the Queensland Gas Access Act) and the *Gas Pipelines Access (ACT) Act 1998* (the ACT Gas Access Act). Additionally, the Commonwealth has passed the *Gas Pipelines Access (Commonwealth) Act 1998* (the Commonwealth Gas Access Act), to enable certain things to be done in support of the NSW, SA, Queensland and ACT gas access regimes.

The NSW, SA, Queensland and ACT Gas Access Acts enact:

- the Gas Pipelines Access Law (GPAL); and
- the National Third Party Access Code for Natural Gas Pipeline Systems (the National Code).

Collectively, these Acts, the GPAL and the National Code form the National Gas Access Regime as it applies in NSW, SA, Queensland and the ACT.

The National Gas Access Regime is designed to facilitate negotiations between owners of natural gas pipelines and third parties interested in seeking access to the services of those pipelines.

The revocation process is designed to determine whether particular pipelines should continue to be subject to the gas access regime. This involves an assessment of whether the pipelines exhibit monopoly characteristics, and whether continued access would promote competition in another market.

## Classification of the Pipelines for which Revocation is Sought

The Moomba to Wilton pipeline, Young to Culcairn pipeline and Dalton to Canberra pipeline have been classified as transmission pipelines. By reason of this, and the fact that the primary pipeline within the Moomba to Sydney Pipeline System is an interstate pipeline, the Minister for Industry, Science and Resources, Senator, The Hon Nicholas Minchin, is responsible for deciding this application.[1]

## Effect of Coverage

If pipelines are Covered, the owners/operators of the relevant pipelines must meet certain obligations under the National Gas Access Regime. The National Gas Access Regime contains rules covering such matters as:

- the content and operation of Access Arrangements (Access Arrangements specify the terms, conditions, and prices on which owners/operators offer access);

[1] See the definition of 'Relevant Minister' in the National Code and the GPAL, and Annex G to the *Natural Gas Pipelines Access Agreement* made by COAG Governments in November 1997.

- the information to be provided by owner/operators to parties interested in obtaining access;
- dispute resolution mechanisms; and
- pricing principles (how the prices in the Access Arrangement are derived).

## Mechanism for Revocation of Coverage of a Pipeline

The National Code recognises that the public benefits of regulating access to a service may change over time due to such factors as changes in market conditions (for example, the emergence of competition) or technological changes affecting the economic viability of new infrastructure.

For this reason, the National Code allows parties to seek revocation of Coverage of a pipeline. Applications are made to the Council. Following consideration of issues raised in public consultations, the Council conveys a recommendation to the Relevant Minister, who decides the matter. Both the Council and the Minister must consider the criteria for revocation set out in section 1.9 of the National Code.

If revocation is granted, the owner and operator are released from their obligations under the Gas Access Act of the application State or States and the National Code. The owner and operator are no longer required to submit an access arrangement for the pipeline to the regulator, or to respond to access requests by third parties.

## Revocation Process to be Followed under National Code

The processes for dealing with revocation applications are specified in sections 1.24 to 1.39 of the National Code.

After release of the Final Recommendation, the following steps will be taken:

- the Council will provide copies of the Final Recommendation to relevant parties, including the owner/operator and any party who made a submission;
- the Minister must make a final decision to grant or not grant revocation of Coverage within 21 days of receiving the Final Recommendation;
- the Minister must provide copies of his decision and reasons to relevant parties, including the owner/operator and any party who made a submission;

- the Minister's decision (if it is to grant revocation of Coverage) can take effect no earlier than 14 days after the date on which it is made; and

- under section 38 of the GPAL, any person adversely affected by the Minister's decision may apply for review under either the NSW, SA, Queensland or ACT Gas Access Acts, each of which specify the Australian Competition Tribunal (the Tribunal) as the review body.

# Part B – Background Information

## Structure of the Natural Gas Industry

Natural gas is an important source of energy in NSW. In 1997/98, users in NSW consumed 106.6 PJ of natural gas, about 9.5 per cent of their total energy requirements. (NSW Ministry of Energy and Utilities, 1999b) However, NSW's use of natural gas as a percentage of total energy consumption is low by comparison with some other States. For example, in 1997/98 Victoria consumed 241.9 PJ, about 16 per cent of its total energy requirements. (ABARE, 1999, p. 141) The highest gas-using State is WA; in 1997/98, consumers in that State used 312 PJ of gas or 47 per cent of their total energy requirements. (WA Office of Energy, 1999, p. 9)

Natural gas occurs in raw form in natural reservoirs located both on land and at sea. It is collected via gathering pipelines and processed to remove impurities. It is then transported by large capacity, high pressure transmission pipelines to final markets, where it is supplied directly to very large industrial users or via medium and low pressure distribution pipelines to commercial and residential users. In the course of supply to users, retailers provide marketing, billing, and meter reading services.

Reductions in the transport costs of gas can make it a significantly more attractive source of energy. Transport costs normally represent a significant proportion of total delivered costs, but can vary widely depending on the difficulty of collecting the gas, the cost of laying the transmission and distribution pipelines, and the distance from the gas basin to the final market. Information collected in 1990/91 on the final price of gas delivered in NSW, Victoria, Queensland and SA suggested that transmission prices represented around 10 per cent of final prices, while distribution prices represented around 40 and 50 per cent of final prices.[2] (International Energy Agency (OECD), 1994, p. 16)

The submission on the Eastern Gas Pipeline application from the Australian Pipeline Industry Association (APIA) states that in NSW transmission tariffs represent less than 6 per cent of the total delivered price of gas for residential customers and less than 15 per cent for commercial/industrial customers. (APIA, submission 24, p. 6) LECG states that for large users (who draw gas from the transmission network and do not pay distribution or retailing charges) transmission tariffs represent around 25 per cent of the total delivered gas price for the Moomba to Sydney Pipeline, and are expected to represent around 26 per cent for the Eastern Gas Pipeline. (LECG, submission 27, p. 17)

[2] Recent tariffs for transport of gas to Sydney, discussed below, suggest transmission tariffs in the range of $0.65 – $0.91 (before GST) on basin prices of about $2.35 – $2.55.

The composition of the delivered price of gas for large and small users in NSW is discussed further below.

Gas transport tariffs are affected by the mechanisms used to manage different types of risk. One major risk is associated with the construction of new pipelines. When deciding whether to build a pipeline, the prospective pipeline owner needs to ensure that sufficient capacity on the pipeline is likely to be booked to cover the costs of construction and allow a reasonable rate of return to be made. In Australia, this risk has historically been managed by deferring pipeline construction until long-term contracts for capacity at particular prices have been signed. However, this approach carries the risk that long-term prices may be at a discount to those users are prepared to pay for capacity in the pipeline. If the prospective pipeline owner is confident of demand for gas supplied through its pipeline, it may elect not to commit to long term contracts. In this case, it may seek to manage risk by entering shorter term contracts, hoping that growth in demand will place upward pressure on the prices that parties are prepared to pay for capacity in the pipeline.

In South East Australia, two major basins supply most of the needs of Sydney, Melbourne, Adelaide, Brisbane and regional centres. The first is the Cooper/Eromanga Basin. The Cooper/Eromanga Basin is spread across the north east corner of South Australia and the south west corner of Queensland. Gas from the Cooper Basin is processed at the Moomba processing plant in South Australia and supplies Sydney and Adelaide, while gas from the Eromanga Basin is processed at Ballera in Queensland, (as well as at Moomba) and supplies Brisbane, Mt Isa, and Adelaide. At present, virtually all the natural gas used in NSW and SA is sourced from the Cooper/Eromanga Basin.[3] Gas from the Cooper/Eromanga Basin may also be supplied to Victoria via pipes interconnecting Wagga Wagga in NSW and Wodonga in Victoria (the Interconnect).

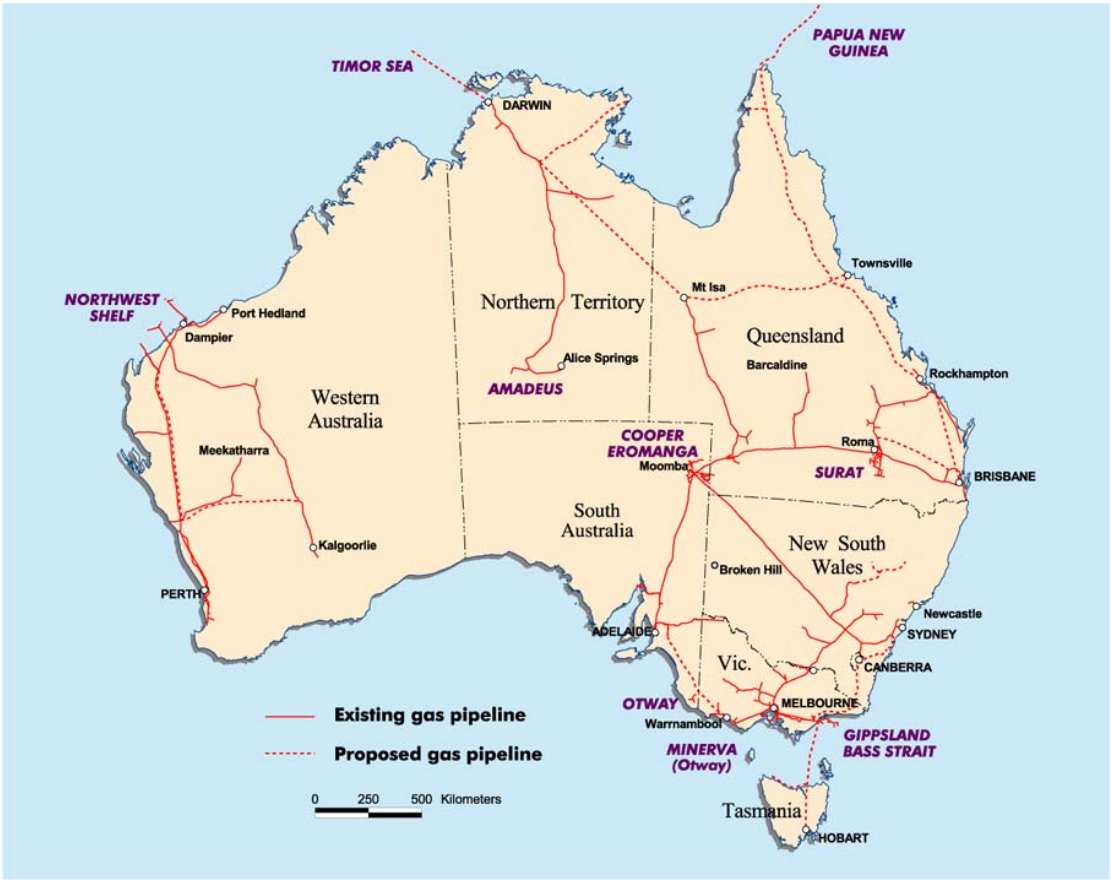
The second major source of supply is the Gippsland Basin in Bass Strait. Gas from the Gippsland Basin is processed at Longford and supplies Melbourne and regional Victoria. It is currently possible for small amounts of gas from the Gippsland Basin to be supplied to Sydney through the Interconnect. The Eastern Gas Pipeline has recently commenced transporting gas from the Gippsland Basin to Sydney and a number of regional towns in Victoria and NSW. Almost all the gas used in Victoria is sourced from the Gippsland Basin.[4]

Diagram 2 below contains a map of the major pipelines in Australia.

[3] Around 95 per cent in 1997-98. (NSW Ministry of Energy and Utilities, 1999b)

[4] Historically, about 98 per cent of Victoria's natural gas requirements have been supplied by the Gippsland Basin, with the remaining 2 per cent being supplied by the Otway Basin. (Victoria, 1999, p. 3)

## Diagram 2: Natural Gas Pipelines in Australia




Source: South Australian Department of Primary Industries and Resources.

The scope for competition for the supply of natural gas to NSW depends on factors including:

- the degree of ownership concentration at gas production, transmission, distribution and retailing;
- the degree of vertical integration of ownership;
- the relative price of gas supplied from processing plants, the amount of reserves in the major gas supplying basins;
- constraints on supply, for example, production constraints on the output of processing plants;
- existing long-term contractual arrangements among producers, pipeline owners and users;
- available capacity for transporting gas, in particular uncontracted or spare capacity; and
- regulatory arrangements over the production, supply, and use of gas.

## Production

Production in the Cooper/Eromanga Basin is dominated by Santos. Gas collected in the fields in the Cooper/Eromanga Basin near Moomba in SA is jointly produced and marketed by the South Australian Cooper Basin Unit Producers (SA Unit).[5] Santos holds an interest of approximately 60 per cent in the gas produced by the SA Unit and also holds majority interests in most of the production permits located in the Cooper/Eromanga Basin in South West Queensland.[6] Esso, through its subsidiary Delhi Petroleum, holds a 20 per cent interest in the gas produced by the SA Unit, while Origin Energy holds about a 13 per cent interest. (SA Department of Primary Industries and Resources, 2000).[7]

Alternative sources of supply for NSW are:

- coal-bed methane produced at sites near Camden, and coal-bed methane produced at Narrabri in North West NSW; and
- gas from the Gippsland Basin supplied to Sydney via the Eastern Gas Pipeline or the Interconnect.

The Sydney Gas Company is seeking to extract coal-bed methane from coal beds in the Sydney Basin near Camden. Sydney Gas Company's website states that it has developed a pilot project at Johndilo near Camden which it is confident will produce a minimum of 2 PJ per annum. The company intends to build a short pipeline to interconnect with AGL's distribution system, and has signed a letter of intent to sell gas into AGL's distribution system if it can achieve minimum flows of 2 PJ per annum. (Sydney Gas Company, 2000, p. 1)

Feasibility studies are also being carried out on production of coal-bed methane near Narrabri in the north west of NSW. According to the NSW Ministry of Energy and Utilities:

> There are indications that commercial quantities of gas exist near Narrabri … An intensive 12 month gas exploration has begun in the Narrabri region and feasibility studies will examine the possibility of piping this gas to Newcastle and Sydney. (NSW Ministry of Energy and Utilities, 1999)

It is difficult to assess the impact of this potential source of gas because it has yet to be established as economic to produce.

[5] Joint production means that gas is produced at a shared facility, while joint marketing means that the producers combine together as a single marketing entity to sell to purchasers of gas.
[6] *Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) ATPR 41-593 at 44,188.
[7] Approximate shares of participants in the SA Unit are: Santos 59.75 per cent; Esso 20.21 per cent; Origin Energy (formerly the energy assets of Boral) 13.19 per cent; Gulf 4.75 per cent; and Cultus 2.1 per cent.

Gas can be supplied from basins in Victoria to NSW through the Interconnect. The actual amount that can be supplied is limited by the degree of compression in the Victorian gas network and the capacity of the Interconnect. This is discussed further below.

The gas production fields in the Gippsland Basin are jointly owned and operated by Esso and BHP. Gas from these fields is processed at Esso's processing plant at Longford near Sale. Esso and BHP jointly market the gas produced in the Gippsland Basin and sell it to Gascor.[8] The joint marketing agreements between Esso/BHP and Gascor are confidential, but the Victorian Department of Treasury and Finance reports that:

> In November 1998, new terms were agreed between Gascor and BHPP and Esso for the supply of gas from the Gippsland Basin. The new contract provides Gascor with gas supply through to 2009 or the depletion of the contracted quantities, whichever is the earlier. (Victorian Department of Treasury and Finance, 1998, p. 63)

This agreement has been authorised by the *Gas Industry Act (Victoria) 1994* to exempt it from Part IV of the TPA.

The gas supplied under this agreement meets a large proportion of Victoria's gas requirements until 2009, but leaves some scope for outstanding demand to be met by other suppliers.

Woodside has expressed an interest in developing the Kipper gas field in Bass Strait. This field lies adjacent to fields under production by Esso and BHP. (Woodside, submission 28, p. 1)

## Reserves

Figures in a report prepared for the Business Council of Australia (BCA) by Port Jackson Partners indicate reserves in the Cooper/Eromanga Basin of 9,233 PJ, about 7.6 per cent of Australia's total natural gas reserves. Cooper/Eromanga Basin producers were estimated as producing at an annual rate of about 212 PJ per year, indicating reserves could continue to meet current rates of demand for about 43 years.[9] (Port Jackson Partners, exhibit 28, facing p. 21)

[8] Gascor has now been disaggregated into the three stapled Victorian distribution and retailing companies (Stratus, Westar, and Multinet) which have been privatised.

[9] Mr McArdle of Santos testified to the Australian Competition Tribunal during hearings in the *AGL Cooper Basin decision* in 1997 that the Cooper Basin had little capacity to supply gas to NSW beyond that committed under its contract to supply AGL in Sydney. This contract provides for a maximum of 120 PJ per year to be supplied under a contract expiring in 2006 (unless renewed for a period up to five years). On the evidence before it, the Tribunal found beyond 2006 the Cooper and Eromanga Basins had the capacity only to supply "perhaps 15 % to 20 % of NSW demand for several years", far less than the current 95 – 100 per cent of NSW demand. (*Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) ATPR 41-593 at 44,204). However, since that time, the Council understands that significantly more gas has been discovered in the Cooper/Eromanga Basin.

These figures suggest that there are sufficient gas reserves in the Cooper/Eromanga Basin to enable the Moomba to Sydney Pipeline System to be a significant supplier of gas to the NSW market for the foreseeable future. In their joint submission, Woodside and Shell Development note that they, or their customers, may in future seek to ship gas via the Moomba to Sydney Pipeline System from the Sunrise gas fields in the Timor Sea. The submission notes that delivery of gas from the fields to Darwin is expected to commence in 2005, with gas possibly flowing to markets in South East Australia (possibly via the Moomba to Sydney Pipeline System) soon after. (Woodside/Shell, submission 6, p. 2)

Port Jackson Partners estimated reserves in the Gippsland Basin of about 13,283 PJ or roughly 11 per cent of Australia's total gas reserves. The Otway Basin holds small additional reserves (Port Jackson Partners, exhibit 28, facing p. 21). At present rates of production, these reserves can meet current rates of demand for more than 50 years.

## Gas Transmission and Distribution

Gas from the Moomba processing plant in the Cooper Basin is transported to Sydney, regional NSW, and the ACT via the Moomba to Sydney Pipeline System. Another pipeline runs from Moomba to Adelaide.

The Moomba to Sydney Pipeline was constructed between 1973 and 1976 and gas supply to Sydney commenced late in 1976. (AGA, 1997, pp. 23-24) The pipeline was originally owned by the Commonwealth and operated by a statutory authority, The Pipeline Authority. The pipeline was sold to EAPL in 1994. (EAPL, 1999, p. 23)

The Moomba to Sydney Pipeline System supplies gas to Sydney and, through laterals and distribution pipelines, to major regional centres including Dubbo, Newcastle, Lithgow, Wollongong, and the ACT. It transported 111.7 PJ in 1998, and 115.8 PJ in 1999, (EAPL, 1999, pp. 11, 13)[10] supplying over 95 per cent of NSW's natural gas requirements in those years. (NSW Ministry of Energy and Utilities, 1999b)

There has been a change in the ownership structure of the Moomba to Sydney Pipeline System following the establishment, in June 2000, of the Australian Pipeline Trust. The System continues to be owned by EAPL (which also remains the service provider), but all shares in EAPL are now held by Australian Pipeline Limited, a publicly listed company. The Council understands that AGL holds a 30 per cent interest and Petronas a 10 per cent interest in the Australian Pipeline Trust. (EAPL, 2000a) Prior to the creation of the Trust, AGL held a 76.48 per cent interest in EAPL and Petronas a 23.52 per cent interest.

[10] TJ units converted to PJ units through multiplication by 365.25/1000.

A significant proportion of the capacity of the Moomba to Sydney Pipeline System is committed under the Gas Transportation Deed between EAPL and AGL Wholesale Gas Pty Ltd[11]. The Gas Transportation Deed provides a comprehensive arrangement under which EAPL transports gas from Moomba to Wilton, facilitating AGL's long-term take-or-pay arrangement with the SA Unit. Under the take-or-pay contract, AGL agreed to take (or pay for) a minimum amount of gas over a 30 year period from the SA Unit.[12] AGL distributes the gas it receives under the take-or-pay contract mainly through its distribution network in Sydney. The take-or-pay contract is set to expire in 2006.

According to EAPL's Access Arrangement Information, lodged with the ACCC in June 1999, the Moomba to Sydney Pipeline System currently has the capacity to transport about 172 PJ per year (which could be expanded to more than 290 PJ per year through the addition of up to six compressor stations).

The capacity of the Moomba to Sydney Pipeline System is relatively constrained in parts of the system. The most constrained part is the segment between Moomba and Young, on which only about 9.9 PJ per year of spare capacity is available for access by third parties. Capacity is less constrained in other parts of the pipeline. (ACCC, 1999a, p. 11) This is because some gas leaves the main pipeline at Young and enters laterals to supply regional areas of NSW.

EAPL states that it expects more spare capacity will be available as the take-or-pay contract with the SA Unit producers nears expiration and banked gas is consumed. From June 2000, it expects the level of available capacity to increase to about 21 PJ per year by winter 2003, and to approximately 55 PJ per year by 2005. (ACCC, 1999a, p. 11) EAPL also expects that the operation of the Eastern Gas Pipeline will reduce demand for transport of gas in the Moomba to Sydney Pipeline System, freeing up additional spare capacity. (EAPL, 1999, pp. 11-12)

In August 1998, the Interconnect was completed. It links GPU GasNet's gas transmission network in Victoria and EAPL's gas transmission network in NSW through a lateral from Young to Wagga Wagga. Gas can be transported from Longford to Sydney via the Interconnect.

According to LECG's submission on behalf of Duke on the application for Coverage of the Eastern Gas Pipeline, the capacity of the Interconnect to transport gas to Sydney is almost 5 PJ per year. (LECG, submission 27, p. 31) Through backhaul arrangements, this can be doubled to about 10 PJ per year.

[11] The Gas Transportation Deed replaced the Gas Transportation Agreement on 1 July 2000.
[12] *Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) 19 ATPR 41-593 at 44-168.

LECG's submission states that the capacity of the Interconnect could be expanded through additional compression and looping to somewhere around 90 PJ in total capacity.[13] It estimates this could be achieved at a capital cost of about $232 million. (LECG, submission 27, pp. 31-32)

Existing booked capacity southbound on the Interconnect amounts to around 5 PJ per annum. (EAPL, 1999, p. 9)

The Interconnect does not add significant capacity as gas flowing through the Interconnect must flow along part of the Moomba to Sydney Pipeline System to reach Sydney. In addition, capacity constraints on the Victorian side of the border make it difficult to supply more than about 6 PJ per year into NSW at current rates of compression and demand (more could be supplied with greater compression of the Victorian transmission system).[14]

The Longford to Melbourne pipeline, which supplies gas from the Gippsland Basin to Melbourne, is owned by GPU GasNet Pty Ltd. The Eastern Gas Pipeline has an initial capacity of 55 PJ per year, with the ability to expand to a maximum capacity of 110 PJ per year through additional compression. (Duke, 1999, p. 4)

The distribution system in Sydney is owned by AGL and is Covered under the National Code.

### Tariffs

The price of gas supplied by both the Cooper/Eromanga Basin and the Gippsland Basin is around $2.35 to $2.55 per GJ depending on the season and other economic factors. Data on the daily price movement of Gippsland Basin gas is provided by Vencorp. Cooper/Eromanga Basin gas price data is confidential, but figures can be deduced from the Tribunal hearing in the *AGL Cooper Basin decision* where, for 1993-94, "the average ex-field price for Cooper Basin gas sold to AGL … was stated in public evidence to be $2.21 per GJ".[15] The Port Jackson Partners report for the BCA cited basin price for Cooper/Eromanga Basin gas of $2.40 in 1999. (Port Jackson Partners, 2000, exhibit 29, facing p. 21)

The Council notes that both basins have been in a position of largely monopoly supply to particular areas (Sydney, regional NSW and Adelaide

[13] NSW Ministry of Energy and Utilities, 1999b claims the Interconnect could be upgraded to around 90 PJ per year, while EAPL and the Gas Transmission Corporation of Victoria claim the Interconnect could eventually carry around 70 PJ per year.

[14] According to GPU Gas Net Pty Ltd, which operates the Victorian gas transmission system, capacity to supply gas to NSW through the Interconnect depends on pressure in the northern Victorian system, which in turn depends on seasonal demand in Northern Victoria. Growth in demand in northern Victoria (approximately the area of the Victorian gas network north of the Melbourne city fringes) would displace approximately an equal amount of gas that could be supplied to NSW.

[15] *Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) ATPR 41-593 at 44,185.

in the case of the Cooper/Eromanga Basin and Melbourne and regional Victoria in the case of the Gippsland Basin). This means that the historical price of gas from these basins may be above competitive levels.

As the Moomba to Sydney Pipeline System is Covered under the National Code, EAPL has recently submitted an Access Arrangement for it to the ACCC for approval. The Access Arrangement specifies the transport tariffs that EAPL proposes to charge for transporting gas from Moomba to Wilton outside Sydney. EAPL has proposed a number of tariffs depending on whether delivery is guaranteed for any particular time. In its draft Access Arrangement, EAPL proposes a tariff of 70.8 cents per GJ[16] to transport gas from Moomba to Wilton (firm transport at 100 per cent load factor).[17] EAPL has since signalled its intention to reduce its published tariff for transport from Moomba to Wilton to 65.77 cents per GJ (excluding GST) from 1 July 2000. The Council understands that there has been a 1.9 per cent increase in AGL's distribution tariffs from the same date.

The draft Undertaking provided by Duke to the ACCC for the Eastern Gas Pipeline specified the tariffs it is prepared to offer. Under Duke's proposed tariffs, it would cost 86 cents per GJ to transport gas from Longford to Wilton outside Sydney (firm transport at 100 per cent load factor).[18] (The ACCC has indicated that it does not accept Duke's draft Undertaking.)

Port Jackson Partners' report for the BCA estimated the delivered price in Sydney of gas from the Cooper/Eromanga Basin was $3.20, consisting of an ex-Cooper/Eromanga Basin price of $2.40 and a transmission tariff of 80 cents. (Port Jackson Partners, exhibit 29, facing p. 21)[19] This indicates that transmission tariffs represent approximately 25 per cent of the delivered gas price for large users.

As stated earlier, LECG suggests transmission tariffs on the Eastern Gas Pipeline will represent about 26 per cent of the delivered price of gas for users in Sydney taking gas in Sydney directly from the Eastern Gas Pipeline. APIA estimates transmission tariffs will represent around 6 to 15 per cent of the delivered price for commercial and residential users (as these users will also pay distribution and retail charges).

[16] Charges taken from EAPL Access Arrangement Information detailing tariffs to 1 July 2000. Calculations are: 1 PJ/year = 2.73785 TJ/day; Yearly capacity charge for firm or class FT service = 15.69*1299*12*2.73785 = $669,612; Yearly commodity charge = 0.0299*1000*1299 = 38,840. 1GJ = 1PJ/1,000,000.

[17] Firm transport means transport with the guarantee that the gas will be delivered on the day and at the time specified in the contract. One hundred per cent load factor means that the user uses all of the capacity booked by it for any given day or time.

[18] Calculations are: Single forward haul rate of $0.86/GJ to Zone 3, which includes Wilton and Sydney.

[19] GJ prices converted to PJ prices by multiplying by 1000.

## Size of NSW Market and Rate of Growth

The likelihood of capacity constraints in the transport of gas to NSW depends on the capacity of the two major pipelines serving that market, the rate of growth in demand in NSW, and the extent of fluctuations in demand. Where transport capacity becomes relatively constrained, the operators of the Moomba to Sydney Pipeline System and the Eastern Gas Pipeline may have greater scope to engage in parallel pricing behaviour. It is therefore useful to assess the point at which growth is likely to cause capacity to become constrained.

With the commissioning of the Eastern Gas Pipeline, the combined transport capacity of the Eastern Gas Pipeline and the Moomba to Sydney Pipeline System is initially (that is, excluding additional capacity created through compression and looping) about 226 PJ per year.

It is difficult to forecast accurately growth in demand in Sydney. This is because demand projections tend to estimate aggregate demand across NSW and the ACT, and because growth in gas-fired electricity generation is unclear.

The Australian Gas Association (AGA) and the Australian Bureau of Agricultural and Resource Economics (ABARE) have produced forecasts of gas use in Australia, including NSW. The latest comprehensive AGA study, in 1997, predicted demand in NSW and the ACT as per Table 2 below:

**Table 2: AGA modified estimates (1997) gas use NSW/ACT**
(AGA, 1997, lift-out)

| Year | Demand in PJ |
|---|---|
| 1995 | 100.9 (actual) |
| 2000 | 148.3 |
| 2005 | 182.9 |
| 2010 | 218.2 |
| 2015 | 240.2 |
| 2020 | 258.0 |
| 2025 | 273.2 |
| 2030 | 292.5 |

Since 1997, growth in demand for gas has been revised down due to slower than expected growth in gas-fired electricity generation. The AGA's latest forecasts of gas consumption in NSW come from a 1999 study by the National Institute of Economic and Industry Research. (NIEIR, 1999) NIEIR's predictions of NSW gas consumption are contained in Table 3 below.

**Table 3: NIEIR projections of NSW/ACT consumption**
(NIEIR, 1999, p. 42)

| Year | Demand in PJ |
|---|---|
| 1996-97 | 129.9 |
| 2004-05 | 165.7 |
| 2014-15 | 281.4 |

The latest ABARE estimates are contained in Table 4 below.

**Table 4: ABARE forecasts of demand for NSW/ACT**
(ABARE, 1999, Table D)

| Year | Demand in PJ |
|---|---|
| 1995-96 | 107.8 (actual) |
| 1999-00 | 142.0 |
| 2000-01 | 143.1 |
| 2001-02 | 154.8 |
| 2002-03 | 157.6 |
| 2003-04 | 160.4 |
| 2004-05 | 168.0 |
| 2009-10 | 179.5 |
| 2014-15 | 229.6 |

## Capacity Constraints

Capacity constraints are likely to arise well before average demand in NSW rises to the combined capacity of the Moomba to Sydney Pipeline System and the Eastern Gas Pipeline. This is because of intraday and seasonal fluctuations in demand which cause short term constraints even where average demand is well below the combined capacity of the two pipelines.

One illustration of the degree of fluctuations is that average demand of about 115 PJ on the Moomba to Sydney Pipeline System during 1998/99 resulted in peak demand of about 161 PJ, or about 40 per cent above average.

Gas usage fluctuates significantly during the day and according to the season. (International Energy Agency (OECD), 1994, pp. 34-35) These fluctuations could give rise to significant capacity constraints even where average usage does not exceed 226 PJ per year. In Europe, peaks in demand are met by drawing from gas storage reservoirs or linepack.[20] However, since there are currently no gas storage reservoirs in NSW, and available linepack is limited, peaks in demand must largely be met out of

[20] Linepack is temporary storage of gas in the pipeline which is not immediately needed. Pressures need to be maintained at particular levels, limiting the potential linepack.

the pipelines. Where average usage comes close to the maximum capacity of these pipelines, peak usage during particular times of the day or during certain seasons could be expected to cause significant capacity constraints.

The extent to which gas fluctuations will create capacity constraints depends on the size of the fluctuations, which depends in turn on the extremes of temperature experienced by a site of demand and the percentage of residential demand (as residential demand is more dependent on temperatures than industrial demand). In the case of Sydney, where temperature changes are not extreme and residential consumption is only about 16 per cent of total consumption, fluctuations could be expected not to be pronounced compared to places such as Europe where fluctuations can vary demand by a factor of over 2.5 times because of the extreme cold in winter-time. (International Energy Agency (OECD), 1994, p. 35) Vencorp reports monthly gas demand and sales for gas on the Victorian spot market. It reported fluctuations in daily demand in September 1999 between 0.455 PJ and 0.861 PJ, in daily demand in February 2000 between 0.283 PJ and 0.557 PJ, and in April 2000, between 0.356 PJ and 0.475 PJ, for a total range from the day of minimum demand to peak demand of 0.283 PJ to 0.861 PJ. Assuming the midpoint between these levels represents the average, then monthly peak demand is averaging 25.9 per cent above average monthly demand, and the peak across the three periods is 34 per cent above average. Another method of measuring the size of fluctuations is to compare monthly production at the height of summer (January) with production at the height of winter (August). On this basis, 1999 monthly production at the Cooper/Eromanga Basin increased 21.4 per cent from January to August and monthly production at the Gippsland Basin increased 109 per cent. The Gippsland Basin figures reflect colder Melbourne weather and greater variations associated with greater residential use as a share of total use. (Australian Petroleum Production and Exploration Association, 1999)

At least four other operational factors tend to limit the capacity of the Moomba to Sydney Pipeline System and the Eastern Gas Pipeline to meet demand.

- The pipelines must supply not only Sydney but places along their routes. Gas supplied to places along the route of the Eastern Gas Pipeline or the Moomba to Sydney Pipeline System reduces the carrying capacity of the pipelines by the time they reach Sydney. This can cause constraints at points along the route of the pipelines; for example, the Moomba to Sydney Pipeline System is most capacity constrained on the section from Moomba to Young.[21]

[21] On the section from Moomba to Young, the Moomba to Sydney Pipeline reaches close to full capacity at times of peak demand, while on the section from Young to Wilton it only reaches about 70 per cent during times of peak demand.

- Where a user's demand is uncertain, it may need to reserve greater capacity than it ends up using. For example, where a factory is unable to predict precisely its demand over a coming period, it may sign a one year contract reserving sufficient capacity to meet its expected maximum daily demand over that year. The factory may be able to sell any unutilised capacity through the secondary market, agree to surrender it back to the pipeline owner for a fee, or write clauses in to the contract to permit it some relief from having to pay for the full amount of its reserved capacity.

- While combined capacity is 226 PJ per year, constraints could arise in one or other of the pipelines at an earlier stage. This would arise, for example, where gas from one basin became much cheaper than from the other basin, leading to a surge in demand for transport of gas through the pipeline connecting the cheaper basin to users.

- Balancing and operational and safety requirements which reduce available capacity.[22]

Determining the point at which capacity is likely to become constrained is guided by examining the patterns of demand for transport capacity in the Moomba to Sydney Pipeline System and other pipelines.

Table 5 shows, for a system capable of transporting an average of 226 PJ per year, how various fluctuations can cause capacity constraints even where average demand is well below 226 PJ per year. For example, where peak demand fluctuates 40 per cent above average demand (as the Moomba to Sydney Pipeline System did in 1999), then a system capable of carrying 226 PJ per year could expect to experience some capacity constraints on average demand of 162 PJ per year. Average demand of 162 PJ per year is forecast to occur around 2005.

There does appear, on the current configurations of the Eastern Gas Pipeline and the Moomba to Sydney Pipeline System to be excess transport capacity to Sydney. However, the amount of excess capacity, and the time taken for it to be absorbed by natural growth in the market is difficult to predict. A best estimate would suggest capacity constraints will emerge around 2010, although it is possible that peak seasonal demands may give rise to constraints as early as 2005.

[22] Changes in weather can also affect the transport capacity of pipelines. In summer, natural gas expands, reducing the transport capacity of a pipeline, while in winter, natural gas contracts. This can partially offset additional demand in winter.

**Table 5: Peak requirements**

| Height of Peak Demand Above Average Demand (as percentage) | Average Demand (In PJ) |
|---|---|
| 0 | 226 |
| 5 | 215 |
| 10 | 205 |
| 15 | 196 |
| 20 | 188 |
| 25 | 181 |
| 30 | 174 |
| 35 | 167 |
| 40 | 162 |
| 45 | 156 |
| 50 | 151 |

## Costs of Expanding Capacity

LECG provides estimates of the cost of adding incremental capacity to the Interconnect, the Eastern Gas Pipeline, and the Moomba to Sydney Pipeline System.

LECG estimates it would cost $232 million to expand the capacity of the Interconnect by 85 PJ to 90 PJ per year, $88 million to expand the capacity of the Eastern Gas Pipeline by 55 PJ to 110 PJ per year,[23] and $61 million to expand the capacity of the Moomba to Sydney Pipeline by 47 PJ to 219 PJ per year.[24] (LECG, submission 27, p. 32 and p. 36)

The Council has sought to compare the incremental costs over a comparable range. The LECG submission provides estimates for expanding the capacity of the Interconnect by 40 PJ per year, the Eastern Gas Pipeline by 40 PJ per year, and the Moomba to Sydney Pipeline by 47 PJ per year. Over these ranges, the incremental cost of expanding capacity for the Interconnect is $4.175 million per PJ, for the Eastern Gas Pipeline is $1.6 million per PJ, and for the Moomba to Sydney Pipeline is $1.30 million per PJ. (LECG, submission 27, p. 32 and p. 36)

These figures indicate the incremental costs of adding capacity to the Eastern Gas Pipeline and the Moomba to Sydney Pipeline System are

[23] Calculated from LECG's estimate that the cost of adding 1 PJ on the Eastern Gas Pipeline is $1.6 million.

[24] On these figures, the approximate incremental costs per PJ of capacity for the Interconnect are $2.73 million, for the Eastern Gas Pipeline are $1.6 million, and for the Moomba to Sydney Pipeline are $1.26 million.

much lower than for adding capacity to the Interconnect across all ranges of additions to capacity.[25]

## Conclusion

In conclusion, it appears that the NSW gas industry will continue to be highly concentrated even following the construction of the Eastern Gas Pipeline. Ownership will continue to be highly concentrated in production, transmission, and distribution.

Based on operational requirements and forecasts of gas demand in the NSW market, it appears likely that the current installed pipeline capacity of the Moomba to Sydney Pipeline System and the Eastern Gas Pipeline (around 226 PJ per year) will be absorbed somewhere between 2005 and 2010.

[25] According to the figures supplied by LECG, the incremental cost of expanding the capacity of the Interconnect is $2 million per PJ to add 15 PJ, $3.67 million per PJ to add 30 PJ, $4.175 million per PJ to add 40 PJ, and $2.73 million per PJ to add 85 PJ. The cost of expanding the capacity of the Moomba to Sydney Pipeline is $1.46 million per PJ to add 11 PJ, $1.30 million per PJ to add 29 PJ, $1.30 per PJ to add 47 PJ, $1.26 million per PJ to add 66 PJ, and $1.26 million per PJ to add 84 PJ. The incremental cost of adding capacity to the Eastern Gas Pipeline is estimated at $1.6 million per PJ across the range. (LECG, submission 27, p. 32 and p. 36)

# Part C – Consideration of the Criteria under Section 1.9 of the National Code

## *The Nature of the Council's Decision and Its Approach to Decision-Making*

Under the National Code, in determining whether to recommend revocation of Coverage, the Council must consider whether the pipeline meets the Coverage criteria in section 1.9. The Council must recommend revocation of Coverage of a pipeline if that pipeline does not satisfy all of the criteria.

The appropriate test for the Council is that it must be "affirmatively satisfied" of the matters set out in clause 1.9.[26] In doing so, it is required to comply with the duties imposed upon it under the general principles of administrative decision-making. Provided that an administrative decision maker reaches a decision within these general principles, the way in which an administrative decision maker is to approach a particular decision is not otherwise prescribed by the law. There are a "whole range of possible approaches to decision-making", the correctness of any one approach depending on the circumstances of the particular case.[27]

In the context of the Eastern Gas Pipeline application, issues were raised concerning the burden of proof imposed on the Council. The Council notes that questions of the standard of proof have no application to administrative decisions and statistical analysis has not been accepted by courts in Australia as providing a legitimate basis for reaching a decision.

## *Guidance in Interpreting the Coverage Criteria*

In interpreting the Coverage criteria, the Council has used general principles of statutory interpretation. In the particular context of this application, it has had regard to the following specific matters.

First, the Council has had regard to the purpose sought to be achieved in enacting the Gas Access Acts of NSW, SA, Queensland, ACT and the

[26] *Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754 at 40,755.

[27] See *MIEA v Wu Shan Liang* (1996) 185 CLR 259 at 282; also *John Meadows & Sornawathy Meadows v Minister for Immigration and Multicultural Affairs* (unreported, Einfeld, von Doussa and Merkel JJ, 23 December 1998) especially at p. 12 per Einfeld J.

Commonwealth.[28] Reference has been had to the preambles to each of the Gas Access Acts to determine this purpose.

Second, pursuant to section 10.5 of the National Code, the Council has had regard to the introduction and overview to section 1 of the National Code:

- where the meaning of the provision in section 1 appeared clear, to confirm the ordinary meaning conveyed by the text of the provision; or

- where the Council considered the provision was ambiguous or obscure, or the ordinary meaning would lead to a manifestly absurd or unreasonable result, to determine the meaning of the provision.

Third, the Council has had regard to decisions of the Tribunal in relation to applications for declaration under Part IIIA of the TPA. This is because in relevant respects the words of the declaration criteria in sections 44G(2) and section 44H(4) of the TPA raise for consideration the same issues as those raised by the Coverage criteria. The declaration criteria have been considered by the Tribunal in the *Australian Union of Students decision* and the *Sydney Airports decision*.[29]

## *The Relevant Pipelines and the Services Provided by those Pipelines*

Each of the criteria in section 1.9 of the National Code requires consideration of whether either the pipeline under consideration or the services provided by it satisfy certain tests. The Council therefore considers it useful to begin by identifying the relevant pipelines and the services provided by them before considering the individual criteria in detail.

This application seeks revocation of Coverage of three main transmission pipelines within the Moomba to Sydney Pipeline System, some comprising several pipeline numbers as noted in Part A.

[28] Section 33, *Interpretation Act, 1987* (NSW); section 15AA, *Acts Interpretation Act, 1901* (Commonwealth).

[29] *Re Application for review of the decision by the Commonwealth Treasurer & published on 14 August 1996 not to declare the "Austudy Payroll Deduction Service" under Part IIIA of the Trade Practices Act 1974; by the Australian Union of Students* [1997] ACompT 1 (28 July 1997); (1997) 19 ATPR 41-573 and *Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754.

## The Pipelines for which Revocation is Sought

'Pipeline' is defined in the National Code and the GPAL as a pipe or system of pipes for transporting natural gas and tanks, machinery, etc attached to the pipes, but does not include any facilities of the upstream processing plant, or anything downstream of the connection point to the consumer.[30]

The three pipelines for which revocation is sought are:

- the Moomba to Wilton pipeline;
- the Young to Culcairn pipeline; and
- the Dalton to Canberra pipeline.

The latter two are lateral pipelines which branch off the Moomba to Wilton pipeline, but under the National Code they must be considered separately.[31]

The Moomba to Wilton pipeline supplies gas to:

- Sydney (via the AGL Wilton to Horsley Park pipeline);
- points along its route, including Goulburn, Marulan, Moss Vale and Bowral; and
- the lateral pipelines branching off it, namely the AGL Central West System, the Young to Lithgow pipeline (and associated spurs to Bathurst, Orange and Oberon), the Young to Culcairn pipeline and the Dalton to Canberra pipeline. The last two of these are pipelines for which revocation has been sought. Revocation has not been sought for the Young to Lithgow pipeline or for the AGL Central West System. The AGL Central West System does not form part of the Moomba to Sydney Pipeline System.

The Young to Culcairn pipeline branches off the Moomba to Wilton pipeline and comprises: a pipeline running from Young to Wagga Wagga, a spur to Cootamundra and an extension from Wagga Wagga to Culcairn in NSW. This extension forms a portion of the Interconnect which carries gas to and from Victoria. A lateral pipeline (for which revocation has not been sought) runs from Burnt Creek on the Young to Wagga Wagga pipeline to Junee, Griffith, Leeton and Narrandera in NSW.

The Dalton to Canberra pipeline branches off the Moomba to Wilton pipeline at Dalton and runs to North Watson in the ACT. It supplies gas to Canberra, Queanbeyan and the Yarrowlumla Shire.

[30] Section 2, GPAL read together with section 10.8 of the National Code.
[31] This issue is discussed in Part A.

## Services Provided by the Pipelines for which Revocation is Sought

*Services Provided by Gas Pipelines*

'Service' is defined broadly in the National Code to mean a service provided by means of a Pipeline including (without limitation) haulage services (such as firm haulage, interruptible haulage, spot haulage and backhaul), the right to interconnect with the pipeline and ancillary services.[32]

Natural gas transportation services can generally be further classified into 'firm' or 'interruptible' transportation services. With a 'firm' transportation service, the user is guaranteed delivery of gas at all times, while with 'interruptible' services the pipeline operator reserves the right to interrupt the transportation service at any time (generally in times of peak demand). Interruptible services are accordingly less reliable than firm services and could be expected to be cheaper. Other gas transportation services offered by pipeline operators include off-peak summer services (typically the time of least demand for gas transportation services). Providing this range of firm, interruptible, and off-peak summer services enables the pipeline owner to maximise usage by the highest paying source of demand.

Backhaul refers to arrangements for the supply of gas from a producer to a user in circumstances where the user is located upstream of the point on the pipeline where the producer can inject the gas. The user's requirements are actually met by gas diverted from another producer.

Interconnection is the right to join other pipelines with the relevant pipeline (the subject of the Coverage application). Parties may be interested in interconnecting their pipelines with the three pipelines for which revocation is sought to open up new supply possibilities for their regions.

Linepack is another service third parties may seek. However, linepack is typically sought by users to assist in balancing small fluctuations in their daily demand, and can therefore be viewed as a service ancillary to gas transportation.

The Council considers that for the purposes of considering this Coverage application, it is not necessary to define every possible type of gas transportation service.

*Geographic Scope of Pipeline Services*

The definition of service in the National Code says nothing about the geographic scope of the service provided by the pipeline. In other words, it

[32] Section 10.8, National Code

does not indicate whether or not the transportation service, of whatever kind, is one which is a point to point service or a more broadly defined service of transporting gas to a particular destination or region. This has significance in relation to several of the criteria the Council must consider.

The essence of a pipeline is that it transports gas between two points. Those two points may be the origin and destination of the pipeline itself. Alternatively, the points may be the origin and some point along the route.

From the perspective of a gas producer, a transportation service must originate at the relevant gas field. This may occur either by a pipeline having its origin there or a spur line or interconnect being developed to link in with an existing pipeline. A pipeline which transports gas from another field to the same destination point as that to which the first producer wishes to transport gas is of no use to the first producer. A gas producer requires a point to point service for the transportation of its gas.

A purchaser of gas makes a decision about whether or not to purchase gas available at its location It may contract directly with both the producer and the pipeline owner; alternatively, the gas producer or an intermediary may establish the relevant transportation arrangements. The cost of transportation to the destination will be a critical element in considering the price at which the delivered gas is supplied and the components of the total price are identifiable as the price of the gas ex field and the price for the transportation of that gas.

The purpose of identifying the services provided by a particular pipeline is to consider whether:

- Coverage of the Pipeline would promote competition in a market other than the market for the transportation services;
- it would be uneconomical to develop another pipeline to provide the services provided by the Pipeline the subject of the application;
- access to the Services provided by means of the pipeline can be provided without undue risk to human health and safety; and
- access to the Services provided by the pipeline would not be contrary to the public interest.

As outlined by the Council in its Final Recommendation in relation to the Eastern Gas Pipeline, there are two possible approaches to service definition. The first involves defining the relevant service in terms of both the start and end points (or regions) of the service. In the case of the three pipelines for which revocation is sought, such an approach would involve the transport of gas from the starting point to all points served by the respective pipelines along their respective routes.

The point to point approach focuses on the key nature of the service provided by pipelines as being a transportation service sensitive to origin and destination. By analogy, in the context of rail track services the transport of people and goods is sensitive to origin and destination. For example, a rail line from Swan Hill in Victoria to port facilities in Geelong may not provide a useful service for a wheat grower in Griffith who wanted to bring his wheat to Geelong. Thus, in applications for declaration of rail track services under Part IIIA of the TPA, the Council has considered the question in the context of point to point movement.[33]

A point to point approach to service definition is consistent with the approach adopted by the regulatory authority in the United States, the Federal Energy Regulatory Commission (FERC). FERC, in considering proposals for the application of market based rates to a particular pipeline, requires identification of the transmission service over a particular path and requires identification of sellers that offer available transmission services over that same path. Thus, in order to specify a gas transportation market, the applicant must first identify all products and services available as good alternatives to the applicant's customers. Next, the applicant must identify the origin and destination of that transportation. The relevant geographic market will be defined in two steps: first, those alternative sellers that offer service between the same origin and destination markets and second, all economically substitutable transportation sold by pipelines (or other good alternative products and services) serving either the origin market or the destination market. (FERC, 1996, pp. 32-33; Brattle Group, 2000, p. 19)

An alternate approach would be to consider the service to be defined by reference to the destination or the market it serves, so that the Moomba to Wilton pipeline could be described as providing the service of transportation of gas to the Sydney region or South East Australian gas sales market. The reasoning behind this approach is that since one of the prime objectives of the National Code is to promote competition in relevant upstream and downstream markets, the service definition should focus on the areas of actual and potential competition.

The Council considers that a point to point approach to service definition is more consistent with the language of the Code and the approach to service definition more generally under Part IIIA of the TPA. It also reflects the fact that service definition is concerned with the particular facility at issue. Hence in the *Sydney Airports decision* the Tribunal said:

> It is important to understand, in terms of s.44H(4)(b) what it is that must be uneconomical for anyone to develop. It is not simply "another facility" but rather "another facility to provide the service"; that is to say, the service provided by the use of aprons and hardstands at SIA and the service provided by the use of an area at that airport to store equipment

[33] See, for example: NCC, 1997a, p. 5; and NCC, 1997c, p. 14.

> and to transfer freight from the loading and unloading equipment to and from trucks. It should also be noted that s.44H(4)(b) requires satisfaction that it would be uneconomical to develop "another facility" to provide that service. (*Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754 at 40,791)

The Council concludes that, consistent with this approach, the services of the three pipelines for which revocation has been sought may be described as follows.

- The Moomba to Wilton pipeline provides gas transport services from Moomba to Wilton and destinations en route, as well as transportation services from Moomba to the lateral pipelines branching off it.

- The Young to Culcairn pipeline provides gas transport services from Young to Culcairn, to destinations en route and to the Burnt Creek to Griffith pipeline.

- The Dalton to Canberra pipeline provides gas transport services from Dalton to Canberra, Queanbeyan and the Yarrowlumla Shire.

## *The Markets in which the Pipelines Provide Services*

Having identified the relevant services or products as being the point to point gas transportation services identified above, ordinary market analysis must be used to determine, in the case of each separate product, what market it is in. In other words, for each separate transportation service, it must be determined whether there are any other transportation services competitive with that service.

### Meaning of the Term 'Market'

In considering the questions of market definition, the Council is guided by the work of the Federal Court, the Tribunal, and the ACCC in their consideration of market for the purposes of Part IV, as well as the Tribunal's and the Court's consideration of Part IIIA.

The Tribunal has defined 'market' in the following way:

> A market is the area of close competition between firms, or putting it a little differently, the field of rivalry between them (if there is no close competition there is of course a monopolistic market). Within the bounds of a market there is substitution – substitution between one product and another, and between one source of supply and another, in response to changing prices. So a market is the field of actual and potential transactions between buyers and sellers amongst whom there can be

> strong substitution, at least in the long run, if given a sufficient price incentive. (*Re Queensland Co-operative Milling Association Ltd* (1976) 25 FLR 169 at 190)

This view of market and has been accepted by the High Court in the *Queensland Wire* case and was adopted by the Tribunal in the context of Part IIIA in the *Sydney Airports decision*.[34]

## Dimensions of Markets

The relevant dimensions of markets include the following.

- The product market, that is the types of goods and services in a market. Product markets can be considered separate if their respective products are not substitutable in demand or supply. Products are substitutable in demand (and therefore in the same product market) if consumers will substitute one product for the other following a small but significant change in their relative prices. Substitution in supply occurs when a producer can readily switch its assets from producing one product to another.

- The functional market. Functional market definition focuses on the different steps in a production process. In defining functional markets, the Council has had regard to the Tribunal's approach to functional market delineation in the *Sydney Airports decision* which is consistent with the approach used by the High Court in *Queensland Wire* and developed by Professor Maureen Brunt (Brunt 1990) and Professor Henry Ergas, (Ergas 1997, pp. 1 - 3).[35] The Council considers that the two following conditions must be satisfied before markets can be regarded as functionally separate.

    - The layers at issue must be separable from an economic point of view (*economically separable*). This involves an assessment as to whether the transaction costs in the separate provision of the good or service at the two layers are so large as to prevent such separate provision from being feasible. In effect, to be in different markets, vertical integration must not be inevitable.

    - Each layer must use assets sufficiently specific and distinct to that layer such that the assets cannot readily produce the output of the other layer (*economically distinct*). In effect, supply side substitution must not be so readily achievable as to unify the field of rivalry between the two layers.

[34] *Queensland Wire Industries Pty Ltd* v *The Broken Hill Proprietary Ltd and Another* (1989) 167 CLR 177 and *Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754 at 40,772.

[35] See, for example, the test of involvement and test of influence proposed in Smith and Walker, (1998).

> Markets may be functionally separate even though there is a *one for one* relationship, that is to say, perfect supply and demand side complementarity. A good example of this is rail track and train operations. However, where complementarity is associated with economies of joint production or consumption such that separate provision or consumption was not economically feasible, the services will not be in functionally separate markets.[36]

- The geographic dimension of the market. This refers to the area covered by the market such as national, intrastate or regional markets. The reference to 'other markets' in criterion (a) includes markets outside Australia.

- The temporal dimension of the market. This refers to whether the size and scope of the market is likely to change over time. The temporal dimension is particularly relevant where production technologies are continually changing. In order to determine the temporal parameters of markets, the Council generally has regard to long-run rather than short-run substitution possibilities.

## Market Definition for Gas Transport Services

Whilst there have been several Australian decisions which have considered the question of market definition in the context of gas sales,[37] there do not appear to be any which have focused on the issue of gas transportation. The Council focuses upon this for the purposes of determining:

- whether these services are provided in a market separate from that in which gas sales occur; and

- the scope of the other market.

In the *AGL Cooper Basin decision*, the Tribunal identified a number of gas-related markets as part of its assessment of the market served by natural gas supplied by the Cooper/Eromanga Basin to Sydney via the Moomba to Sydney Pipeline System.[38]

The Tribunal stated that:

> We find there are three product markets of relevance for this application. The first is natural gas, extending at the margin to encompass, at times,

[36] *Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754 at 40,772-40,773.
[37] E.g.: *Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) ATPR 41-593; *Alliance Petroleum NL v The Australian Gas Light Company* (1995) 64 SASR 346; *Australian Gas Light Company (Authorisation)* (1986) ATPR (Com) 50-114; and ACCC (1999c).
[38] *Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) ATPR 41-593 at 44,209-44,212.

> alternative and complementary energy sources, principally electricity. When we refer to the "natural gas market" it should be understood in this extended sense. Then there are two further product markets, the services of transmission and reticulation.
>
> For the natural gas market, there are a number of functional dimensions to be considered: exploration and development (i.e., proving reserves); production and processing; and distribution.
>
> The geographic dimension of the natural gas market has been expanding from NSW in 1986 to south east Australia (NSW, Victoria, South Australia and Southern Queensland) today. (*Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) ATPR 41-593 at 44,210-44,211)

In reaching this definition, the Tribunal assumed the then prospective Interconnect and the Longford to Sydney pipeline would be constructed. This makes the Tribunal's market definitions relevant to the Council's consideration of this application.

The Council has also had regard to the ACCC Determination in respect of the Mereenie Gas Producers' application for authorisation. (ACCC, 1999c).

The Tribunal noted that the transportation services for moving gas from its field and to its distribution points are in different markets. However, it did not delineate the boundaries of those markets.

The transportation services may be distinguished from other gas related markets because they are distinct in terms of product and distinct from a functional perspective.

### The Potential for Substitutability Between Different Services

The product supplied by a gas transmission pipeline is a point to point transportation service and at one level it may be said that no other type or kind of transportation service is substitutable, i.e., there are no substitutes in supply or demand for the transportation service itself between those two points. In much the same way the Federal Court, in describing the geographic scope of a towage services market, said:

> In the present case, all parties had agreed that the relevant geographic market was that of the Port of Bunbury. There was no basis for substituting towage services in Fremantle or Albany for those in Bunbury. *(Stirling Harbour Services Pty Ltd v Bunbury Port Authority (2000)* ATPR 41-752 at 40,731).

There may be alternate sources for the purchasers of gas in that a gas purchaser may choose between purchasing gas delivered to Sydney from the Bass Strait via the Eastern Gas Pipeline or gas delivered to Sydney from Moomba via the Moomba to Wilton pipeline. That is, however, a decision about the substitutability of delivered gas from different

sources,[39] not one about the availability of alternate transportation services. In this sense the market for the transportation of gas is a dependent market.

The transportation service is supplied on a point to point basis and "[g]as transmission pipelines in Australia … typically constitute a natural monopoly in that alternative pipelines connecting seller and buyer do not exist".[40] This supports the view that the product is the point to point transportation service which is a natural monopoly. That product is not capable of substitution for some other transportation service between different points.[41]

The potential for substitutability between transportation services from different points of origin to the same destination may be examined by considering the ability of EAPL to effect a small but significant price increase.

If users will readily obtain gas from the Gippsland Basin, rather than from the Cooper/Eromanga Basin, in response to a small but significant non-transitory change in relative prices for gas transmission services in favour of the Eastern Gas Pipeline, it would mean that the services of the Moomba to Sydney Pipeline System and the Eastern Gas Pipeline are within the same 'field of rivalry'.

This is the same methodology used by FERC in its approach to the application of market based rates to pipelines in the United States. The primary criteria for allowing the market to determine the gas transmission price is that the pipeline company must demonstrate that it does not have market power or that it cannot exercise its market power. FERC defines market power as the ability of a firm (or group of firms) to profitably maintain prices above competitive levels for a significant period of time. (FERC, 1992, p. 21; Brattle Group, 2000, p. 16)

To test for the market power of a pipeline owner the FERC:

- defines the relevant market;
- measures the company's market share and market concentration; and
- evaluates entry and other factors.

In considering the geographic scope of the market, FERC first requires identification of sellers that offer available transmission over the same path. In doing so, it recognises that in practice, parallel path competition is only likely for either secondary markets (including interruptible transmission service) on the same facility or for transmission between

[39] As to which see discussion later in this section (pp. 51-55).
[40] *Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) ATPR 41-593 at 44,182.
[41] See also *Stirling Harbour Services Pty Ltd v Bunbury Port Authority (2000)* ATPR 41-752 at 40,731.

well-functioning market centres. (FERC, 1995, p. 24; Brattle Group, 2000, p. 20).

In addition to parallel path competition, constraints on the market power of a pipeline owner may come from the ability of a producer to sell into alternative destination markets and the ability of an acquirer to purchase gas from alternate sources. Thus, a pipeline owner "might be able to exercise market power if its customers have only few good alternatives to the pipeline's service either over a specific path, or separately in the origin and destination markets". (Brattle Group, 2000, p.20). The field over which a company can exercise market power will delimit the market boundaries.

Ideally, testing for the price responsiveness of demand for different services is conducted by quantitative analysis, by calculating cross-elasticities of demand for the respective services.[42] Where this is not available, the conduct of market participants is examined from a range of perspectives.

For gas users with contracts with particular producers the two pipeline systems may not provide effective substitute services. This is because gas supply may be available from a producer in one basin on more favourable terms than from producers in the other basin.

## Application of Market Analysis to the Pipelines for which Revocation is Sought

### *Moomba to Wilton Pipeline*

EAPL argues in its application that, as a means of transporting gas to the Sydney market, the Moomba to Wilton pipeline has been duplicated by the Eastern Gas Pipeline. CMS Energy concurs (CMS Energy, submission 1, p 2), while Origin Energy and Great Southern Energy disagree (Origin Energy, submission 4, p. 2; Great Southern Energy, submission 2, p. 4).

For users in Sydney, the Eastern Gas Pipeline might be considered to provide substitute transmission services for the services of the Moomba to Wilton pipeline if users will readily obtain gas from the Gippsland Basin, rather than the Cooper/Eromanga Basin, in response to a small but significant non-transitory change in relative prices for gas transmission services in favour of the Eastern Gas Pipeline.

[42] A cross-elasticity of 0 indicates a change in the price of one product has no effect on demand for the second product, while a change of 1 indicates that a change in the price of the first product has an equal effect on demand for the second product. Low cross-elasticity of demand between two products suggests they are not in the same market. A negative cross-elasticity suggests that the goods are complementary, that is people tend to buy both or neither, and that the products are not in the same market.

For many people wanting to use the Moomba to Wilton pipeline, the Eastern Gas Pipeline will not be a ready substitute.

First, for the producers in each basin, the two pipelines do not provide substitute services. Gas from the Cooper/Eromanga Basin cannot be moved into Sydney using the Eastern Gas Pipeline, nor can many gas users along the routes of the Moomba to Wilton pipeline and the Eastern Gas Pipeline use any other pipeline to obtain their gas supplies. Woodside's submission on the application for Coverage of the Eastern Gas Pipeline argued that:

> It is insufficient to assert that the existence of alternative gas pipeline routes to Sydney, for example, will of itself provide an adequate degree of competition. The Eastern Gas Pipeline and Moomba to Sydney Pipeline do not compete in point to point transmission services, they merely have a common termination point, and run in parallel for a minor percentage of their respective lengths. (Woodside, submission 28, p. 2)

Second, for gas users with contracts with particular producers the two pipelines may not provide effective substitute services. This is because gas supply may be available from a producer in one basin on more favourable terms than from producers in the other basin. Submissions from some gas users support this point. Great Southern Energy, which is both a gas retailer and a distribution pipeline owner, notes that "… regard must be had to the start and end point of the gas transportation service, not least because only one pipeline may connect a gas user to a producer of gas and, as a result, neither of these parties have any choice as to how to transport their gas." (Great Southern Energy, submission 2, p. 4) Similarly, Origin Energy argues that "… for suppliers taking delivery of product from the Cooper Basin the EGP service is not a substitute for the MSP." (Origin Energy, submission 4, p. 2)

Third, gas users' ability to switch between suppliers of both gas and gas transmission services are limited by contractual arrangements. NECG's attachment to EAPL's application notes that contractual complexities (such as the common use of medium to long-term contracts and significant take-or-pay components) may make it more difficult for one pipeline rapidly to pick up market share. NECG notes that a gas retailer wishing to switch from one pipeline to another would face the necessity of also switching sources of gas supply, and vice versa. (EAPL, Application, p. 13)

It is likely that for some users, the services of the Moomba to Wilton pipeline and the Eastern Gas Pipeline will be effective substitutes because those users are indifferent as to whether gas is supplied from the Cooper/Eromanga Basin or Bass Strait fields.

However, the Council does not consider that the ability to switch between sources of supply is sufficiently easy so as to integrate the field of rivalry for the services of the two pipelines. Therefore, the Council concludes that

the services of the Eastern Gas Pipeline are not effective substitutes for the services of the Moomba to Wilton pipeline.

*Young to Culcairn Pipeline*

The Young to Culcairn pipeline can be viewed as providing two forms of gas transportation service: the supply of gas to areas from Young to Culcairn and to the Burnt Creek to Griffith lateral; and the supply of gas from NSW to Victoria, and vice versa, via the Interconnect.

EAPL argues in its application that, as a link between Longford and Sydney, the Interconnect has been duplicated by the Eastern Gas Pipeline. EAPL notes, however, that as a supply line to markets situated between Young and Culcairn, and as a link between Moomba and Victoria, the Interconnect may not be economic to duplicate. (EAPL, Application, p. 6)

The Council considered whether the Interconnect provides competing services to those provided by the Eastern Gas Pipeline in its Final Recommendation on Coverage of the Eastern Gas Pipeline. The Council concluded in that Final Recommendation that the substitute services provided by the Interconnect are limited, due to: the Interconnect's much smaller capacity to transport gas from Longford to Sydney; and the fact that many customers along the route of the Eastern Gas Pipeline cannot be serviced by the Interconnect. Given the high cost of expanding the Interconnect relative to the Eastern Gas Pipeline, the Council considered that it would not be economic to expand the Interconnect to compete more fully.

The Eastern Gas Pipeline will provide some potential for alternative routes of gas supply to those provided by the Interconnect and its associated infrastructure (the Young to Culcairn pipeline and the Victorian transmission system). In particular, the Eastern Gas Pipeline is likely to provide a substitute service for those users wishing to transport gas from Longford to Sydney.

The bulk of the services provided by the Interconnect system, however, relate to the supply of gas to regional areas. For these services, the Eastern Gas Pipeline will not provide a substitute service. For instance, it is clear from its routing that it will not be able to supply gas to users situated in the region served by the Young to Culcairn pipeline, or to the lateral pipeline which runs off it.

The Council concludes that, while the Eastern Gas Pipeline will provide some services which could be viewed as competing with those of the Young to Culcairn pipeline, it does not do so to a sufficient extent to undermine the Young to Culcairn pipeline's natural monopoly characteristics.

*Dalton to Canberra Pipeline*

EAPL argues in its application that, as a means of transporting gas to Canberra, the Dalton to Canberra pipeline will be duplicated economically by the Eastern Gas Pipeline. (EAPL, Application, p. 6)

The Council notes that the proposed lateral from the Eastern Gas Pipeline to Canberra is not yet listed as being under construction. Were the lateral to be built, consideration of revocation would raise issues similar to those noted for the Moomba to Wilton pipeline. In particular, for some parties the Eastern Gas Pipeline will not be an effective substitute. This is notably the case for: a gas producer in the Cooper/Eromanga Basin wishing to ship gas to the ACT; gas users in the ACT wishing to purchase gas from a producer in the Cooper/Eromanga Basin; and gas users in the ACT who face contractual impediments to switching between producers from different basins.

For these reasons, the Council does not consider that supply from the Eastern Gas Pipeline and the Dalton to Canberra pipeline are sufficiently substitutable to be considered competing services. As a consequence, the existence of the Eastern Gas Pipeline will not refute the proposition that it is uneconomic to develop another pipeline to provide the services of the Dalton to Canberra pipeline.

The Council therefore concludes that the services of the Eastern Gas Pipeline are not provided in the same market as the services of the Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline. The Council considers that the markets in which the services provided by the three pipelines for which revocation is sought exist are as follows.

- The Moomba to Wilton pipeline provides services in the market for gas transport services from Moomba to Wilton, to markets en route and to the lateral pipelines branching off it.

- The Young to Culcairn pipeline provides services in the market for gas transport from Young to Culcairn, to markets en route and to the Burnt Creek to Griffith pipeline.

- The Dalton to Canberra pipeline provides services in the market for gas transport from Dalton to Canberra, Queanbeyan and the Yarrowlumla Shire.

**Criterion (a)** **that access (or increased access) to services provided by means of the pipeline would promote competition in at least one market (whether or not in Australia), other than the market for the services provided by means of the pipeline.**

## *Background*

### The Council's Approach to Criterion (a)

The rationale for this criterion is that access regulation is only warranted where access is likely to create better conditions or a better environment for competition in at least one market other than the market for the services of the gas pipeline.

Before it concludes that a pipeline meets this criterion, the Council must be satisfied that:

- the service to which access is sought is not in the same market as the market or markets in which competition is promoted; and
- access would actually promote a more competitive environment in that other market.

The Council's approach is to:

- verify that the market or markets in which competition is said to be promoted is separate from the market for the service; and, if so, then
- determine if access (or increased access) would promote competition in this separate market or markets.

It is not necessary to define precisely the boundaries of all the possible markets, only to determine whether there are distinct markets.

### Are the Markets for the Pipelines' Services Separate from the Markets in which Competition may be Promoted?

In order to determine whether the services provided by the three pipelines for which revocation is sought are in the same or different markets from the market or markets in which competition is likely to be promoted, the Council applies the test outlined earlier in Part C under the discussion of market definition.

There are a number of potential markets that may be affected by a decision to revoke Coverage of the three pipelines, in particular, the markets encompassing the activities of gas exploration, production, processing, reticulation, wholesaling and retailing.

The most likely market in which access (or increased access) to the services of the three pipelines for which revocation is sought may promote competition is the market within which gas sales take place.

In defining the relevant market in which sales of natural gas take place, the Council examined:

- whether the relevant market was a natural gas sales market or an energy sales market;
- whether there are a number of functional levels within which sales of natural gas occur (e.g., wholesale, retail); and
- the geographic extent of this market (e.g., whether it is contained to Sydney, to NSW, or extends to South East Australia).

*Electricity as a Substitute for Gas*

The Council considered the extent to which electricity is a substitute for gas in its Final Recommendation on the application for Coverage of the Eastern Gas Pipeline.

In the *AGL Cooper Basin decision*, the Tribunal examined the extent of substitution between electricity and gas in defining the nature of the market within which natural gas existed. The Tribunal considered gas and electricity were not substitutes (though to some extent the demand for gas related to the demand for electricity) and that a separate natural gas market existed with competition from other forms of energy at the margins.

The Tribunal considered that over time gas and electricity markets were likely to converge, resulting in the eventual creation of a broader energy market.[43]

In its consideration of the convergence between gas and electricity in the context of the Eastern Gas Pipeline Final Recommendation, the Council examined submissions by parties and available evidence on the cross-elasticity of demand between gas and electricity.[44] Submissions by NECG, LECG, APIA and Incitec addressed this issue. Some of these

[43] *Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) ATPR 41-593 at 44,197-44,199.
[44] Cross-elasticity measures the change in demand for one product when the price of another changes. If demand for a product goes up strongly when the price of another rises, then this would suggest a high cross-elasticity of demand, that the two goods are regarded as close substitutes, and that they exist in the same market.

submissions were explicitly provided in connection with both this application and the Eastern Gas Pipeline application; others, whilst not expressly so, were taken by the Council to have relevance to both applications.[45] APIA's submission argued that the gas and electricity markets were rapidly moving to convergence within an energy market, while the submissions from LECG and NECG suggested that while the markets may not have converged, electricity prices significantly constrain the pricing of gas transmission tariffs.

The price of electricity affects the price of gas on a number of levels. First, when users are making decisions about asset purchases, the relative competitiveness of gas and electricity are considerations in determining what appliances or plant should be purchased. Second, because one of the uses of gas is as an input for electricity production, its price continues to be constrained by the price of electricity to some degree even after these investments are made.

One benchmark for assessing the extent of convergence is whether gas is used to a significant degree in generating electricity. Gas-fired electricity generation plants convert gas to electricity. Where businesses decide to use gas for electricity generation, then for some part of the energy market gas and electricity can be characterised as substitutes.

NECG agreed with the view expressed in the Council's Draft Recommendation on the application for Coverage of the Eastern Gas Pipeline that electricity and gas are not within the same market. However, it argued that the electricity market exerts substantial constraint over the gas market because prices for delivered gas (which includes the transport tariff on gas) are disciplined by the prices prevailing in the electricity industry and new gas fired electricity generation represents an important new source of potential revenue to pipeline service providers. NECG also noted that the entry of a new gas-fired electricity generator in NSW or Victoria is unlikely at the moment because of the state of excess supply of electricity generation in those States.

In a letter to the Council dated 2 May 2000, Duke supplied analysis drawn from a 1996 AGA study of the cross-elasticity of demand between electricity and gas.[46] It noted that this study was performed on 1973-74 to 1993-94 data. The AGA study indicated that the percentage change in demand for electricity based on a one per cent change in the price of gas was, in aggregate:

- for the residential sector, 0.15;

[45] As noted in Part A (p. 21).
[46] The study was AGA (1996) *AGA Research Paper No 3 – Price Elasticities of Australian Energy Demand*.

- for the commercial sector, -0.03; and
- for the industrial sector, 0.00.

These figures indicate very low cross-elasticity of demand between gas and electricity, in other words, changes in the price of gas do not significantly add to growth in demand for electricity.

The evidence before the Council leads it to the view that gas and electricity remain in separate markets. While the Council considers that electricity can be a substitute for gas in some circumstances and it can also provide some constraints on the price of gas, the Council does not consider that the field of rivalry is so close as to put them in the same market.

*Relevant Functional Levels within the Natural Gas Industry*

The Tribunal in the *AGL Cooper Basin decision* considered that there were a number of functional levels to be considered in defining the natural gas market: exploration, production and processing and distribution. The Council agrees with this analysis. In using the term 'distribution' in this context the Tribunal meant gas sales, rather than carriage of gas through distribution pipelines.

In examining the distribution dimensions, there is a question whether there are separate functional markets for wholesale sales of natural gas and for retail sales of natural gas.

The system of transmission pipelines currently operating, or soon to operate, in the South East Australian region, potentially enables gas producers in both the Bass Strait and the Cooper/Eromanga Basin (SA and South West Queensland) to sell gas (in some cases through backhaul arrangements) in Adelaide, Sydney, Canberra, Melbourne and regional areas of NSW and Victoria.

Users directly purchasing gas from producers are generally large industrial users, such as electricity generators, aggregators, or retailers. These wholesale purchasers would be expected to contract with the producers able to supply on the most favourable terms and conditions.

There is evidence to suggest that wholesale supply and retail supply are economically separable, i.e., transaction costs in the separate provision of gas at the wholesale or retail level are not so great as to prevent such separate provision from being feasible. The evidence the Council relies on is the current structure of the industry in Australia: gas wholesaling and retailing are conducted by different businesses, with little involvement in retailing by gas producers. The emergence of independent retailers in Australia since the deregulation of the gas industry supports this view.

It is more difficult to determine whether the gas wholesale and retail markets are economically distinct. Both producers and retailers sell gas to large users, with some large users purchasing gas both directly from producers and through retailers. However, supplying gas to smaller users, including households, is dominated by retailers. It is not feasible for a small user to negotiate directly with producers. Retailers require customer service centres, billing systems, marketing and expertise in operating those functions as well as dealing with additional matters such as risk assessment and pricing for customers on short-term contracts with requirements for only small amounts of gas. While retailing requires particular assets and expertise, it is not clear that these are distinct from those required for wholesaling.

It is not possible for the Council, at this time, to be sufficiently certain that there are separate functional markets for wholesaling and retailing of gas. For the purposes of its consideration of the Coverage criteria, the Council considers the market to be the supply and sale of natural gas, what the Tribunal referred to as the distribution functional dimension of the natural gas market.

*Geographic Dimension of Gas Sales Market*

Currently, gas transmission pipelines connect the Moomba processing plant to Adelaide, Sydney, Canberra, Melbourne and various NSW and Victorian regional centres. See Diagram 2 in Part B of this Final Recommendation.

The Longford processing plant, which processes Bass Strait gas, is connected by gas transmission pipelines to Melbourne, regional Victoria, Sydney, regional NSW, and Canberra. With the completion of the Eastern Gas Pipeline, Longford is now also connected to different areas of regional Victoria and NSW.

Since the completion of the Interconnect in 1998, the Bass Strait producers have been able to offer a limited amount of gas to the Sydney, Canberra and regional NSW areas, in competition with the Cooper/Eromanga Basin producers. The construction of the Eastern Gas Pipeline greatly expands this potential.

The Council considers that this pipeline network gives the gas sales market a geographic dimension that encompasses South East Australia. This geographic dimension relies on the assumption that producers and users have access to the network of pipelines described above, on reasonable terms and conditions. This access has been, or will be, provided because either:

- the regulation of third party access to monopoly pipelines; or

- the pipelines would provide appropriate access of their own accord.

Regions that are supplied gas through a single transmission pipeline may not be included within the South East Australian gas sales market if restrictions on access to those pipelines reduce the potential for supply side substitution. In this case, Coverage of these pipelines, by ensuring access on reasonable terms and conditions, helps to integrate these regions into the field of rivalry for gas producers in South East Australia, and thus into the South East Australian gas market. The three pipelines for which revocation is sought service a number of regional areas, both directly and through the supply of gas to lateral pipelines, which cannot be serviced by other pipelines.

*Temporal Dimension of Gas Sales Market*

The Council considers that there are no particular issues going to the temporal dimension of the South East Australian gas sales market on which consideration of this criterion is likely to turn. However, the Council recognises that relevant considerations include the possible future convergence of energy markets and the possible construction of other pipelines that will have an impact on this market.

The Council considers the markets in which the services provided by the three pipelines for which revocation is sought exist (outlined earlier in Part C) are separate from the South East Australian gas sales market.

The Council recognises that there may be other relevant markets, but has not been able to identify any such markets where this criterion may be satisfied.

## Meaning of 'Promote Competition'

The Tribunal has provided some guidance on the meaning of 'promote competition'. In the *Sydney Airports decision*, the Tribunal considered whether to declare the services of certain ground handling facilities at Sydney International Airport (SIA) to enable third party providers to offer ground handling services in competition with existing providers. The operator of the SIA, the Federal Airports Corporation (FAC), and its successor, the Sydney Airports Corporation Limited (SACL) argued that a tender process for introducing another two or three ground handling entities at SIA would do as much or more to promote competition than declaration of the services of the ground handling facilities at SIA.

In considering section 44H(4)(a) of the TPA, on which criterion (a) of the National Code is based, the Tribunal made the following observations on the promotion of competition test:

> The Tribunal does not consider that the notion of "promoting" competition in s 44H(4)(a) requires it to be satisfied that there would be an advance in competition in the sense that competition would be increased. Rather, the Tribunal considers that the notion of "promoting" competition in s 44H(4)(a) involves the idea of creating the conditions or environment for improving competition from what it would be otherwise. That is to say, the opportunities and environment for competition given declaration, will be better than they would be without declaration.
>
> We have reached this conclusion having had regard, in particular, to the two stage process of the Part IIIA access regime. The purpose of an access declaration is to unlock a bottleneck so that competition can be promoted in a market other than the market for the service. The emphasis is on "access", which leads us to the view that [section] 44H(4)(a) is concerned with the fostering of competition, that is to say it is concerned with the removal of barriers to entry which inhibit the opportunity for competition in the relevant downstream market. It is in this sense that the Tribunal considers that the promotion of competition involves a consideration that if the conditions or environment for improving competition are enhanced, then there is a likelihood of increased competition that is not trivial. (*Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754 at 40,775)

The Tribunal added:

> The Tribunal is concerned with furthering competition in a forward looking way, not furthering a particular type or number of competitors. In this matter, therefore, the Tribunal must be reasonably satisfied that declaration would, looking forward, improve on the competitive conditions in the relevant markets that are likely to exist as a result of the SACL tender process as compared with a situation where there was no declaration. (*Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754 at 40,775)

## The Appropriate Test for Competition With and Without Access

The first question that arises in applying the with and without declaration test endorsed by the Tribunal[47] is what are the with and without Coverage counterfactuals.

One approach would be to compare likely market conditions arising from regulation under the National Code against those arising from regulation under EAPL's proposed Undertaking. A second approach is to compare

[47] *Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754 at 40,788-40,789.

likely market conditions with Coverage under the National Code against likely conditions with no access regulation.

In the context of the Eastern Gas Pipeline Coverage application, Duke argued that access regulated by Coverage under the National Code should be set against access as governed by the terms of its Part IIIA Undertaking submitted to the ACCC. In effect, Duke submitted that the Council should consider whether access under the National Code is more likely to promote competition in the gas sales market than access under the Undertaking.

The Council sought legal advice on this issue in the context of the application for Coverage of the Eastern Gas Pipeline. The Council was advised that it should take into account those market conditions which would prevail if the pipeline were not Covered under the National Code, as compared with those that would prevail if it were Covered under the National Code. In the absence of any Undertaking having been accepted by the ACCC, the terms and conditions of access offered by a pipeline operator in a proposed Undertaking are not relevant to consideration of those market conditions. If an Undertaking had been accepted by the ACCC, it might be that the market conditions existing if the pipeline were not Covered would include the existence of that Undertaking.

This advice is consistent with the approach taken by the Tribunal in the *Sydney Airports decision*.[48]

The first approach is problematic in a case such as the Eastern Gas Pipeline for the reasons outlined at pages 66 and 80 of the Council's Final Recommendation on that application. It would be even more problematic for this application as the Council has not yet received details of EAPL's proposed interim or draft Undertaking.

On this basis, the Council has adopted the second approach: to compare likely market conditions with Coverage under the National Code against likely conditions with no access regulation. The Council discusses further the relevance of EAPL's proposed Undertaking under criterion (d).

[48] *Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport (2000)* ATPR 41-754 at 40,788-40,789.

## *Analysis*

### Would Access Promote Competition in the South East Australian Gas Sales Market?

Using the approach to promotion of competition outlined by the Tribunal in the *Sydney Airports decision*,[49] the Council considers the issue of whether access is likely to promote competition in the South East Australian gas sales market involves an assessment of the conditions for competition having regard to the likely market behaviour of the suppliers to that market, i.e., both the producers and the pipeline owners. This assessment ultimately rests on judgements about the outcome likely to result after taking into account the combination of incentives facing market participants, particularly EAPL and Duke, with and without Coverage of each of the three pipelines.

### The Current State of Competition in the South East Australian Gas Sales Market

Before the Eastern Gas Pipeline became a reality, there was limited competition between gas producers. This is reflected in the Tribunal's decision in the *AGL Cooper Basin Decision*, where it said:

> Over the less than 30 years since a significant Australian natural gas industry came into being, an industry structure has emerged where the major producing gas basins are widely separated, and where the systems of supply of sales gas to the major population centres are and remain physically distinct from each other, and are governed by separate commercial arrangements that impact on each other only indirectly…
>
> Australian gas industry has customarily adopted pricing practices that reflect the structure of the industry. Gas prices in the large cities, which roughly coincide with the centres of substantial gas demand, are not set in any open marketplace, but are set by the seller in tariff schedules applying to small users, or are negotiated with large users by the seller, and incorporated into sales contracts…
>
> Small users buying at tariff prices, including both residential and commercial users, have limited market strength, in that they can elect to use an energy source other than gas, for example by using electricity if they believe that gas prices are too high. They do not in the usual case have a choice among competing gas suppliers. In the absence of alternative gas suppliers, large industrial users of energy may have sufficient market strength to negotiate with a single supplier to achieve a contracted gas price that they find satisfactory, using various

[49] *Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754 at 40,775.

> negotiating arguments, for example: that they may not construct a new gas-using facility at all, or they may locate it elsewhere, or they may use electricity or another substitute fell, or have the capability to transfer production to another facility allocated where energy prices are cheaper. In recent times, with the emergence of proposals to connect the Victorian and NSW gas supply systems, the industrial customer may be able to point in negotiations to the prospective existence of an alternative gas supplier…
>
> The prices paid for gas in Australia by end-users reflect the differences in the market power of gas customers that have been noted above, and reflect also the cost effects of gas reticulation and customer administration between gas users who purchase varying gas quantities… *(Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) ATPR 41-593 at 44,182 and 44,184-44,185)

In the Council's opinion this statement provides an accurate summary of the limited competition which existed prior to the commissioning of the Eastern Gas Pipeline. The question for the Council is whether the existence of the Eastern Gas Pipeline will, of itself, lead to a competitive market in gas sales in South East Australia. If it were to do so then it is unlikely that Coverage of the Moomba to Sydney Pipeline System would promote competition. However, if significant limits on the extent to which there is competition in that market remained, then Coverage may promote competition in that market.

In this context it is important to examine the extent of competition which will exist in the alternate scenarios. This was an issue raised by Incitec, a major user of gas. Incitec argues that Coverage of the Moomba to Sydney Pipeline System should be retained in full. If either of the Eastern Gas Pipeline and the Moomba to Sydney Pipeline were not Covered, Incitec argues that the resulting "duopoly competition" would "produce a price somewhere between monopoly pricing and a perfectly competitive market". It submits that "[r]egulation, if properly effected, [could] eliminate this "duopoly rent"." (Incitec, submission 3, p. 2). This is consistent with the distinction between competition and contestability drawn by the Tribunal in the *AGL Cooper Basin decision*, where it said:

> We conclude by indicating the relationship between the markets just defined and the market structures they contain. Just as markets are expanding so market structures are evolving. We observe a transition from monopoly to at least "contestability" in present-day markets and possibly to full workable or effective competition in the markets of the future. We make this distinction between "contestability" and competition, since current Australian usage requires for "contestability" no more than that a second competitor enters the market-place; and, as we have seen in a number of Australian industries, the presence of two competitors does not necessarily give rise to effective competition. *(Re AGL Cooper Basin Natural Gas Supply Arrangements* (1997) ATPR 41-593 at 44,211)

## The Likely Conduct of EAPL and Duke

The Council has concluded that the services provided by the pipelines are in different markets, however both transport gas into the South East Australian gas sales market. The fact that the pipelines are in different markets indicates that strong competition between the pipeline services is not inherently likely. Competition does, however, exist for the sale of delivered gas in South East Australia and the question for examination here is the extent to which access will promote competition in that market. It is expressed in the following way by Woodside in its submission on the application for Coverage of the Eastern Gas Pipeline:

> Gas markets need competitive delivered gas prices in order to develop. The delivered gas price comprises two major components: the gas sales price and the transmission tariff. Basin to basin competition will provide much of the potential needed to maintain competitive gas prices. … Given the relatively underdeveloped state of Australia's gas pipeline infrastructure, and the desire for competition at all levels of the gas market, Woodside submits that the EGP should be subject to Coverage under the [National] code for its entire length. (Woodside, submission 28, p. 1)
>
> …
>
> It is insufficient to assert that the existence of alternative gas pipelines to Sydney … will of itself provide an adequate degree of competition. The EGP and the EAPL [Moomba to Sydney Pipeline System] do not compete in point to point transmission services, they merely have a common termination point, and run in parallel for a minor percentage of their respective lengths. (Woodside, submission 28, p. 2).

### *Incentives facing EAPL and Duke*

Given that the Council has found that the pipelines are in different markets, there can be no assumed competition between the services provided by the pipelines. Therefore the incentives facing the pipeline owners must be examined.

As noted in Part B, EAPL's draft Access Arrangement proposes a tariff for transport of gas from Moomba to Wilton of 70.8 cents per GJ (firm transport at 100 per cent load factor). The Council understands, although it has not received any advice of this from EAPL, that EAPL has indicated that it will reduce its published tariffs for transport of gas from Moomba to Wilton to 65.77 cents per GJ (excluding GST) from 1 July 2000. Duke's draft Undertaking (which the ACCC has indicated it does not accept) proposes a tariff of 86 cents per GJ to transport gas from Longford to Wilton (firm transport at 100 per cent load factor).

*Low Prospects of New Entry*

The Council considers that EAPL and Duke face little risk in the long term of entry by a third pipeline for the following reasons.

- There is relatively slow market growth in NSW and the ACT.
- Expansion of the capacity provided by the Eastern Gas Pipeline and the Moomba to Sydney Pipeline System can be effected at much lower cost than the cost of building a new pipeline into NSW. In the case of the Eastern Gas Pipeline, expansion of up to 110 PJ per year is possible, and for the Moomba to Wilton pipeline, expansion of up to 270 PJ per year is possible.
- As discussed earlier in Part C, to some extent the Interconnect can provide substitute services for the transport of gas from Longford to Sydney. However, there are significant limitations on its ability to do so. Not only is the Interconnect part-owned by EAPL, but the costs of expanding its capacity to provide substantial competition are high.

LECG argues that there are potential new sources of competition through:

- new pipelines (e.g., the proposed PNG-Brisbane Pipeline being extended to Sydney); and
- the existence of the Interconnect.

In the Council's view, whilst these opportunities are possible, the likelihood is low because of the high barriers to entry. It is also possible that gas from new sources may be transported to the South East Australian gas sales market with the use of existing infrastructure.

This low risk of entry by a third party demonstrates the prospect that the Eastern Gas Pipeline, as the new market entrant, may be able to execute a strategy of pricing capacity above competitive levels in anticipation that EAPL will follow a similar strategy. Successful execution of this strategy would result in a less than competitive market and greater profits for both parties. Particular features of the market place would assist this strategy.

- The fact that the investment in the Eastern Gas Pipeline is sunk means it cannot be forced out of the market, making accommodation more likely.
- EAPL and Duke will have significant bargaining power in negotiations with producers and gas users.
- The ability of EAPL to respond in the short to medium term will be constrained by its available capacity and pre-existing contractual

commitments at established tariffs. On the other hand, the Council notes that EAPL could increase the capacity of the Moomba to Wilton pipeline.

- As there are only two pipelines, and pipeline pricing is relatively transparent (particularly if one or both pipelines are Covered by the National Code), monitoring by either party of a pricing agreement would be relatively easy.

- Given the huge disparity between current prices (which are near average costs) and marginal costs, the consequences for either pipeline of a price war, where price is driven towards marginal cost, would be disastrous.

- The contractual framework for gas purchase, transmission, distribution and sale to end users is complex, with medium to long-term contracts common and significant take or pay components to contracts at several stages. A gas retailer wishing to switch from one pipeline to another would face the necessity of also switching sources of gas supply from Moomba to Longford, or vice versa. These contractual complexities may make it more difficult for one pipeline to suddenly to drop its price and rapidly pick up market share.

- The pipelines' customers are likely to shop around for the best price and would, in the process, keep each pipeline informed of what pricing is being offered by its competitor.

These factors lead NECG to state that, while collusion appears unlikely, it cannot be ruled out as a future possibility in the absence of some of price regulation. (EAPL, Application, p. 13)

*Capacity*

The construction of the Eastern Gas Pipeline is expected to lead to surplus transmission capacity into NSW and the ACT. However, it appears to the Council that, whilst there will initially be some excess capacity, it is likely to be absorbed somewhere between 2005 and 2010. The main reason for this is, because of peaks and troughs in gas demand, capacity constraints can arise long before average demand over a year equals the average installed capacity of the two pipelines.

A number of submissions identified excess capacity as a key factor which would lead to behaviour by EAPL and Duke that would enhance competition in the gas sales market.[50] Excess capacity will militate against market power where it provides incentives to cut tariffs and boost

[50] See, for example: LEGG, submission 27, p.5; NECG, submission 26, p. 11; APIA, submission 24, pp. 3-4; GGT Pty Ltd, submission 25, p. 40; IPA, submission 20, pp. 5-6.

volumes. The Council does not consider that the existence of surplus capacity is likely to have that effect in the present case.

The existence of vertical relationships may also impact on the availability of surplus capacity. EAPL appears to have both interest and influence in gas distribution in NSW through its relationship with AGL.
Great Southern Energy has identified this as a source of discriminatory behaviour in relation to retailers competing with AGL (Great Southern Energy, submission 2, p. 3), while the Institute of Public Affairs considers such behaviour unlikely in this case (IPA, submission 20, pp. 1 and 7)
While it could be expected that ring-fencing and other provisions of the National Code would limit any such effect, the imperfect information available to regulators means that it cannot be ruled out.

The goal of the two pipelines is not to maximise the throughput of gas but to maximise profits. Profits derive from the multiplication of throughput by tariffs. In this case, the evidence suggests that the increase in throughput from a tariff cut is smaller than the loss in revenue, due to the relatively inelastic nature of demand for gas. This means that the pipeline owners may not cut tariffs where this results in higher throughput but lower profits.

Even before commencing operation, the proportion of capacity that was contracted on the Eastern Gas Pipeline was already around that of the Moomba to Sydney Pipeline.[51] As outlined earlier, EAPL has foreshadowed tariff cuts of approximately 7 per cent. This is significant. However, the Council cannot assess the motivation for this proposed reduction and notes that, even with the reduction, EAPL's tariffs appear to have a monopoly element.

*Parallel Pricing*

The existence of only two sources of supply in the gas sales market, coupled with high barriers to entry for any prospective sources of competition, is inherently unlikely to lead to vigorous competition. This market structure may well lead to a parallel pricing strategy between the pipeline owners.

To date Duke's entry does not appear to have had a significant impact on EAPL's conduct. EAPL's current tariffs (even with the recent reduction) appear to have a monopoly element. Duke's proposed tariff under its Undertaking to the ACCC (which was not accepted) appeared to be largely in accordance with or above EAPL's tariff.

NECG's submission on behalf of Duke and EAPL argues that a parallel pricing strategy may break down because both pipelines would have an

[51] Around 65-70 per cent of the Moomba to Sydney Pipeline's capacity is currently contracted; for the Eastern gas Pipeline the figure is around 65 per cent.

incentive to cheat on the agreement in order to capture more market share. (NECG, submission 26, p. 15) It says parallel pricing behaviour (it uses the term 'tacit collusion') is more likely where:

- "players can react quickly to punish behaviour";
- "it is easy to detect deviations in behaviour"; and
- "players have the ability to coordinate punishments or there are few players". (NECG, submission 26, p. 15)

In this case, NECG notes there would be two pipelines providing gas transportation capacity into NSW but argues that there are particular features of the marketplace that make punishment difficult:

- there is a large gap between average costs and marginal costs [of provision of capacity on the two transmission pipelines] so a punishment strategy in which one pipeline reduced its prices to marginal costs would be extremely costly for that pipeline. This suggests that such a punishment strategy lacks credibility;
- punishment strategies by the competing pipeline may take a substantial period before they become effective – for example, customers often buy transmission capacity on long-term contracts – raising the cost and reducing the credibility of punishment;
- in the absence of access rules that facilitate the dissemination of pipeline prices, prices may be somewhat hidden – price secrecy mitigates against collusive outcomes …; [and]
- gas transmission pricing has a number of different elements. There are several different transmission services involved, the contracts are generally for several years and the structure of pricing (e.g., take-or-pay provisions) can have a significant impact on the customers' marginal costs – product heterogeneity reduces the risk of tacit collusion. (NECG, submission 26, pp. 15-16).

The Council considers that 'punishment' may not be necessary both because the prices reached in such a price war are not sustainable and because such a price war would result in major losses to any party that engaged in it. This means prices may self-correct to equilibrium levels above competitive levels relatively quickly and without the need for punishment. The disastrous consequences of such a price war would discourage both parties from ever engaging in it. The Council considers that this joint optimal pricing strategy is consistent with EAPL's recent tariff reduction.

A number of upstream and downstream users who made submissions to the Council expressed concern about pricing. These concerns would seem

to derive from the extent of the market power which is held by EAPL and the potential for a parallel pricing strategy between EAPL and Duke.[52]

NECG also argues that the services of pipelines are quite heterogeneous, implying that price cuts could be applied selectively in order to capture market-share in particular segments of the market, thus displacing a parallel pricing strategy. (NECG, submission 26, p. 16)

The Council recognises that the market for gas sales is made more heterogeneous through, for example, the application of different risk sharing strategies. However, the extent of heterogeneity can be overstated, and even where price cuts are applied in some segments of the market, an overall strategy of parallel pricing may still prevail.

On balance, the Council considers that these factors do not have sufficient substance to outweigh EAPL and Duke's incentives and ability to engage in parallel behaviour. In this regard, the Council notes that:

- no upstream or downstream party supported revocation of Coverage, and the majority explicitly supported Coverage, a trend which was also evident in submissions on the Eastern Gas Pipeline application; and
- the LECG submission said Coverage of both the Moomba to Sydney Pipeline and the Eastern Gas Pipeline might eliminate allocative costs associated with parallel pricing behaviour of about $21.2 million for a net benefit from Coverage (after deduction of regulatory and indirect costs) of $9.8 million.

If the pipelines were to continue to be Covered, then certain information disclosure provisions would continue to apply in respect of the prices on which services are offered. NECG argued that the information disclosure provisions of the National Code may facilitate parallel pricing behaviour by letting each pipeline know the pricing strategies of the other. (NECG, submission 26, pp. 15-16)

The Council does not accept this argument. The minimum information requirements in the various pipeline management, services and trading policies are not high, and do not appear to be of a nature that would facilitate collusion between pipeline owners. Moreover, the information disclosure provisions may facilitate greater scrutiny of prices, thus making it easier for the regulator and the market to detect parallel pricing strategies. The Council notes that submissions from peak user bodies, such as PIAC, AGUG, and EMRF, argued strongly for increased price transparency, indicating that they saw users' interests as best served by more information disclosure and greater price transparency.

[52] See, for example: Incitec, Submission 3, p. 2; Origin Energy, Submission 4, p. 1; and Woodside, Submission 28, pp. 1-2.

On balance, the Council considers that the benefits of information disclosure, notably the promotion of a better-informed market, are likely to outweigh any costs associated with the increased potential for parallel pricing behaviour.

The Council is firmly of the view, based on consideration of the available evidence, that there is a real danger or likelihood of parallel pricing behaviour between EAPL and Duke in the absence of Coverage.

## The Relevant Promotion of Competition

*Submissions Opposing Revocation*

The Council has received submissions from several downstream users opposing revocation of Coverage of the three pipelines for which revocation is sought. This is in line with its experience in the application for Coverage of the Eastern Gas Pipeline, where most users and producers argued for Coverage. The submissions typically emphasise the potential for access to lead to increased activity and investment in other sectors of the economy.

Origin Energy, a gas retailer, argues that all three pipelines should remain Covered. Origin notes that, in order to sell natural gas in the South East Australian market, natural gas suppliers require access the Moomba to Sydney Pipeline System. In order to access laterals, third parties must also access the three pipelines for which revocation of Coverage is sought. It argues that access to each of the three pipelines is therefore required to promote competition in areas served by the laterals. (Origin Energy, submission 4, p. 1) Incitec submits that parties in areas serviced solely by the three pipelines for which revocation is sought (both directly and indirectly) "can expect the protection that was intended to flow from the reform process in re-regulating monopolies". (Incitec, submission 3, p. 3)

In considering whether access to the three pipelines would promote competition, the Council notes that backhaul to these regional centres does not open up greater possibilities for competition than forward haul because backhaul requires access to the services of the three pipelines for which revocation is sought in the same way as forward haul.

Great Southern Energy, a gas retailer and distribution pipeline owner, also supports full Coverage of the Moomba to Sydney Pipeline System. It argues that "Coverage would increase the overall usage of natural gas by protecting users from abuse of market power". (Great Southern Energy, submission 2, p. 1) Its submission emphasised the "importance of medium to long term certainty [of transmission tariffs] in relation to the potential for new entry … into the markets for the wholesaling and retailing of natural gas":

In Great Southern's view, it is less likely that entities would seek to enter the markets for the wholesaling and retailing of natural gas if the long term structure of pipeline tariffs and applicable access terms were uncertain.

> … if the Eastern Gas Pipeline and the Moomba to Sydney Pipeline System were both covered under the Access Code then it is more likely that new entrants would be attracted to the gas wholesaling and retail markets as it would be easier for them to secure transmission capacity into these markets (Great Southern Energy, submission 2, p. 3)

On the upstream side, Woodside and Shell Development's joint submission notes that they, or their customers, may in future seek access to ship gas from the Sunrise gas fields in the Timor Sea, which they are working to develop, via the Moomba to Sydney Pipeline System. The submission notes that the pipeline transmission tariff is a major component of end-user gas sales price for gas from remote sources, and that "gas markets need competitive delivered gas prices in order to develop and grow." (Woodside/Shell, submission 6, p. 1)

Submissions received on the application for Coverage of the Eastern Gas Pipeline from groups such as the Public Interest Advocacy Centre (PIAC), the Energy Markets Reform Forum (EMRF) and the Australian Gas Users' Group (AGUG) argued that Coverage would promote price transparency and a better informed market.

*Submissions Supporting Revocation*

The two submissions received on the Council's Draft Recommendation are supportive of revocation. EAPL argues that the public interest would be best served by allowing a reasonable opportunity for the Moomba to Sydney Pipeline System and Eastern Gas Pipeline to compete. (EAPL, submission 21, p. 1) IPA argues that there is 'workable competition' between EAPL and Duke as: each has large amounts of excess capacity and a strong incentive to increase throughput; and neither has an affiliate which would gain from behaviour discriminating against a rival. IPA states that "While the MSP and EGP can never be perfect substitutes for each other, this has analogies with other markets, most of which are characterised by what we sometimes call "imperfect competition"." (IPA, submission 20, pp. 5-6)

Previously, the Council had received a submission from CMS Energy supporting EAPL's application. Some of the submissions received on the Eastern Gas Pipeline application also indicated support for revocation of Coverage of the Moomba to Sydney Pipeline, including Goldfields Gas Transmission (GGT), NECG (on behalf of Duke and EAPL) and the Institute of Public Affairs (IPA).

CMS Energy and several of the Eastern Gas Pipeline submissions argue that entry of the Eastern Gas Pipeline of itself will result in a competitive market-place for gas sales in South East Australia. Other submissions on the Eastern Gas Pipeline application argued that: Coverage would dampen the incentives for new entry; that the provisions of the National Code undermine innovative services and entrepreneurship; and that various factors reduce the likelihood of parallel behaviour between EAPL and Duke.

LECG argues the entry of the Eastern Gas Pipeline would of itself create much more competitive conditions in the South East Australian gas sales market and that Duke faced incentives to price access to the Eastern Gas Pipeline competitively in order to break into the market for transport of gas to NSW. The Council notes that EAPL may be prepared to cede a certain percentage of market share in order to ensure a stable equilibrium and avoid a price war.

Some submissions suggested Coverage under the National Code would impose costs greater than any benefits provided by Coverage. In particular, they suggested Coverage would reduce incentives to offer innovative service and price options. (e.g., Energy Australia, submission 8, p. 4; Duke, submission 17, pp. 36 – 37; EAPL, submission 16, p. 8; EAPL, submission 21, p. 1) The Council considers that the National Code retains considerable flexibility for parties to construct innovative service and pricing options. This issue is discussed further in criterion (d) in the context of assessing whether the costs associated with Coverage outweigh the benefits.

## *Conclusion*

Having considered the South East Australian gas sales market with and without Coverage, the Council is firmly of the view that Coverage of each of the pipelines would promote competition in the South East Australian gas sales market.

In this regard, the Council notes that:

(a) the Moomba to Wilton pipeline is the sole means of supplying gas to regional areas along its route including Goulburn, Marulan, Moss Vale and Bowral;

(b) as a component of the Interconnect system, the Young to Culcairn pipeline assists in providing gas transportation services from Moomba to Victoria and from Longford to Sydney;

(c) the Young to Culcairn pipeline is the sole means of supplying gas to regional areas along its route including Young, Cootamundra,

Wagga Wagga and Culcairn. It is also the only means of supplying gas to the Burnt Creek to Griffith pipeline which runs off it;

(d) the Dalton to Canberra pipeline is the sole means of supplying gas to regional areas along its route, including Queanbeyan and the Yarrowlumla Shire;

(e) in the absence of the proposed lateral from the Eastern Gas Pipeline to Canberra, the Dalton to Canberra pipeline will be the sole supplier of gas to Canberra.

Coverage of each of the pipelines will provide access so as to integrate fields of rivalry and thereby promote competition. As the Tribunal noted in the *Sydney Airports decision* the promotion of competition "involves the idea of creating the conditions or environment for improving competition from what it would be otherwise".[53]

It is the Council's view that where there are no alternate sources of competition, removal of the impediments is likely to promote competition, even though the actual increase in competition may not be large. By providing gas transmission services on appropriate terms and conditions to regions where there are currently no means of supplying natural gas, access will remove a barrier to entry in the supply of gas to the regions served by each pipeline by integrating those regions into the broader South East Australian gas sales market and thereby promoting competition in that market.

The Council therefore concludes that criterion (a) is met for the Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline.

[53] *Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754 at 40,775.

**Criterion (b)** **that it would be uneconomic for anyone to develop another pipeline to provide the services provided by means of the pipeline.**

## *Background*

### The Council's Approach to Criterion (b)

Criterion (b) would appear to be designed to identify potential Coverage of pipelines where the development of competing pipelines would be inefficient.[54] The intent is that competitive infrastructure (whether in actual or potential terms) should not be Covered. In other words, access regulation should be limited to infrastructure where competing facilities are not economically viable.

As such, access regulation should normally be confined to infrastructure exhibiting *natural monopoly* characteristics – that is, where a single facility can meet market demand at less cost than two or more facilities. Such a facility is normally characterised by large up-front investment costs and low operating costs, resulting in economies of scale or scope across a broad range of output. In other words as output from a natural monopoly facility increases, average costs per unit of output continue to decrease across the range of output sought by the market.

This approach is consistent with that of the Tribunal in the *Sydney Airports decision*. The Tribunal held that 'another' facility must be one capable of providing services competitive with those provided by the relevant facility. Services which are merely complementary to those provided by the relevant facility should not be regarded as competing services for the purposes of this criterion.

The Council therefore considers the reference in criterion (b) to 'services' should be interpreted as involving a consideration of whether it is uneconomic to develop another pipeline to provide competing services.

### Interpretation of Criterion (b)

Apart from two differences, criterion (b) of the National Code mirrors the language in the declaration provisions in sections 44G(2)(b) and 44H(4)(b). The differences are that criterion (b) talks about whether it would 'uneconomic' (as opposed to 'uneconomic*al*') to develop another 'Pipeline' (as opposed to another 'Facility') to provide the services.

[54] *Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754 at 40,791-40,793.

The Council considers that nothing turns on the variation between 'uneconomic' in criterion (b) and 'uneconomical' in the declaration provisions. In support of this view, the Council notes that the Gas Reform Implementation Group, when it formulated the Coverage criteria under section 1.9 of the National Code, indicated that it intended to replicate the words of section 44G.[55]

The use of the word 'Pipeline' in criterion (b) prevents the Council from considering whether a facility other than a pipeline could provide the services provided by the three pipelines for which revocation is sought. Under criterion (b), the Council could not, for example, look at whether liquefication of natural gas and transport by road might provide the service of gas transportation provided by the three pipelines. By contrast, the words in the declaration provisions in section 44G and 44H are broader in that they contemplate consideration of the services of other types of facilities.

With these differences between criterion (b) and the declaration provisions in mind, the Council has sought guidance on the interpretation of criterion (b) from the decision of the Tribunal in the *Sydney Airports decision*.

In relation to the meaning of the word 'uneconomical', the Tribunal said:

> …the uneconomical to develop test should be construed in terms of the associated costs and benefits of development for society as a whole. Such an interpretation is consistent with the underlying intent of the legislation, as expressed in the second reading speech of the Competition Policy Reform Bill [which inserted Part IIIA into the Trade Practices Act 1974], which is directed at securing access to "certain essential facilities of national significance". This language and these concepts are repeated in the statute. This language does not suggest that the intention is only to consider a narrow accounting view of "uneconomic" or simply issues of profitability.
>
> … If "uneconomical" is interpreted in a private sense then the practical effect would often be to frustrate the underlying intent of the Act. This is because economies of scope may allow an incumbent, seeking to deny access to a potential entrant, to develop another facility while raising an insuperable barrier to entry to new players (a defining feature of a bottleneck). The use of the calculus of social cost benefit, however, ameliorates this problem by ensuring the total costs and benefits of developing another facility are brought to account. This view is given added weight by Professor William's evidence of the perverse impact, in terms of efficient resource allocation, of adopting the narrow view. (*Re Application for Review of the Declaration by the Commonwealth Treasurer Published on 30 June 1997 of Certain Freight Handling Services Provided by the Federal Airports Corporation at Sydney International Airport* (2000) ATPR 41-754 at 40,793)

[55] See GRIG Policy Paper on the National Gas Access Regime, p. 7, quoted in National Competition Council, 1997, p. 13.

## What Types of Pipelines Might Provide Competing Services?

In considering the markets in which the Pipelines provide services, most of the matters relevant to this issue have already been considered. However, there are two matters which merit comment.

*New and Existing Pipelines*

The words used in criterion (b), 'develop another pipeline', should be interpreted in the context of the objective of the legislative scheme. If, as discussed above, the main purpose of criterion (b) is to identify for potential Coverage pipelines where the development of competing pipelines would be inefficient, then it seems appropriate to take account of other existing pipelines in addressing this criterion.

Therefore, the Council considers the objectives of the legislative scheme are best met by also having regard to the provision of competing services by another existing pipeline for the purposes of criterion (b).

In reaching this view, the Council has taken a broad view of the word 'develop' to connote 'unfold more fully', 'bring out all that is contained in', and 'bring out from a latent to an active or visible state' (Shorter Oxford Dictionary). Thus, an existing pipeline with relevant constraints or deficiencies could be 'developed' to provide competing services where previously it did not. Further, the existence of a pipeline which already provided services which were competitive, or would be competitive, with the services of the pipeline the subject of the Coverage application could also be said to defeat any scope that criterion (b) could be satisfied. The notion of 'develop' may not require any physical changes to the existing pipeline, merely the recognition that it provided, or could provide, competing services.

The Council concludes that where an existing pipeline already provides, or could provide with minor modifications or enhancements, services which are competitive with the services of the pipeline the subject of the Coverage application, criterion (b) will not be satisfied.

*Pipelines which Compete with Parts of the Application Pipelines*

Another consideration in determining the range of pipelines that might provide competing services is the possibility that other pipelines might provide services that compete with those provided by parts of the three pipelines for which revocation is sought.

Section 1.7 of the National Code grants the Council some discretion to determine the extent of Coverage, providing:

> If the NCC recommends that the Pipeline be Covered, the NCC may do so to a greater or lesser extent than requested by the applicant if, having

> regard to the part of the Pipeline that is necessary to provide Services that Prospective Users may seek, the NCC considers it appropriate …

Accordingly, the Council must take into account whether new or existing pipelines do or could provide competing services to the whole or part of the three pipelines for which revocation is sought, whether or not this required some enhancement to the existing capacity of existing pipelines.

## *Analysis*

In accordance with the above, the Council's analysis of criterion (b) must involve consideration of whether new or existing pipelines do, or could, provide competing services to the whole, or part, of the three pipelines for which revocation is sought.

The Council considers the potential for substitutability between different gas transportation services earlier in Part C. In that context, the Council discusses the extent to which the Eastern Gas Pipeline provides services which compete with those of the three pipelines for which revocation is sought (as the 'existing' pipeline most likely to do so). The Council concludes that the services of the Eastern Gas Pipeline are not provided in the same market as the services of the three pipelines for which revocation is sought. While to some extent the Eastern Gas Pipeline and the Interconnect provide substitute services for the transport of gas from Longford to Sydney, the potential for substantial competition is limited due to the high costs of expanding the Interconnect's capacity.

### Would it be Economic to Develop Pipelines to Provide the Services of the Pipelines for which Revocation is Sought?

Whether it would be economic to develop pipelines that provide the gas transport services of the three pipelines for which revocation is sought depends on the economics of pipeline construction.

Transmission pipelines typically exhibit natural monopoly characteristics that strongly curtail opportunities for construction of new pipelines. Some of the factors relevant to a consideration of whether it is economic to develop new transmission pipelines which provide the services of the three pipelines for which revocation is sought are:

- whether there is spare capacity in the three pipelines;
- whether current and projected levels of demand are most cheaply supplied by the three pipelines or with the addition of new pipelines;

- whether average and marginal costs of production per unit for the three pipelines continue to decline for all likely levels of demand at their destinations (including Sydney) and along their routes;

- whether the costs of developing other pipelines to provide the transport capacity sought by third parties outweigh the costs of expanding the capacity of each of the three pipelines to meet the third parties' needs, while ensuring the owner/operator and existing users do not lose amenity; and

- the height of barriers to entry (such as large upfront costs of developing other pipelines, particularly costs that could not be recovered if the new investment were abandoned).

Each of the three pipelines for which revocation is sought are characterised by high construction costs and low operating costs such that the marginal cost of transporting a unit of gas is very low. Moreover, up to the point of fully expanded capacity in the three pipelines, the average costs of transporting an additional unit of gas could be expected to decline. In lay terms, this means it will almost always be cheaper to transport gas through each of the three pipelines (up to the point of full developable capacity) than it will be to build additional pipelines to transport gas along the routes of the three pipelines.

Moreover, the high sunk costs of constructing additional pipelines serve as a barrier to the entry of new pipelines. 'Sunk costs' are those elements of an investment that are fixed or committed, and where, if the investment fails, little or none of the investment can be recovered. The presence of sunk costs also means that incremental or gradual entry – a common form of entry in other industries – is not feasible in transmission.

A further factor which would be likely to discourage a party from building a new pipeline is spare capacity in the existing pipeline. Generally, the greater the amount of available capacity, the less parties will be able to charge for any particular unit of capacity. New entry would be further discouraged if the costs of expanding the existing pipeline to provide additional capacity were lower than the costs of building a new pipeline to do so.

*Moomba to Wilton Pipeline*

Origin Energy argues that it would not be economic to develop another pipeline to provide transportation services from Moomba to Sydney, due to the prohibitive capital costs and the advent of significant unutilised capacity with the completion of the Eastern Gas Pipeline. (Origin Energy, submission 4, p. 2) Great Southern Energy also argues that it would be uneconomic to develop another pipeline to provide the services provided by

the Moomba to Sydney Pipeline System. (Great Southern Energy, submission 2, p. 4)

Capacity and cost of expansion issues associated with the Moomba to Sydney Pipeline System are discussed in detail at Part B. Briefly, capacity in the Moomba to Wilton pipeline appears to be relatively constrained between Moomba and Young, where gas leaves the system to supply laterals. Over the medium term, however, these constraints are expected to ease, due to: the approaching expiration of the take-or-pay contract with the SA Unit producers and consumption of banked gas; and the construction of the Eastern Gas Pipeline, which will reduce the demand for gas transport in the three pipelines for which revocation is sought. Further, the commissioning of the Eastern Gas Pipeline is expected to lead to excess transmission capacity to Sydney generally.

As noted in Part B, EAPL states that the Moomba to Wilton pipeline could be expanded substantially (from 172 PJ to 290 PJ per year) with additional compression. LECG estimates that the cost of expanding the capacity of the Moomba to Wilton Pipeline by 47 PJ (to 219 PJ per year) would be $61 million. This cost appears relatively low compared with the cost of building a new pipeline.

The easing of capacity constraints on the Moomba to Wilton pipeline in the medium term, combined with the relatively modest costs of expansion, suggest that it is unlikely to be economic to develop another pipeline to provide the services of the Moomba to Wilton pipeline.

*Young to Culcairn Pipeline*

EAPL observes in its application that, as a supply line to markets situated between Young and Culcairn, and as a link between Moomba and Victoria, the Interconnect may not be economic to duplicate. (EAPL, Application, p. 6) Origin Energy argues that it would not be economic to develop another pipeline to provide transportation services from Young to Culcairn. (Origin Energy, submission 4, p. 2)

Gas flows over the Interconnect appear to be close to capacity. As noted in Part B, LECG has suggested that the Interconnect is able to transport 5 PJ per annum (this can be doubled through backhaul) while existing booked capacity southbound amounts to around 5 PJ per annum.

The actual capacity of the Interconnect is restricted to a fraction of its potential by the limited capacity of the pipelines on either side of it. Most of these constraints lie on the Victorian side; data provided by LECG suggests that flow through the Interconnect could be increased from 5PJ to 35 PJ per annum before any capacity expansion were required in the Moomba to Sydney Pipeline System. (LECG, submission 27, p. 32)

As noted in Part B, LECG has estimated the cost of expanding the Interconnect system by 85 PJ to 90 PJ per annum at $232 million. While this implies a significantly higher incremental cost of expansion than for either the Moomba to Wilton pipeline or the Eastern Gas Pipeline, it is probable that such expansion would still be more economic than building another pipeline to provide the Interconnect's services. What appears more likely than either of these options is that any substantial excess demand for transport of gas between Victoria and NSW would be met by the Eastern Gas Pipeline, through capacity expansion if necessary.

*Dalton to Canberra Pipeline*

Current capacity in the Dalton to Canberra pipeline is 16.4 PJ per year (or 45 TJ per day). The pipeline is operating very close to capacity, with constraints being experienced during periods of peak winter demand. As a result, EAPL intends to expand the pipeline in 2001, through partial looping, at a cost of around $3.5 million. (EAPL, 1999, p. 30)

The relatively modest cost of expanding the Dalton to Canberra pipeline suggests that it is unlikely to be economic to develop another pipeline to provide its services.

## *Conclusion*

The Council concludes that it would not be economic for any party to develop pipelines to provide the services of the Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline at current and reasonably anticipated levels of future demand, and therefore that criterion (b) is met for each of these pipelines.

**Criterion (c)** **that access (or increased access) to the services provided by means of the pipeline can be provided without undue risk to human health or safety.**

## *Background*

The rationale for this criterion is that the National Code should not be applied to pipelines where access or increased access may pose a legitimate risk to human health or safety.

## *Analysis*

The Council did not receive any submissions arguing that it would be unsafe to provide access or increased access to the services of the Moomba to Wilton pipeline, the Young to Culcairn pipeline or the Dalton to Canberra pipeline. This is consistent with the Council's experience in relation to a number of applications seeking revocation of Coverage of pipelines, where safety concerns were not raised to support revocation.

The National Gas Access Regime contemplates the provision of access to pipelines throughout Australia under Gas Access Acts in each State and Territory. The Council is not aware of any instance where safety concerns have been raised in relation to access or increased access to the services of pipelines. No evidence has been raised to suggest that safety is a particular concern in relation to the provision of access or increased access to the services of the three pipelines for which revocation is sought.

NSW, SA, Queensland and the ACT have passed regulations dealing with the safe operation of gas pipelines. The Council is confident that these regulations deal appropriately with any safety issues arising from access to the three pipelines.

## *Conclusion*

The Council concludes that access (or increased access) can be safely provided to the services of the Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline, and therefore that criterion (c) is met for each of these pipelines.

**Criterion (d)** **that access (or increased access) to the services provided by means of the pipeline would not be contrary to the public interest.**

## *Background*

In Coverage matters, the Council considers whether access to a pipeline is contrary to the public interest. The Council adopts a broad view of the types of matters that may raise public interest considerations, including the effect access might have on the environment, regional development, and equity.

Previously, the Council and the relevant Minister have taken into account the costs of regulation under the National Code compared with the benefits delivered by regulation. (See, for example, National Competition Council, 2000a) In making this assessment, the Council has taken into account both the direct and indirect costs and benefits of access.

## *Analysis*

### Issues Raised in Submissions

The following issues of relevance to criterion (d) were raised variously in EAPL's application and submissions to the Council on both this application and the application for Coverage of the Eastern Gas Pipeline:

- the policy arguments for regulation under the National Code compared to regulation under an Undertaking, including the effect of regulation under the National Code on new investment, tariff innovation and entrepreneurial risk-taking;
- the costs and benefits of regulation;
- the policy arguments for and against symmetrical regulation of the Moomba to Sydney Pipeline System and the Eastern Gas Pipeline; and
- the adequacy and desirability of information disclosure arrangements under the National Code.

### Policy Arguments for Regulation Under the National Code Compared to Regulation under an Undertaking

Submissions on the Eastern Gas Pipeline application from the Western Australian Office of Energy, the South Australian Office of Energy and PIAC were supportive of Coverage of major pipelines in order to ensure

regulatory consistency, to discourage forum shopping, and to promote a uniform national framework. Many argued that COAG had developed the National Code to ensure a single uniform regulatory framework for third party access to the services of pipelines.

With respect to the current application, Great Southern Energy notes that Coverage of the three pipelines for which revocation is sought would ensure regulatory consistency, discourage forum shopping and promote a uniform national framework. (Great Southern Energy, submission 2, p. 6) Incitec raises concerns that revocation of Coverage of the three pipelines may lead to an 'unravelling effect', i.e., the progressive revocation of Coverage of pipelines around the country. (Incitec, submission 3, p. 3)

On the other hand, submissions from Energy Australia, Duke, the IPA and APIA (on the Eastern Gas Pipeline application) criticised elements of the National Code, arguing in effect that it is ill-equipped to regulate 'entrepreneurial' pipelines.

The two submissions received on the Council's Draft Recommendation were also critical of the impact of regulation. EAPL argues that Coverage would result in "regulator-imposed limitations on the flexibility of both pipelines to offer dynamic and market driven services". (EAPL, submission 21, p. 1) IPA's submission argues that regulations are providing an opportunity for vested interests to obtain advantages on a particular pipeline rather than a means for encouraging an efficient expansion of the pipeline network. IPA also notes, however, that it is desirable that businesses formerly owned by governments are subjected to access and price regulation. (IPA, submission 20, p. 9)

The Council considers there are strong policy justifications for the view that all natural gas pipelines that meet the Coverage criteria should be regulated under the relevant Gas Access Acts and the National Code. Further, the Council considers there is little substance to the criticisms of the National Code, and that the National Code can facilitate many if not all the commercial objectives sought by pipeline owners.

Support for the view that all pipelines which meet the Coverage criteria should be regulated under the National Code can be found by examining the TPA, the preambles to the Gas Access Acts, and from the Introduction to the National Code.

The provisions in section 44ZZA of the TPA, which deal with the circumstances under which the ACCC will accept Undertakings, are relevant to this issue. Section 44ZZA(3)(d) provides that, in considering whether to accept an Undertaking, the ACCC shall have regard to "whether access to the service is already the subject of an access regime". This provision gives the ACCC discretion, where the services in question

are already subject to an access regime, to reject (or require modifications to) Undertakings.

This view is bolstered by the preamble to the Gas Access Acts and the objectives of the National Code found in the Introduction to the National Code.

The preambles to the Gas Access Acts in each State and Territory, and in the Commonwealth, provide *inter alia* that:

> The Commonwealth, the States of New South Wales, Victoria, Queensland, South Australia, Western Australia, and Tasmania, the Australian Capital Territory, and the Northern Territory agreed in November 1997 to the enactment of legislation in the Commonwealth and those States and Territories so that a uniform national framework applies for third party access to all gas pipelines.

The Introduction states:

> The Access Arrangement is similar in many respects to an undertaking under Part IIIA of the Trade Practices Act and is designed to allow the owner or operator of the Covered Pipeline to develop its own Tariffs and other terms and conditions under which access will be made available, subject to the requirements of the [National] Code.

The clear intention that can be drawn from the preambles and the Introduction to the National Code are:

- that governments intended a uniform system of regulation to apply to all pipelines that met the Coverage criteria; and

- where pipelines are subject to Coverage under the Coverage criteria, then the provisions of the National Code should apply in respect of the services of those pipelines to the exclusion of alternative systems of regulation.

In relation to the argument that the National Code has the effect of stifling innovation and is ill-equipped to regulate 'entrepreneurial' pipelines, the Council has examined whether these criticisms are borne out by examining the National Code.

NECG's attachment to EAPL's submission was representative of the criticisms of the National Code raised in submissions. The submission argued that if both the Eastern Gas Pipeline and the Moomba to Sydney Pipeline were Covered under the National Code, neither owner "would have the motive or opportunity to respond flexibly to demand conditions in the marketplace":[56]

[56] NECG present reasons to prefer regulation by Undertaking compared to regulation through coverage, and also argue the case that some form of regulation is preferable to no regulation.

- "The revenue adequacy (revenue cap) philosophy of the [National] Code pricing principles removes the motive to adjust prices in response to changing demand conditions";

- "The [National] Code's mandatory policy requirements … work to limit each pipeline's opportunity to adjust to changing market circumstances and develop new service offerings";

- "Some innovative price and service offerings would be less likely to occur [because owners] would need to disclose these offerings [to their competitors]; and

- "short review periods (typically five years under the National Code) are likely to create substantial disincentives for investment, for example in expanding capacity". (EAPL, submission 16, p. 8)

The task of regulation under the National Code is to attempt as far as possible to mimic the outcomes that would be achieved in a competitive market, by correcting for any distortions caused by structural features of the gas transmission services markets.

The Council recognises that inevitably any regulatory model would have some shortcomings that would cause it to fall short of the results achieved in a competitive market, but that regulation of a pipeline is justified where the results under regulation would improve on the results without regulation.

The Council considers that many of the criticisms levelled against the National Code have not been substantiated. For example, Duke and NECG incorrectly criticise the five year tariff review periods under the National Code: the National Code does provide for longer review periods. Section 3.18 provides:

> An Access Arrangement Period accepted by the relevant Regulator may be of any length; however, if the Access Arrangement Period is more than five years, the relevant Regulator must not approve the Access Arrangement without considering whether mechanisms should be included to address the risk of forecasts on which the terms of the Access Arrangement were based and approved proving incorrect. …

Section 3.18 then suggests particular mechanisms to address the risk of forecast errors.

Another criticism is that the tariff setting principles in the National Code are too inflexible, particularly in relation to entrepreneurial pipelines.

Tariff setting principles are contained in section 8 of the National Code which sets out the rules for reference tariffs. Reference tariffs are likely to be the tariffs that apply for services typically sought by access seekers. Parties are free to negotiate tariffs other than reference tariffs, but

reference tariffs will be applied by the arbitrator if the parties fail to reach a satisfactory agreement in relation to a reference service.

Reference tariffs are required to be approved by the relevant regulator for the pipeline. Transmission pipelines in South East Australia which are Covered by the National Code, including those in the Moomba to Sydney Pipeline System, are regulated by the ACCC and are required to submit proposed reference tariffs to the ACCC for approval.

Section 8 is flexible, and rather than specifying particular tariffs or tariff calculation methods, instead specifies a range of tariff-setting principles. The guiding principles are set out in section 8.1 which provides that a Reference Tariff should be designed with a view to achieving the following objectives:

(a) providing the Service Operator with the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the Reference Service over the expected life of the assets used in delivering that Service;

(b) replicating the outcome of a competitive market;

(c) ensuring the safe and reliable operation of the Pipeline;

(d) not distorting decisions in Pipeline transportation systems or in upstream or downstream industries;

(e) efficiency in the level and structure of the Reference Tariff; and

(f) providing an incentive to the Service Provider to reduce costs and to develop the market for Reference Services.

The Council considers that the SA Office of Energy is correct when it argues that:

> … there is sufficient flexibility in the National Code to enable Access Arrangements made under it to consider the individual circumstances of each Pipeline or Pipeline System against a common yardstick. (SA Office of Energy Policy, submission 12, p. 2)

Further, Great Southern Energy and Origin Energy argue that the reference tariffs provided for under the Access Code do not prohibit operators of pipelines from offering other services or undertaking entrepreneurial activity. (Great Southern Energy, submission 2, p. 5; Origin Energy, submission 4, p. 2)

### Would EAPL's Proposed Undertaking Do More to Promote Competition than Coverage Under the National Code?

As noted in Part A, the Council understands that EAPL has not yet submitted a draft Undertaking to the ACCC, although its application signals its intention to do so.

Legal advice to the Council, sought in the context of its consideration of the application for Coverage of the Eastern Gas Pipeline, stated that it was legally permissible for the Council to take into account a draft Undertaking as part of the Council's consideration of criterion (d). However, in that case it did not appear that the submission of the Undertaking to the ACCC or its terms had any particular relevance.

Without details of EAPL's proposed Undertaking, it is difficult for the Council to assess what impact it may have on competition. Even if the Undertaking were in draft form, the ACCC may reject or request the modification of the Undertaking, or EAPL may withdraw it (with the consent of the ACCC).[57] This makes it difficult for the Council to place much weight on EAPL's proposed Undertaking.

It seems to the Council that EAPL could achieve many of the objectives of an Undertaking in the form of an Access Arrangement under the National Code. This is because of the intention of the National Code (expressed above) is for "Access Arrangement [to be] similar in many respects to an Undertaking under Part IIIA" and because of the flexibility of the National Code in the design of Access Arrangements.

The Council is not satisfied that Coverage under the National Code would be contrary to the public interest by reason of EAPL's proposal to submit a draft Undertaking to the ACCC.

### Costs of Coverage under the National Code

LECG's analysis of the net welfare impact of Coverage of the Eastern Gas Pipeline and Moomba to Sydney Pipeline is that there would be a net cost of $11.4 million if the market were competitive but a net benefit of $9.8 million if the market were collusive. (LECG, submission 27, p. 62)

The Council recognises that there are costs associated with regulation under the National Code and that these can be significant. However, the Council considers it reasonable to assume that the costs of legitimately regulating monopoly infrastructure were taken into account by COAG in its decision to develop the National Code. It also notes that, were the three pipelines for which revocation is sought not Covered, their owner would face not insubstantial costs in negotiating individual contracts with customers.

[57] Section 44ZZA(7).

Some submissions, in discussing regulatory costs, suggest that regulation of transmission prices may reduce the attractiveness of new pipeline investment and so impede industry development (e.g., IPA, submission 20, p. 7; APIA, submission 24, p. 2). The Council considers that whether new investment in gas pipeline infrastructure is desirable should be looked at from a broad viewpoint. The intent of regulation is to cap prices at levels comparable to those which would exist in a competitive market. Looked at from the perspective of the economy as a whole, any investment which required returns greater than this in order to proceed could be considered uneconomic. Further, failure to maintain gas transmission prices at competitive levels would inhibit activity and (otherwise economic) investment in those sectors of the economy which use these services. This would lead to an inefficient allocation of the economy's resources, and so be undesirable. Investment in gas pipeline infrastructure therefore cannot be viewed as desirable simply for its own sake.

Overall, the Council considers that the benefits of regulating the three pipelines under the National Code will outweigh the costs. These benefits are likely to be large, given the size of the market in which competition will be promoted (the market for gas sales in South East Australia). In particular, as discussed in Part B, transmission tariffs can represent a significant portion of the total delivered cost of gas. This suggests that, for large users at least, gains from regulation in the form of lower tariffs could be significant.

### Costs of Partial Coverage under the National Code

Several submissions raised issues associated with the potential partial Coverage of the Moomba to Sydney Pipeline System. The Council notes that, as it has determined that the criteria are met for the whole of each of the three pipelines for which revocation is sought, partial Coverage is not at issue for this application.

### Symmetrical Regulation

EAPL has argued that it is important to ensure symmetrical regulation of the Moomba to Sydney Pipeline System and the Eastern Gas Pipeline: that is, both should be Covered, the subject of an Undertaking, or not regulated.

NECG's attachment to EAPL's submission on the application for Coverage of the Eastern Gas Pipeline sets out the case for symmetrical regulation:

> If a situation were to eventuate in which one pipeline was regulated under the [National] Code and the other pipeline were subject to a Part IIIA Undertaking or no Coverage … then the pipeline covered by the [National] Code would find itself at a severe competitive disadvantage. (EAPL, submission 16, p. 6)

EAPL and NECG argue that the information disclosure and price-setting requirements imposed on Covered Pipelines would place them at a disadvantage relative to 'competing' uncovered pipelines. They also argue that a lack of regulatory symmetry may lead to inefficient economic outcomes, including through its potential to impact on resource allocation and gaming behaviour. Santos argues that the Council should not turn criterion (d) into a positive obligation that it is in the public interest to have symmetry in regulation of all pipelines. (Santos, submission 5, p. 2)

The Council considers that the criteria for Coverage set out in the National Code should be applied independently to each application for Coverage or revocation brought before it. Where pipelines have similar characteristics it is likely that its processes will result in similar recommendations.

This approach is consistent with the submission by Santos, which argues that "it is the NCC's duty to apply the National Code to each pipeline and to come to a recommendation on that basis alone." (Santos, submission 5, p. 2)

The structure of the National Code is such that its ring-fencing and other provisions could be expected to deal with pipeline owners having relationships with parties engaging in other gas-related activities (e.g., gas distribution). However, given the imperfect availability of information to regulators, this issue cannot be ignored. That said, it is not the central focus of decisions about Coverage.

### Information Disclosure

The Council notes that submissions raise a range of views on the net benefit of information disclosure. This issue has also been considered under criterion (a) in the context of the promotion of competition. Whilst there is nothing which would prevent a factor being relevant to more than one criteria for Coverage, there is nothing in the analysis of this particular issue which differs depending upon the criterion against which it is assessed.

As noted in relation to the promotion of competition, on balance, the Council considers that the benefits of information disclosure, notably the promotion of a better-informed market, are likely to outweigh any costs associated with the increased potential for parallel behaviour.

## *Conclusion*

The Council concludes that access (or increased access) to the services of Moomba to Wilton pipeline, the Young to Culcairn pipeline and the Dalton to Canberra pipeline would not be contrary to the public interest.

Therefore, the Council is satisfied that criterion (d) is met for each of these pipelines.

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*Wu Shan Liang* (1996) 185 CLR 259.

# Appendix 1: Submissions to the Council

The Council has taken into account submissions made in relation to the application for Coverage of the Eastern Gas Pipeline.

### First Round Submissions — Moomba to Sydney Pipeline System

1. CMS Energy
2. Great Southern Energy
3. Incitec
4. Origin Energy
5. Santos
6. Woodside / Shell Development

### First Round Submissions — Eastern Gas Pipeline

7. Institute of Public Affairs
8. Energy Australia
9. Public Interest Advocacy Centre
10. WA Office of Energy
11. EAPL
12. SA Office of Energy Policy
13. EAPL
14. Australian Gas Users' Group
15. AGL
16. EAPL (enclosing NECG report)
17. Duke (later revised and resubmitted)[58]
18. Energy Markets Reform Forum
19. Duke

### Second Round Submissions — Moomba to Sydney Pipeline System

20. Institute of Public Affairs
21. EAPL

### Second Round Submissions — Eastern Gas Pipeline

22. EAPL
23. CMS Energy
24. APIA
25. GGT Pty Ltd

[58] Page references are to the revised submission.

26. NECG submission on behalf of Duke/EAPL - both in commercial-in-confidence and non commercial-in-confidence form
27. LECG submission on behalf of Duke - both in commercial-in-confidence and non commercial-in-confidence form
28. Woodside
29. Duke
30. Duke (through Minter Ellison)

# Appendix 2: Criteria for Coverage in Section 1.9 of National Code

Section 1.9 of the National Code provides:

> *Subject to sections 1.4(a) and 1.10, the NCC must recommend that the Pipeline be Covered (either to the extent described, or to a greater or lesser extent than that described, in the application[59]) if the NCC is satisfied of all of the following matters, and cannot recommend that the Pipeline be Covered, to any extent, if the NCC is not satisfied of one or more of the following matters:*
>
> *(a) that access (or increased access) to Services provided by means of the Pipeline would promote competition in at least one market (whether or not in Australia), other than the market for the Services provided by means of the Pipeline;*
>
> *(b) that it would be uneconomic for anyone to develop another Pipeline to provide the Services provided by means of the Pipeline;*
>
> *(c) that access (or increased access) to the Services provided by means of the Pipeline can be provided without undue risk to human health or safety; and*
>
> (d) *that access (or increased access) to the Services provided by means of the Pipeline would not be contrary to the public interest.*

[59] Having regard to any part of the pipeline that is necessary to provide services that potential users may seek access to (section 1.7).