

**SUBMISSION BY WMC RESOURCES LIMITED
ON THE MOOMBA TO ADELAIDE GAS PIPELINE
APPLICATION FOR REVOCATION OF COVERAGE**



5 May 2005

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1. Background

Epic Energy South Australia Pty Limited ("EESA") has submitted an application to revoke coverage of the Moomba to Adelaide Gas Pipeline ("MAP") under the provisions of the *Gas Pipelines Access (South Australia) Act 1997* (SA) (the "Gas Access Act"). The Gas Access Act applies the *National Third Party Access Code for Natural Gas Pipeline Systems* (the "Code") to the MAP.

WMC Resources Limited ("WMC") opposes the application submitted by EESA. In WMC's submission it is clear that the criteria for coverage of the MAP, set out in section 1.9 of the Code, are satisfied. Accordingly, there is no basis to revoke coverage.

1.1 WMC's Activities

WMC is a major diversified resources company listed in Australia and the United States, with world-class businesses in the minerals industry. WMC is currently considering the feasibility of a substantial expansion of its Olympic Dam mining operation ("ODO") and, independently of the expansion, the substitution of liquid fuels used at ODO with natural gas. WMC has an option to acquire 12-30 PJ/pa of gas from the PNG Gas Project for delivery at Moomba. WMC is currently evaluating the implications of liquid fuel replacement and development of a gas fired power station at ODO and becoming a user of the services provided by the MAP. ODO may be serviced by a lateral pipeline commencing at Compressor Station Number 2 in the northern reaches of the MAP. WMC is, therefore, extremely sensitive to the tariff structure for the MAP and to the negotiating position adopted by EESA.

WMC opposes EESA's application. WMC submits that all of the criteria set out in section 1.9 of the Code are satisfied and that there is no basis to revoke coverage of the MAP.

The purpose of this submission is to express WMC's concerns and to provide information that WMC believes will be useful to the Council in its consideration of the application.

1.2 Productivity Commission Arguments

Throughout its application for revocation, EESA argues that commentary and recommendations made by the Productivity Commission in its review of Australia's Gas Access Regime (Report 31, August 2004) (the "Pipeline Access Review"), and the Federal Treasurer's response to the Productivity Commission, should be taken into consideration when evaluating the:

- application in general; and
- criteria set out in section 1.9 of the Code in particular.

At this point in time such comments, recommendations and responses have not been incorporated into law and it is fallacious to contend that they should be used to override existing law or to govern the application of existing law. WMC submits that all submissions contained in EESA's application for revocation relating to the application of commentary and recommendations of the Productivity Commission, and the Federal Treasurer's response thereto, should be disregarded in their entirety. To the extent that the work of the Productivity Commission becomes law and results in modification to the Gas Access Act and, or, the Code (and the application thereof) those modifications should be considered as and when they are known and in the context of properly developed legislation.

WMC therefore submits that all arguments put forward by EESA, which are based upon the commentary and recommendations of the Productivity Commission, and the Federal Treasurer's response thereto, should be disregarded in their entirety.

1.3 Contract and Demand Forecasts

Similarly, EESA argues that changes in the contract and market environment faced by the MAP (emphasising falling contract demand for MAP services but not addressing whether this necessarily means declining use of the MAP) will render coverage unnecessary. In essence, this argument is based upon the proposition that the regulated tariff will be above any of the tariffs that EESA would be able to realise in the market.

The problem with this argument is that, while the very market changes described by EESA may result in changing contracting behaviour regarding MAP services, this is neither guaranteed nor does it necessarily imply declining use of MAP services. The pipeline industry has been able to base its operations on long term, take or pay contracts in the past but a move to more flexible market arrangements, generated at least in part by the application of the Gas Access Act, can be expected to increase the aggregate use of pipeline services. The implications of these changes on a particular pipeline system cannot be determined by reference to rigid, historical patterns of pipeline contracting and use.

2. Criterion (b)

that it would be uneconomic for anyone to develop another pipeline to provide the Services provided by means of the Pipeline

2.1 The Role of Criterion (b)

The focus of criterion (b) is on determining whether the MAP exhibits natural monopoly characteristics. It is not the purpose of criterion (b) to analyse markets or to assess the market power of EESA as the service provider.

In WMC's submission, EESA's analysis of criterion (b) falls into error in a number of key respects. First, EESA inappropriately defines the "services" provided by means of the MAP. Second, the approach suggested by EESA to the interpretation of "uneconomic" does not reflect the proper application of the criteria. In this context EESA has adopted the decision of the Minister for Industry Tourism and Resources in regard to the Moomba to Sydney Gas Pipeline System (the "EAPL Decision") without critical consideration of the decision.

2.2 The Services Provided by means of the Pipeline

WMC agrees with the approach to service definition outlined by the Council in its Issues Paper.

As noted by the Council, the starting point in considering the relevant services in any application is the wording of section 1.9(b) of the Code. That section identifies, as a pre-condition of coverage, that "*it would be uneconomic for anyone to develop another Pipeline to provide the Services provided by means of the Pipeline*". "Service" is defined to mean:

"A service provided by means of a Covered Pipeline (or when used in section 1 a service provided by means of a Pipeline) including (without limitation):

- (a) haulage services (such as firm haulage, interruptible haulage, spot haulage and backhaul);*
 - (b) the right to interconnect with the Covered Pipeline; and*
 - (c) services ancillary to the provision of such services,*
- but does not include the production, sale or purchasing of Natural Gas."¹*

As the present matter involves section 1 of the Code it is the definition of Pipeline which is relevant.

Pipeline is defined to mean:

"A pipe, or system of pipes, or part of a pipe, or system of pipes, for transporting natural gas, and any tanks, reservoirs, machinery or equipment directly attached to the pipe, or system of pipes, but does not include -

- (a) unless paragraph (b) applies, anything upstream of a prescribed exit flange on a pipeline conveying natural gas from a prescribed gas processing part; or*
 - (b) if a connection point upstream of an exit flange on such a pipeline is prescribed, anything upstream of that point; or*
 - (c) a gathering system operated as part of an upstream producing operation; or*
-

¹ Section 10.8 of the Code.

- (d) *any tanks, reservoirs, machinery or equipment used to remove or add components to or change natural gas (other than odourisation facilities) such as a gas processing plant; or*
- (e) *anything downstream of the connection point to a consumer".²*

When considering section 1.9(b), "services" are confined to services provided by a Pipeline and it is not permissible to contemplate services provided by alternative technology. This comes from the fact that criterion (b), in its terms, asks whether it is uneconomic to develop "*another pipeline to provide the services provided by means of the Pipeline*" (emphasis added). In this regard, criterion (b) in the Code is different from section 44H(4)(b) in Part IIIA of the *Trade Practices Act 1974* (the "TPA"). Part IIIA of the TPA asks whether it is uneconomical to develop another facility to provide the service. There is nothing in the definition of service which would require, in that context, that the technology by which a relevant service is to be provided is the same as the particular facility at issue. The position under the Code, however, is different and it is only services provided by other pipelines which are of relevance.³ The definition of pipeline in the Code (and set out above) covers *physical* infrastructure such as pipes, tanks and machinery. As such, criterion (b) enquires whether another physical pipeline can provide the relevant services and if so, whether it is economic to do so.

In WMC's view, swaps, backhaul arrangements and other synthetic arrangements that entail the receipt of gas at one location and the delivery of gas at another location are not relevant for the purposes of criterion (b) as they do not amount to "another pipeline" as required under the criterion. In any event, the "service" provided by such contractual arrangements is not the point-to-point service the subject of the application for revocation. The Tribunal in the Duke EGP decision defined the relevant point-to-point service as a

² Section 2 of the Gas Pipelines Access Law (South Australia)

³ Final Recommendation, Application for revocation of coverage of the Parmelia Pipeline under the National Gas Access Regime, NCC, February 2002 at page 36.

"firm forward haulage service".⁴ Contractual arrangements such as swaps and backhaul arrangements do not provide a firm forward haulage service but rather, interruptible services. (The nature of swaps, backhaul and other synthetic arrangements is considered further under heading 3.3).

Criterion (b) focuses on determining coverage of a Pipeline, not on particular services. In other words, section 1.9(b) looks to the facility by which various services are provided. In this regard, again, the Code is different from Part IIIA of the TPA. Part IIIA focuses on identification of a particular service provided by means of a facility and only that specific service is declared, it being contemplated that some services provided by means of a facility may be the subject of declaration whilst others are not.⁵ Conversely, under the Code the focus is on the Pipeline and once the Pipeline is covered, then all Reference Services provided by the Pipeline are subject to the operation of the Code. The services of the Pipeline include the full range of services, such as firm forward haulage, interruptible forward haulage, backhaul, the right to interconnect and other ancillary services.

The essence of the term "service" is to define the service which is bought and sold by the parties using the MAP. As the Tribunal stated in Duke Eastern Gas Pipeline Pty Limited decision (the "Duke EGP matter")⁶:

"That service may be of different use to the producers in the origin market or to the customers in the destination market, but it is the same service."

⁴ Duke Eastern Gas Pipelines Pty Ltd (2001) ATPR 41-821 at para 68.

⁵ See The National Access Regime: A Guide to Part IIIA of the Trade Practices Act 1974, Part B - Declaration, National Competition Council, December 2002 at para 3.11 citing the Sydney Airport matter where the Tribunal stated: "Due recognition is required of the fact that a facility might provide multiple services that individually may or may not meet the declaration criteria set out in s. 44H(4)." (para 80)

⁶ (2001) 23 ATPR 41-821 at 43,059 para 69.

In WMC's submission, the principal service provided by the MAP is most properly described as:

"gas transmission services from Moomba to Adelaide (in the case of the mainline) and to the end points of the lateral lines making up the MAP system, and all points in between".

This point-to-point service definition approach is consistent with that taken in the Duke EGP matter where the Tribunal described the services provided by the Eastern Gas Pipeline as being *"the transport of gas from Longford to Sydney, and to various locations along the route."*⁷

In contrast, in its application EESA does not adopt the Tribunal's point-to-point service definition approach. Instead it adopts a broader service definition describing the relevant services provided by means of the MAP as the (at para 5.4):

*"transportation of gas within the integrated south eastern Australian gas market; and
transportation of gas to markets along the MAPS (north of the Angaston lateral) and along the Whyalla lateral."*

In support of its approach to service definition, EESA relies on the EAPL Decision and comments made by the Productivity Commission in its Pipeline Access Review.

WMC does not agree with EESA's approach to service definition. EESA's approach to defining the term "service" is based upon an uncritical adoption of the EAPL Decision. In WMC's view, the EAPL Decision is flawed in a number of respects. In particular, the Minister did not adopt the point-to-point service definition approach endorsed by the Tribunal in the Duke EGP decision. In that decision, the Tribunal defined the relevant

⁷ Duke EGP matter at 43,059.

service as the firm forward gas haulage service from point A to point B.⁸ In contrast, the Minister in the EAPL Decision considered the point-to-point approach to be *"not appropriate for an increasingly integrated gas pipeline network."* Second, the Minister's service definition approach took into account the role of swaps, backhaul arrangements and other synthetic arrangements. This is not consistent with the requirement in each of the coverage criteria (and not only criterion (b)) that the relevant service must be provided by a pipeline which in turn is defined in the Code as a physical pipeline. In addition, arrangements such as swaps and backhaul arrangements do not provide the firm forward haulage service the subject of the application for revocation. Much of the Minister's analysis in respect of service definition in the context of criterion (b), was influenced by competition and competitive constraint issues. In WMC's view, these are matters that fall for consideration under criterion (a) and not criterion (b). In any event, identification of the relevant service and the relevant pipeline providing that service are threshold questions that should be determined prior to the application of the coverage criteria.

In respect of the Productivity Commission's comments in its Pipeline Access Review, WMC reiterates the view expressed above at heading 1.2, that law reform proposals are of no relevance to the construction of the coverage criteria as they currently stand.

2.3 Uneconomic to Develop Another Pipeline

Having identified the services provided by the Pipeline, it is then necessary to determine whether it is uneconomic to develop another Pipeline to provide those services. This involves testing *"whether for a likely range of reasonably foreseeable demand for the services provided by means of the pipeline, it would be more efficient, in terms of costs and benefits to the community as a whole, for one pipeline to provide those services rather than*

⁸ See footnote 6 for reference. At para 68, the Tribunal stated as follows: "...the pipeline operator sells a (haulage) service consisting of the transport of gas from point A to point B. That is what the customer buys. EGP's standard contract describes the service to be provided as a firm forward haulage service involving the transport of natural gas in the pipeline between specified receipt points and delivery points."

*more than one.*⁹ In assessing the total social costs, it is relevant to take into account any adverse impact, not only on technical efficiency, but also on allocative and dynamic efficiency.

WMC agrees with the Council's approach of taking into account alternate pipelines able to provide the relevant point-to-point service in applying the natural monopoly test under criterion (b). The issue under criterion (b) is whether it is cheaper (from a social cost perspective) for the MAP to satisfy the reasonably foreseeable demand for the services alone rather than together with other pipelines.

WMC does not contest the proposition that with increasing market and infrastructure maturity, there may be alternative means of transporting gas from Moomba to Adelaide and to all points in between but the question of whether such an alternative is economic or uneconomic requires extensive evaluation. It is not sufficient in this regard to suggest that because gas can be transported from Moomba to Adelaide and all points in between using pipelines other than MAP, that criterion (b) is satisfied. For criterion (b) to be satisfied, the use of alternate pipelines (in addition to MAP) needs to be cheaper (in a social cost sense) than using MAP alone.

In its application, EESA did not demonstrate that this was the case. EESA states that physical connection already exists between Moomba and Adelaide absent the MAP (para 5.26). WMC does not agree with this proposition and considers the issue further under heading 2.6. Even if EESA's contention was correct, it would not be enough to satisfy criterion (b). EESA would need to demonstrate that it would not be cheaper for MAP alone to satisfy the reasonably foreseeable demand for the relevant point-to-point services. EESA has failed to do so on both the point-to-point service definition approach but also on the broad service definition approach that EESA advocated in its application for revocation.

⁹ NCC Guide to Part IIIA, paras 4.18-4.21. See footnote 5 for reference. This test of natural monopoly was accepted by the Tribunal in the Duke EGP Decision.

2.4 Demand Forecast and Excess Capacity

Consistent with the approach adopted by the Tribunal in the Duke EGP matter, criteria (b) requires consideration of the likely range of reasonably foreseeable demand for the relevant point -to-point service.

In its application, EESA quotes Hastings' Product Disclosure Statement for the Hastings Diversified Utilities Fund forecasts for the haulage services provided by MAP. It notes a forecast that MAP's contracted volumes would decline from its maximum daily capacity of 418 TJ per day in 2005 to 194 TJ per day in 2006 (para 2.10). This data relates only to forecast contracted volumes and disregards changing patterns of use, including changes in aggregate load factors. This data can be contrasted with that of ABARE which forecasts increasing reliance on the MAP with annual gas throughput for the MAP rising from 110 PJ per annum in 2000 to 120 PJ per annum in 2009-10. (The ABARE forecast is equivalent to a pipeline capacity of only 300 TJ per day and 328 TJ per day respectively at a load factor of 1.00 which emphasises the need to take great care in how pipeline capacity and throughput data are specified). (Attachment A to this submission considers this data in more detail).

In respect of the MAP capacity, WMC does not disagree with the capacity assessments contained at paragraph 3.7 of the application of 313-418 TJ per day¹⁰. However, WMC notes that the capacity estimates quote developable pipeline capacity and disregard currently installed capacity and, in the body of the application, EESA mixes references to installed pipeline capacity with references to developable pipeline capacity without regard to capacity utilisation patterns, load factors, etc.

EESA asserts in its application that since the commissioning of SEAGas, MAP throughput has declined (para 2.7). In addition, it notes that with the expiry of major transportation

¹⁰ Application at 28.

contracts in 2005, its own forecasts and those of an independent expert are that there will be a significant period following 2005 when the MAP capacity will be significantly under utilised. EESA's conclusions on criterion (b) are that on the basis of the point-to-point service approach it is clear that the MAP mainline and the Port Pirie/Whyalla and Angaston laterals can satisfy likely demand for the services over the medium term (paras 5.39-5.44).

Even on the basis of the higher throughput ABARE figures, the capacity of MAP is likely to meet the foreseeable demand without the need for significant capital investment.

2.5 The Costs of Developing a New Pipeline

WMC is not privy to EESA's estimate of physically duplicating the MAP and is not in a position to contest EESA's data.

The reality is that the MAP can satisfy all foreseeable demand for the relevant services. The installed and developable capacity of the MAP is adequate to ensure that additional capacity can be provided to the market at the lowest feasible marginal cost by use of the MAP. There is nothing in the demand forecasts put forward by EESA which suggest that the demand for MAP services is likely to significantly exceed the currently installed capacity of the MAP. Indeed, EESA makes the contrary case very strongly.

Accepting EESA's excess capacity forecasts for the MAP mainline, it is clear that it would be cheaper for MAP to satisfy the reasonably foreseeable demand for the MAP point-to-point services than to develop another pipeline to provide the service. The cost of MAP satisfying demand in circumstances of underutilisation is negligible compared with the capital costs of constructing an alternate pipeline. Even on the basis of the ABARE forecast figures, a modest further expansion or improved utilisation of the capacity of the MAP would be the least cost means of servicing the reasonably foreseeable demand.

In respect of the laterals to the MAP, EESA states in its application that the MAP laterals are likely to be able to satisfy reasonably foreseeable demand over the medium term (see paras 5.39-5.42). Accepting EESA's demand forecasts, it is likely to be cheaper for MAP to meet that demand rather than constructing new lateral by-passes.

2.6 Using Alternate Pipelines to provide the Service

In considering whether it is economic to develop another Pipeline, the Council must have regard to the possibility of existing pipelines being developed in such a way as to provide the services currently provided by the MAP. It must also consider existing pipelines able to provide the entire point-to-point service. Thus, it would be relevant to assess whether it is economic to use the integrated south eastern Australian pipeline system to provide services for the transmission of gas from Moomba to any or all points along the MAP. The service provided by the alternate pipelines must be the same point-to-point service provided by the MAP. The alternate pipelines would not be providing the point-to-point service provided by the MAP if, for example, the delivery of gas to Adelaide purchased at Moomba, is conditional upon gas being available from some other non-Moomba source.

There are at least two alternative means by which gas purchased at Moomba might be delivered to Adelaide. First, Moomba gas may be delivered into the Moomba to Sydney Pipeline ("MSP") for delivery to Wagga Wagga, transferred into the Interconnect for delivery to Barnawartha, transferred into the Victorian gas transmission network for delivery to Paaratte and transferred into the SEAGas Pipeline for delivery to Adelaide. The second alternative route also uses the MSP but then uses the Eastern Gas Pipeline to Longford, the Victorian gas transmission network for delivery to Paaratte and the SEAGas Pipeline for delivery to Adelaide. However, in both cases, network modifications are required to enable the transportation of gas from Moomba to Adelaide.

At this time it is not physically possible to transport gas from Moomba to Adelaide other than by using the MAP. Even if no gas, other than the Moomba gas destined for Adelaide was to flow in the MSP or the Eastern Gas Pipeline, compression capacity would need to be installed at the northern end of the Eastern Gas Pipeline to flow Moomba gas to Adelaide via this route. Similarly, anything but the most modest flow of Moomba gas to Adelaide would not be possible through the Culcairn-Barnawartha Interconnect without additional investment in the GasNet pipeline system. The transportation of Moomba gas to Adelaide (other than via the MAP) when normal flows are maintained to all other markets serviced by the pipeline system would require substantial capital investment.

Attachment A to this submission considers the costs associated with the transportation of gas from Moomba to Adelaide other than by using MAP. There is little doubt that

transporting gas using the alternate routes is significantly more expensive than the cost of using the MAP. As MAP is unlikely to be capacity constrained even on the basis of the higher throughput ABARE figures, it is clear that use of the MAP is the least cost means of satisfying the reasonably foreseeable demand for the point-to-point MAP services.

2.7 Criterion (b) Conclusions

EESA itself emphasises that the MAP will have significant excess capacity after 2005. To the extent that EESA's forecast of reasonably foreseeable demand is in the order of 70 PJ per annum, it will be demonstrably more efficient to use the MAP to transport gas from Moomba to Adelaide and to all points in between than for that gas to be transmitted either through an entirely new pipeline or for it to be transmitted through a complex chain of alternate pipelines from Moomba to the same delivery points. WMC submits that even if the Council were to reject the EESA demand forecasts, the additional demand would need to be significant and significantly above ABARE's higher throughput forecasts in order to make the development of another pipeline economic.

This same conclusion applies irrespective of whether the MAP is compared to a new pipeline duplicating the MAP or whether the alternate routes to the MAP are considered as part of a complex south eastern Australian gas pipeline network.

WMC submits that it is clear that criterion (b) is satisfied - development of another pipeline to provide the relevant services would be uneconomic.

3. Criterion (a) - Promotion of Competition

that access (or increased access) to services provided by means of the pipeline in question 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 in question

Criterion (a) requires the Council to determine whether access (or increased access) to services provided by means of the MAP would promote competition in at least one market other than the market for the services provided by the MAP itself. This requires comparison of the competitive environment in dependent markets with coverage and the competitive environment in those dependant markets absent coverage. As the MAP is currently covered, the present situation represents the situation with coverage.

WMC agrees with the Council's framework for assessing criterion (a) as set out in its Issues Paper. In particular, satisfaction of criterion (a) requires that:

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

This second enquiry in turn, requires an assessment of whether EESA has the ability and incentive to exercise market power to adversely affect competition in the dependent market, and whether the structure of the dependent market is such that coverage would, by constraining the exercise of market power, promote competition.

For the Council to be satisfied that there would be a promotion of competition, the test is as set out by the Tribunal in the Sydney Airport matter:

"The Tribunal does not consider that the notion of 'promoting' competition in s44H(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 s44H(4)(a) involves the idea of creating the conditions or environment for improving competition from what it would otherwise be. That is to say, the opportunities and environment for competition given declaration, will be better than they would be without declaration."¹¹

This approach was endorsed in the context of the Code by the Tribunal in the Duke EGP matter where it said:

¹¹ Sydney International Airport; Review of Declaration of Freight Handling Facilities (2000) ATPR 41-754 at para 106.

"The Tribunal [in the Sydney Airport decision] concluded that the TPA analogue of criterion (a) 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 notion of 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. We agree."¹²

The timeframe relevant for assessing a promotion of competition will vary depending upon the industry involved. As a matter of principle, the timeframe would seem to be the timeframe within which new entry decisions are made. The Tribunal has in the context of the gas industry considered that this may be described as a 10-15 year time horizon.¹³ There may, however, be an argument that a shorter time frame is appropriate given that the Code focuses on 5 year periods in the context of access arrangements by requiring access arrangements of more than 5 years duration to have a review mechanism for a material change of circumstances. This could be argued to reflect an underlying policy assessment that a 5 year timeframe is of relevance to competitive dynamics in markets dependent upon access to gas transmission services.

In assessing the promotion of competition, the likelihood of new entry is not the sole focus. One must also examine the competitive conditions between incumbent players which may arise because of the threat of new entry from the reduction in barriers to entry.¹⁴

¹² Duke EGP matter at para 75.

¹³ AGL Cooper Basin Natural Gas Supply Arrangements and its adoption in the Duke EGP matter at para 78.

¹⁴ See Ordover and Lehr p11 - Annexure 1 to the NCC, Moomba to Sydney Pipeline System: Revocation Applications under the National Gas Code.

3.1 Market Delineation

The first task for the Council is to identify markets in which competition may be promoted and to establish that any such markets are distinct from the market in which the pipeline services are themselves provided.

In WMC's submission, the market for gas transmission services is a market functionally distinct from the market for gas production and downstream markets which include gas and electricity sales.¹⁵ This is consistent with the decision in the Duke EGP matter in which the Tribunal noted that, *"It was agreed that gas transmission services are provided in the gas transmission market which is functionally separate from other parts of the gas market."*¹⁶ It is also consistent with the views of the Council and the Minister in the application for revocation of coverage of the Parmelia Pipeline under the National Gas Access Regime¹⁷ and the application for revocation of coverage of the Goldfields Gas Pipeline.¹⁸ In both matters, the Council and the relevant Minister concluded that downstream gas sales markets were functionally distinct and constituted separate markets from the market for the gas transmission service the subject of the application for revocation.

¹⁵ This separate functional market delineation exists regardless of whether or not the downstream market is a distinct gas sales market or a market which includes natural gas, LPG, diesel and electricity or some sub-set of those products.

¹⁶ Duke EGP matter para 77. See note 4 for reference.

¹⁷ NCC, Final Recommendation, Application for revocation of coverage of the Parmelia Pipeline under the National Gas Access Regime, February 2002 at pp 48 & 51; Decision on Coverage by the Hon, Eric Ripper, Deputy Premier; Treasurer, Minister for Energy in relation to the Application to the National Competition Council requesting that Coverage of Parmelia Pipeline (PL1-3,5 and PL23) be revoked, 13 March 2002.

¹⁸ The Minister's decision not to revoke coverage of the Goldfields Gas Pipeline is currently the subject of proceedings before the Western Australian Gas Review Board. NCC, Final Recommendation, Application for revocation of coverage of the Goldfields Gas Pipeline under the National Gas Access Regime, Nov 2003. Decision by the Hon, Eric Ripper, Minister for Energy, July 2004.

In the Duke EGP matter, the Tribunal went on to identify each of the following as distinct functional markets which would need to be considered in determining whether access (or increased access) would promote competition:

- (a) the market for gas production and processing;
- (b) the market for gas exploration; and
- (c) the market for gas sales.

EESA contends that the markets relevant to the consideration of criterion (a) are:

- (a) the market for gas sales and production at Moomba and Ballera;
- (b) the market for gas sales along the MAP and the Port Pirie/Whyalla lateral (para 6.9) and later as the market for gas sales along the MAP to north of the Angaston lateral (para 6.17);
- (c) the market for gas sales in south eastern Australia; and
- (d) the market for electricity in the Victorian and South Australian region of the NEM.

In relation to the upstream gas sales and production market, WMC would note that it is clear from recent market developments (including the sale of wet gas by the south east Queensland gas producers via Moomba, the marketing of PNG gas and the purchase of coal seam methane from Origin Energy by AGL) that Moomba is becoming a staging point or market hub for gas entering the south eastern Australian gas market. Such sales may originate from conventional and coal seam methane resources in Queensland and precincts to the north of Moomba such as PNG and the Timor Sea.

While increasing interconnection within the south eastern Australian gas pipeline network may support the broad geographic dimension of the downstream gas sales dependent market, it may be appropriate to consider a narrower geographic dimension based on gas sales in the Adelaide region in order to assess MAP's ability and incentive to exercise market power and any constraints on that power. It has been accepted by courts that market

definition is but a tool and that the purpose for which markets are defined must be kept in mind so as to analyse the competition concern in issue.¹⁹ In addition, the south eastern Australian network is not currently configured to promote the free flow of gas between regional markets. While there are points of interconnection in the south eastern network, physical and contractual constraints limit the use of the connections to effectively integrate the south eastern market. While swaps and other synthetic arrangements may facilitate some measure of trade in gas over a larger geographic area, the commodity being traded in these transactions is an interruptible rather than a firm gas supply. For customers requiring firm gas supply, the substitution possibilities for interruptible gas supply would be limited. Accordingly, there is some doubt as to whether firm and interruptible gas supply fall within the same product dimension of the downstream gas sales market. If the product dimension of the gas sales market is limited to firm supply, the geographic dimension of the market is unlikely to extend to the south eastern Australian region as firm supply is dependant on the existence of adequate underlying physical capacity. As noted above, the south eastern Australian gas sales network is not currently configured to provide for the firm supply of gas between all points within the network. Accordingly, it may be appropriate to consider narrower geographic and product dimensions for the downstream dependent market.

EESA contends that the gas sales markets for gas at points north of the Angaston lateral and on the Port Pirie/Whyalla lateral are distinct from gas markets to south of the Angaston lateral and along the lateral itself. This distinction is based on EESA's view that as the Murray Bridge extension to the Riverland System is in close proximity to the SEAGas pipeline, there is the very real potential for interconnection with the SEAGas pipeline and, as such, provides Angaston lateral users with a substitute for MAPS sourced gas (para 6.23). EESA therefore contends that it services two regional markets, one comprising locations along the MAP to the north of the Angaston lateral connection with the MAP and one comprising the south eastern Australian gas market, with Adelaide and points of

¹⁹ Re John Dee (Export) Pty Ltd (1989) ATPR 40-938, 50, 219.
Dowing v Dalgety Australia Ltd (1992) ATPR 41-165, 40,268.

consumption along the Angaston lateral being subsumed in the south eastern Australian market. While the potential interconnection of points along the MAP to the south of the Angaston lateral take off point may be relevant in assessing market power constraints, WMC does not consider it sufficient for the purposes of market delineation. The prospect of interconnection is dependent upon a large number of contingencies. As customers along the Angaston lateral cannot at present access gas other than via the MAP, it is not appropriate to include the markets along the lateral as part of a wider south eastern Australian market. In addition, even if some of these markets were connected directly to the SEAGas pipeline there remains the prospect of gas sales in the area south of the Angaston lateral but north of Adelaide that may be solely reliant on the MAP for gas.

3.2 Market Structure Considerations

Much of the competition analysis under criterion (a) requires consideration of the degree to which customers of MAP have the ability to use alternate services to those provided by MAP. In considering switching options, it is important to keep in mind the nature of gas transmission contracting. In particular, it is not appropriate in a contract environment to simply conclude that unutilised capacity will be offered to the market at the highest available price provided that the price is in excess of the marginal cost of supplying that unutilised capacity. In a contract environment the decision to sell capacity is an exercise in option pricing, that is to say the seller must conclude that its objective function is maximised by contracting to sell capacity today at today's prices rather than to decline the sale in return for an option for a future sale which has a higher forecast value. It is not uncommon in negotiations for access to gas pipelines for those negotiations to stall because the expectations of the service provider have not been realised. Regulation of access places boundaries on the negative resource allocation impact of such failed negotiations in cases where the service provider is not otherwise subject to competitive pressures.

In such circumstances where the service provider's market power is not otherwise constrained, regulation assures continuing access to the service beyond the term of any existing contract under a known set of rules. This assurance changes the underlying risk faced by parties participating in upstream and downstream markets from an "access risk" to a "tariff risk". That is to say, the risk is changed from:

- (a) the risk that, part way through a downstream contract, the “seller” will not be able to meet its contract obligations because it has been denied access to a pipeline service or denied access at a reasonable tariff; to
- (b) the risk that the “seller” has miscalculated the impact of a regulated tariff reset part way through a downstream contract.

The first risk is untenable and limits the number of participants in markets by raising barriers to entry. The latter risk falls into those categories of risk that informed market participants take as a matter of normal business and risks for which risk management instruments will be developed. By guaranteeing access on reasonable terms and conditions in cases where the service provider is not subject to competitive constraint, coverage will improve the environment for competition in dependent markets by removing an important barrier to entry. As such, it can be said to promote competition in dependent markets.

3.3 Swaps, backhaul arrangements and other synthetic arrangements

In its Issues Paper, the Council asked for details as to the operation of swaps, backhaul and other synthetic arrangements for the purposes of the competition analysis under criterion (a). Attachment B to this submission provides a description of such arrangements.

In its application, EESA notes that swaps and other synthetic arrangements facilitate the sale and acquisition of gas without the requirement for gas to be shipped directly from the seller to the purchaser (paras 5.26-5.27). EESA argues that such arrangements constrain any market power it may have in respect of the MAP as Moomba and Adelaide customers of the MAP are able to sell or acquire gas (as the case may be) without having to rely on the MAP.

The difficulty with this argument is that if swap and backhaul arrangements are to satisfy the needs of gas consumers in downstream markets, the arrangements need to be supported by an underlying physical capacity in the pipelines the subject of the arrangement. Swap and backhaul arrangements are not a substitute for the provision of firm services on the MAP for gas users who depend on the supply of gas to participate in downstream markets, unless the swap or backhaul arrangement is as physically secure as the supply of gas delivered by the MAP. While the Minister in the EAPL Decision may have concluded that swap and backhaul arrangements constrained MSP market power, this conclusion does not

necessarily follow in respect of the MAP. The physical capacity of the pipeline underlying such arrangements must be examined in order to assess its effectiveness in constraining market power.

The degree to which synthetic arrangements may constrain the market power of a particular pipeline is limited to the degree to which customers and sellers are prepared to substitute firm for interruptible supply. Swaps and backhaul arrangements provide for interruptible supply. The prospect of gas users, who rely on their gas supply to participate in downstream markets, switching from a firm gas supply to an alternative interruptible supply in response to an exercise of market power by a pipeline is limited.

3.4 Promotion of Competition in Upstream Markets

In its application, EESA asserts that it has neither the ability nor incentive to exercise market power in upstream markets.²⁰ EESA bases this conclusion on the fact that:

- (a) Moomba and Ballera gas producers are competing in a number of markets;
- (b) upstream users of the MAP have access to a number of substitutes for the services of the MAP; and
- (c) the upstream markets already exhibit anti-competitive behaviour.²¹

It is true that natural gas entering the south eastern Australian market via Moomba is sold in markets from Gladstone to Whyalla. However, this very fact means that any attempt by EESA to increase the prices of MAP services will inevitably result in decreased demand and/or, falling net back (or well head) gas prices for gas sourced at Moomba. The lowest cost transport for Moomba gas to markets is currently via the MAP. While Moomba producers have some ability to sell into markets other than those served by MAP, users and producers face higher transmission costs which makes these alternate markets less

²⁰ application at 23.

²¹ application at 32-35.

preferred. In addition, if EESA was to exercise its market power by, for example monopoly pricing, any commercial incentive on the part of Moomba producers to sell gas to alternate markets via alternate pipelines would be limited by the prospect of a decrease in the well head price for gas as a result of increased supply into those markets. This in turn can wind back production and sales of gas sourced at Moomba and, perhaps more importantly, discourage investment in gas exploration by gas producers selling gas at Moomba.

The proposition that MAP does not have market power appears to hinge on the proposition that any exercise of its monopoly power will cause a realignment of the market and a loss of sales for the MAP service. This proposition appears to rest further on the proposition that upstream users of the MAP can sell gas into other markets and/or have alternative means of delivering gas to at least some locations along the MAP. In regard to the first of these arguments the capacity of upstream users of the MAP to find alternative markets for their gas is constrained by the currently installed capacity of existing pipeline infrastructure to transport Moomba gas to those other markets. Thus for example serious contractual, physical and/or market structure constraints on the South West Queensland, Wallumbilla to Brisbane, Moomba to Sydney, Interconnect (Culcairn to Barnawartha), GasNet and SEAGas pipeline systems to transport gas to their respective markets limit the capacity of Moomba gas sellers to access alternative markets.

Further, EESA asserts that the Cooper and Eromanga and Gippsland hydrocarbon basins account for 98% of the commercially recoverable gas reserves available to the south east Australian gas market (para 6.70). Of this 98%, the Cooper and Eromanga basin accounts for 37%. However, this data ignores the development of coal seam methane in Queensland, PNG gas, North West Shelf gas and Timor Sea gas all of which are contemplated to enter the south eastern Australian market via Moomba. At the moment the MAP represents approximately 50% of the installed capacity for moving sales quality gas from Moomba to the south eastern Australian gas market. With market growth and as new sources of gas supply are connected to the south eastern market via Moomba, the capacity for Moomba gas sellers to sell into other parts of the south eastern Australian gas market will become increasing problematic.

The above analysis is amplified if it is acknowledged that, with the opening of acreage for hydrocarbon exploration, there are a number of smaller gas producers exploring for and

developing gas in the vicinity of Moomba. An assurance of access to the MAP has had, and continues to have, a significant role to play in influencing the behaviour of these smaller producers. With the opening up of exploration acreage and the development of coal seam methane, these producers may play an increasingly important role in promoting gas on gas competition. Without an assurance of access to the infrastructure needed to access markets, this investment in exploration may be severely curtailed.

Finally, if the south eastern Australian gas pipeline network were to be upgraded to allow the transportation of Moomba gas to locations along the MAP (other than via the MAP), the cumulative tariff for using this service would be several times the current MAP tariff or the average or marginal cost of using the MAP. The possibility may exist for Moomba gas sellers to put arrangements in place that by-pass the MAP but the existence of this possibility does not represent a meaningful restraint on the exercise of monopoly power by MAP.

Whilst EESA may argue that it lacks market power because Moomba gas sellers have alternative ways of disposing of their product and delivering gas to existing markets, the capacity of these options is seriously constrained and the cost is prohibitive. MAP, therefore, is the beneficiary of significant shelter from competition and is capable of significantly increasing its tariffs before Moomba gas sellers would be encouraged to seek alternative markets or delivery infrastructure.

3.5 Promotion of Competition in Downstream Markets

3.5.1 Gas sales market along the MAP and the Port Pirie/Whyalla and Angaston laterals

In its application, EESA acknowledges that users along the MAP (north of the Angaston lateral) and on the Port Pirie/Whyalla lateral do not generally have access to substitutes for natural gas delivered by the MAP (para 6.62). In recognition of this, EESA propose undertakings in relation to price and the development of a Code of Conduct (para 6.63).

As noted by the Council in its Issues Paper, the coverage criteria are concerned with the structure of markets and the ability and incentive for pipeline owners to exercise market power to adversely affect competition (para 7.21). Undertakings of the type proffered by EESA which have no provision for later supervision or enforcement do not impact on the underlying market structural concerns that are the subject of the coverage criteria.

Accordingly, they cannot be taken into account as a factor which may constrain the exercise of EESA's market power in the dependant markets.

WMC contends that the fact that EESA acknowledges the market power concern in respect of these gas sales markets and offers undertakings to address the concern, suggests that EESA considers that it has the requisite degree of market power in respect of these gas sales markets. A promise to behave reasonably if coverage is revoked is not sufficient to address the market structure issues and the concern in respect of the exercise of market power under criterion (a).

WMC further contends that there is little incentive for MAP not to exercise its market power in respect of these gas sales markets if coverage is revoked by, for example, monopoly pricing. While there may be some opportunities for users in these markets to switch from MAP transported gas if EESA was to exercise market power, such opportunities are likely to be limited. For example, in the case of users acquiring MAP gas for electricity generation, the prospect of switching from gas fired electricity generation to diesel or grid transmitted electricity (where available) would likely incur high capital and operating costs because, once the initial choice of technology is made, technology switching is extremely difficult. The limited prospects of switching in such circumstances was recognised by the Council in its final recommendation on the application for revocation of the Goldfields Gas Pipeline.²²

The price undertakings put forward by EESA are irrelevant to part haul shippers and, at the proposed levels, leave significant opportunity for EESA to exercise market power. Indeed, the undertaking regarding the full haul tariff clearly discourages use of part haul services and distorts investment by promoting investment in Adelaide over locations to the north of Adelaide on the MAP. Further, EESA's proposition that the threat of re-regulation is a constraint on its behaviour is empty because the timeframe for and the cost of re-regulation is irrelevant for prospective gas users.

²² At para 5.144.

In the absence of any coverage, EESA's ability and incentive to raise tariffs above competitive levels would reduce the competitive standing of gas relative to other fuels in all downstream markets and would reduce the competitive standing of Moomba sourced gas relative to gas from other sources supplied to Adelaide and other southern points of supply on the MAP. If an increase in MAP tariffs did not adversely impact on the net back prices earned by Moomba gas sellers it would increase gas prices in downstream markets and discourage the use of gas.

WMC in particular would get little comfort from EESA's proposed undertakings since the undertakings countenance EESA charging WMC the full haul tariff on the MAP for a part haul service which uses only 290 km of the MAP. This "postage stamp" tariff approach which is reflected in the ACCC approved access undertaking for MAP, may be appropriate given that the current users of the MAP are generally located at the southern end of the pipeline. However, as use of the pipeline changes and consumption points are developed in the northern reaches of the MAP, the postage stamp tariff will become inappropriate as it will effectively entrench a cross-subsidy from users in the northern end of the pipeline to the benefit of those in the southern end. The effect of this cross-subsidy would be to distort investment decisions encouraging southern end use of the pipeline. Accordingly, an undertaking by EESA which provides for the ongoing application of a postage stamp tariff to all MAP users would not be efficient and is indicative of an exercise of monopoly power.

WMC contends that the same market structure concerns apply in respect of the gas sales markets along the Angaston lateral and south of the Angaston lateral along the MAP north of Adelaide. There is no competitive constraint on the ability and incentive for MAP to exercise market power by, for example, setting tariffs above competitive levels. The impact would likely be distortion in investment and competition as detailed above.

3.5.2 Gas sales market in south eastern Australia and the Adelaide region

In the application, EESA contends that competition in downstream markets located to the south of Angaston on the MAP will not be enhanced by regulation of the MAP because (paras 6.68-6.77):

- (a) competition is determined by the location and level of gas reserves;

- (b) there is spare capacity on most south eastern Australian pipeline systems;
- (c) there is developable capacity on the MAP and the SEAGas Pipeline;
- (d) MAP services can be substituted with alternative means of transporting gas sourced at Moomba to all MAP delivery points south of Angaston;
- (e) there are high capital and low operating costs associated with gas transmission; and
- (f) of the limited number, and countervailing power, of counterparties to gas transmission contracts.

Among the problems with EESA's proposition are that:

- (a) the foreshadowed future supplies of gas to south eastern Australian gas markets include significant supplies delivered ex-Moomba;
- (b) the proposed substitutes for MAP services will cost significantly more than the MAP tariffs (for comparable services); and
- (c) gas buyers, regardless of size, ultimately have limited negotiating power when dealing with the owner of a natural monopoly who can deny access to the service.

An increase in the price of MAP services above competitive levels can be expected to alter the relative competitiveness of gas sourced at Moomba vis-à-vis gas from other sources. This will be true unless the increase in tariffs is offset by a reduction in net back prices earned by gas producers at Moomba which would transfer the competitive impact of the MAP from downstream to upstream markets.

At the core of EESA's argument is the view that it does not have an incentive to exercise market power as MAP is not at full capacity and users have the ability to switch to SEAGas pipeline gas. In relation to the first proposition, as discussed above, EESA's demand forecasts for MAP are based solely on forecast contract sales and are significantly lower than those of ABARE. EESA expects a decrease in contract maximum demand from 418 TJ per day in 2005 to 194 TJ per day in 2006. EESA provides little indication of what this reduction in contract maximum demand will mean for MAP throughput. The EESA forecast is based on a pessimistic view in respect of retaining customer contracts due to expire in 2005. In contrast, ABARE's forecasts, which take into account the impact of the SEAGas pipeline are that demand for the MAP will increase from an average of approximately 110 PJ per annum in 2000 to 120 PJ per annum in 2009-10. On the basis of

the ABARE forecasts, MAP would be operating at full capacity given its currently installed capacity and market characteristics, and would require modest augmentation of capacity to meet demand over the next five years.

In respect of the second proposition, the ability for MAP customers to switch to SEAGas is seriously limited. In its application EESA focuses upon the developable pipeline capacity of the various pipeline elements so that the south eastern Australian network appears unconstrained. This, however, is not the case. SEAGas has an installed capacity of around only 200 TJ per day (approximately 70 PJ per annum) and not the 400 TJ per day noted by EESA. While ABARE's forecasts for SEAGas demand suggest some capacity (see Attachment A for details), this does not appear to be supported by SEAGas itself. The standing offer of SEAGas services is currently only 7 TJ per day. However, this service offering is subject to the availability of compression and strongly suggests that SEAGas is currently close to capacity constrained.²³ In addition, the GasNet system has limited capacity to move additional firm service gas from Longford to Parartee and into the SEAGas pipeline and, given the market carriage model of regulation applicable to the GasNet system, access to capacity on that system is constrained for new market participants.

A further limitation on the ability of MAP users to switch away from MAP is the fact that virtually all Otway and Gippsland Basin gas which is developed or committed to being developed is already sold and/or committed for sale. Unless a MAP user is able to secure Gippsland or Otway Basin gas, there is little prospect that switching to the SEAGas pipeline will be a viable alternative to using the MAP.

In summary, WMC contends that there are limited constraints on the ability and incentive of EESA to exercise market power to adversely affect competition in the downstream gas sales market as the prospect of MAP users switching to alternate gas supply sources via the SEAGas pipeline is seriously limited by constraints on access to alternative sources of gas

²³ www.Seagas.com.au

and capacity constraints on the SEAGas pipeline and within the south eastern Australian pipeline network. In light of these factors, WMC considers EESA's demand forecasts to be highly pessimistic as the prospects of its major users switching after the expiry of contracts in 2005 will be limited. This is consistent with ABARE's forecast that the MAP will be fully utilised for the foreseeable future. Accordingly, there would be no effective constraint on the exercise of EESA's market power.

3.5.3 Market for electricity in the Victorian and South Australian region of the NEM

In regard to the MAP's capacity to impact competition in the Victorian and South Australian electricity markets forming part of the NEM, EESA concludes that it does not have the ability to increase MAP prices because:

- (a) the NEM has a gross pool spot market structure;
- (b) an increase in MAP prices would either reduce the demand for transport services on the MAP or would cause electricity generators to seek gas supply over the SEAGas pipeline; and
- (c) the use of gas in electricity generation in South Australia has declined with increased competition from Victorian electricity generators.

EESA notes in its submission that approximately 50% of total natural gas consumption in South Australia is for electricity generation (para 6.35). A significant proportion of gas carried via the MAP is likely to be for electricity generation. Any exercise of market power on the part of EESA such as monopoly pricing, will increase the costs faced by gas fired electricity generators sourcing gas via the MAP. As discussed above at paragraph 3.5.2, there are limited prospects of users of MAP switching to alternate sources of gas transported via alternate pipelines. The limited prospects for customer switching is particularly acute in the case of electricity generation. Once the initial technology choice is made and capital expended on a gas fired plant, the only feasible switching option is for alternate sourced gas as switching to other fuel sources is prohibitive. The limited prospects of switching coupled with the likelihood that MAP's capacity will be highly utilised suggests that there is no effective constraint on the ability and incentive of EESA to exercise market power.

The effect of such an exercise of market power on the Victorian and South Australian electricity market would likely be significant. For example, if EESA was to engage in monopoly pricing, the cost to electricity generators sourcing gas via the MAP would increase. This would in turn affect the price at which those generators would be willing to despatch in the NEM. This would likely result in any one or all of the following:

- increased despatch for South Australian generators not reliant on gas sourced via the MAP;
- increased despatch of Victorian generators via the Victorian/South Australian interconnect;
- decreased despatch of electricity generators reliant on the MAP;
- higher electricity prices within the South Australian region.

Such an outcome would distort markets and investment and would be inefficient as the altered despatch patterns would be purely a function of the extraction of monopoly rents in the market for the MAP gas haulage service.

Indeed, the data set out in attachment B to EESA's application appears to suggest that gas fired electricity generation sets a critical price point in electricity despatched to the NEM. As competition from Victoria has increased it is gas fired electricity generation capacity which has been displaced. If MAP prices were to be increased it would seem almost inevitable that Victorian electricity generators would increase their share of the South Australian market and subject to constraints on the interconnector, may lead to increased electricity prices in South Australia. The only thing that would offset this response would be for gas producers to take a reduction in net back prices or for electricity generators to source increasing quantities of gas from the SEAGas pipeline.

Any increase in electricity prices is unlikely to constrain MAP's incentive to exercise market power. This is because electricity generators are typically a party to long term take or pay contracts. As such, a reduction in the gas consumed by a generator as a result of the despatch of fewer units of electricity will not reduce the amount payable to MAP under such contracts.

Even if this was not the case, determining the likely impact of electricity prices on gas demand is highly complex and the use of aggregate data can be most misleading. For example, the role played by the high voltage interconnections between the Victorian and South Australian electricity grids can only really be evaluated in models which take into account the time of day bidding behaviour of NEM participants. Thus, the capacity of the interconnections may appear unconstrained in aggregate annual or average data but when time of day bidding behaviour is considered there may be fundamental capacity constraints on the system.

3.6 Conclusion on criterion (a)

In WMC's submission, there is no effective constraint on EESA's ability and incentive to exercise market power to adversely affect competition in the dependent markets. The ability for users of MAP to switch to alternate gas sources delivered via alternate pipelines is limited. This is because the availability of alternate gas reserves is limited as is installed pipeline capacity on SEAGas and other pipelines within the south eastern Australian network required for the transportation of gas to current MAP customers. This combined with the likelihood that MAP is unlikely to be capacity underutilised in the medium term, suggests that the requisite incentive to exercise market power exists.

The exercise of market power by MAP will be likely to adversely affect competition in each of the dependent markets discussed above as the relative competitiveness of current users of MAP (both upstream and downstream) will be altered to their detriment in favour of competitors not reliant on MAP. Such an outcome would be distortionary and give rise to inefficiencies.

4. Criterion (c) - Undue Risk to Health and Safety

Criterion (c) requires that access under the mechanisms provided in the Code does not create undue risk to human health or safety. EESA acknowledges that there is nothing which would suggest access to the MAP under the mechanisms set out in the Code would create any human health or safety risk. WMC agrees.

5. Criterion (d) - Public Interest

Once the Council is satisfied that the other criteria are met, it must consider whether, nonetheless, it would be contrary to the public interest to cover the Pipeline.

In WMC's submission none of the reasons advanced by EESA support such a conclusion. EESA contends that coverage would be contrary to the public interest for the following reasons:

- (a) the benefits of competition can be derived by EESA undertakings; and
- (b) costs are unacceptably increased by regulation.

None of the proposed undertakings offered by EESA are close enough to the competitive threshold to suggest that these undertakings alone are capable of delivering the benefits of regulation. In any event, undertakings that cannot be monitored or enforced such as those proffered by EESA cannot be taken into account in assessing the costs and benefits of coverage - coverage being concerned with addressing competitive concerns in market structure.

The argument made by EESA in regard to regulatory costs relate to historical costs expressed in aggregate and quoted without regard to the period over which they have been incurred. Looking forward, EESA's own submissions would suggest that it will be less sensitive to the regulatory outcome and, although EESA contests the proposition, there is good reason to believe that regulatory costs will be significantly reduced in second round regulatory decisions. If the regulatory costs looking forward are properly forecast, and if these forecasts are expressed as a cost per GJ of gas over the regulatory period, they do not represent a negative public interest outcome as compared with the competitive benefits to be derived from continued coverage.

Attachment A

Cost of using alternate pipelines to provide the MAPS service

1. Alternative Transmission Routes

There are at least two alternative means by which gas purchased at Moomba might be delivered to Adelaide. First, Moomba gas may be delivered into the MSP for delivery to Wagga Wagga, transferred into the Interconnect for delivery to Barnawartha, transferred into the Victorian gas transmission network for delivery to Paaratte and transferred into the SEAGas Pipeline for delivery to Adelaide.

The second alternative route also uses the MSP and then transfers the gas into the Eastern Gas Pipeline to Longford, the Victorian gas transmission network for delivery to Paaratte and the SEAGas Pipeline for delivery to Adelaide.

Each of the above alternative transmission routes might involve optimisation of the gas flows using the Western Underground and other gas storage facilities.

2. System Parameters

In order to estimate the incremental cost of using any pipeline system to transport gas from Moomba to Adelaide, it is first necessary to define the base onto which the incremental service is to be grafted. Thus, it is necessary to define the physical configuration of each of the pipeline systems involved in providing the service, foreshadow the operating configurations of those systems in the foreseeable future and then estimate the cost of increasing capacity on these systems to accommodate increased gas flows to underpin a switch of gas from the MAP to an alternative system.

The parameters which need to be defined fall into three broad categories and, unfortunately, two of these categories involve a measure of forecasting and uncertainty. The first such category represents the physical parameters of the pipeline systems, such as their component pipelines and their lengths, diameters,

existing receipt and delivery points, maximum operating pressures (“MAOP”), receipt and delivery design pressures, et al. These parameters are reasonably well documented and change little, slowly and identifiably over time.

The second category of parameters relates to the capacity of the pipeline systems. These capacity estimates may vary widely depending on the operating conditions of the pipeline, the location and the load factors of shippers on the pipeline system and gas quality. Thus, various capacity measures may be quoted for the same pipeline at any point in time.

This variation in the capacity measures arises because the assumptions relating to shippers, gas quality and pipeline operating conditions vary, or because the estimate is made on a different basis. In some cases, pipeline owners will develop special definitions to reflect the problem of quoting a single pipeline capacity measure. Epic Energy, for example, quotes the “Primary Capacity” on the MAP.

The principal data concern for the purposes of criterion (b) rests with estimating a reliable demand forecast for the MAP and for each part of the gas transmission network which might be used to by-pass the MAP. This problem arises because:

- such forecasts are speculative by their very nature and there will always be conjecture as to their validity or accuracy; and
- many demand forecasts (such as those included by pipeline system operators in access arrangements) are prepared at different points in time and cover different time periods and thus, when consolidated, lack consistency.

For this reason, the methodology adopted in the analysis to follow is to:

- use a data set based upon forecasts prepared by ABARE, and summarised in Tables 4-2 and 4-3;
- compare the data in Tables 4-2 and 4-3 with credible gas demand forecasts from other sources; and
- review the merits of each forecast.

The data in Tables 4-2 and 4-3 have been selected because they provide a consistent data set for each gas market and for each element of each pipeline system relevant to the Decision’s framework. These data are based upon forecasts produced by ABARE using the MARKAL model, which models the Australian gas market as an integrated network. The analysis is, therefore, entirely compatible with the Council's approach in applying criterion (b) of section 1.9 of the Code. Annualised data, derived from the data in Tables 4-2 and 4-3, is at Attachment A.

Table-1 Estimated Gas Consumption 1999-2000 to 2019-2020

	1999-2000	Reference Case		High Demand Case	
		2009-2010	2019-2020	2009-2010	2019-2020
New South Wales	138	164	235	179	256
Victoria	225	291	401	304	421
Queensland	69	116	184	178	281
Western Australia	297	502	695	893	1719
South Australia	112	152	199	171	225
Tasmania	0	15	28	16	33
Northern Territory	19	28	32	93	189
Total Gas	861	1268	1774	1833	3123

Table -2 Estimated Gas Throughputs for Major Pipelines

	Current	Reference Case		High Demand Case	
	2000	2009-2010	2019-2020	2009-2010	2019-2020
	PJ	PJ	PJ	PJ	PJ
Existing Pipelines					
Moomba to Sydney	122	85	98	98	124
Moomba to Adelaide	110	120	147	106	120
Longford to Melbourne	205	260	346	272	364
Longford to Sydney	0	55	75	55	85
Wallumbilla to Brisbane	28	38	42	50	56
Amadeus to Darwin	19	28	7	28	7
Dampier to Bunbury	200	215	298	277	300
Proposed Pipelines					
Otway to Adelaide	0	26	46	35	50
Gippsland to Adelaide	0	0	0	35	55
Gippsland to Tasmania	0	14	28	16	33
Timor Sea to Darwin	0	0	140	135	265
Darwin to Mt Isa	0	0	115	70	190
Mt Isa to Townsville	0	0	85	45	134

3. Review of Options

3.1 Business as Usual Pipeline Operating Conditions

For the purpose of criterion (b) it is first necessary to specify the “business as usual” operating state of each pipeline system and then to examine the cost of shipping incremental volumes of gas on each of the pipeline systems. For the purpose of the Base Case it is assumed that the demand for the services of each pipeline system is described in Table 4-1 and in Table 1 at Attachment A. Based upon these tables:

- the MSP is assumed to have a fully utilised capacity of 122 PJ in 2000 and forecast usage of the MSP does not exceed this capacity until financial year 2019/2020;
- the MAP has fully utilised capacity of 110 PJ in 2000 and forecast usage of the MAP approaches or exceeds this level in all financial years from 2000 to 2019/2020;
- the Interconnect has a north to south capacity of 20 PJ pa and a south to north capacity of 4 PJ pa and its use is ignored by ABARE over the period from 2000 to 2020;
- the EGP is assumed to have a partially used capacity of 45 PJ pa in 2002 which is exceeded by 2008;
- the GasNet System is assumed to have a fully utilised capacity of 205 PJ pa in 2000 which is exceeded in all years after 2000; and
- the SEAGas pipeline will need to have its capacity progressively increased until 2020.

Given this background, the business as usual operating state of these pipelines would contemplate no upgrade of the MSP, a very modest upgrade of the capacity of the MAP to manage gas transportation demand from 2001 to 2003, major upgrades of the GasNet System with a focus on delivering gas to Melbourne, limited strategic use of the Interconnect and no upgrading of the capacity of that pipeline prior to 2020 and progressive upgrading of the EGP after 2007.

3.2 Alternative Moomba Adelaide Routes - System Upgrades

3.3 Moomba to Adelaide Pipeline System

Whilst the current capacity of the MAP is in the order of 110 PJ per annum, it is capable of expansion to what has become known as its ultimate capacity of around 200 PJ per annum. This capacity expansion can be realised by the installation and, or, upgrading of compressor facilities and looping along its length.

The use of the term “ultimate capacity” is in itself misleading because the capacity of a pipeline system can always be increased. Indeed, it has become fashionable to see pipeline systems as little more than a system of easements and right of ways which, because of their current use, lend themselves to be used as a highway for gas transportation.

For the purpose of this analysis it is clear that if ABARE’s forecast sales of Moomba gas to points along the MAP are to be effected using the MAP that only minor investment in the MAP will be required for some time. Indeed, if the ABARE forecasts are replaced by EESA’s pessimistic forecasts no capacity enhancement investment in the MAP would appear to be needed for some time.

3.4 Alternative Route: Option A (Via Interconnect)

Option A involves a Moomba Shipper contracting for carriage of its gas (an incremental volume in the order of 100 PJ per annum) via the MSP to Wagga Wagga, via the Interconnect to Barnawartha, via the Victorian gas transmission network (the “GasNet System”) to Paaratte and thence via the SEAGas Pipeline to Adelaide. In order to effect the transport of ABARE’s forecast sales of Moomba gas destined for Adelaide using Option A at a service level equivalent to a full forward haul (“FFH”) service on the MAP, it would be necessary to:

- install additional capacity of the MSP;
- install compression at Wagga Wagga;
- upgrade the Interconnect and the GasNet System; and
- upgrade the SEAGas System.

3.5 Alternative Route: Option B (Via EGP)

Option B also involves a Moomba Shipper contracting for carriage of gas via the MSP to Sydney, via the Eastern gas Pipeline to Longford, via the Victorian gas transmission network (the “GasNet System”) to Paaratte and thence via the SEAGas Pipeline to Adelaide. In order to effect the transport of ABARE’s forecast sales of Moomba gas destined for Adelaide using Option B at a service level equivalent to a FFH service on the MAP, it would be necessary to:

- install additional capacity on the MSP;
- install compression in Sydney;
- install additional capacity of the Eastern Gas Pipeline;
- upgrade the GasNet System; and
- upgrade the SEAGas System.

4. Discussion and Conclusions

The analysis reported above is focused only on the private costs associated with transporting incremental quantities of gas from Moomba to Adelaide and it is limited to that extent. To properly consider criterion (b) of section 1.9 of the Code it is necessary to:

- undertake comparable analyses of the cost of serving alternative points of gas consumption served by the MAP;
- repeat these analysis for services other than an FFH service;
- consider the net social cost of providing these services;
- consider gas transmission demand scenarios other than the ABARE forecasts used in the Base Case; and
- assess whether there are any costs, in addition to those considered above, which are incurred by Moomba Shippers when they use an alternative service to the MAP.

5. Tariffs verses Upgrade Costs

The discussion above is focused on identifying the cost incurred by corporations/individuals and the community to upgrade the various pipeline systems to transport Moomba gas for sale in Adelaide. However, before these upgrade costs come into play a Moomba gas seller transporting gas to Adelaide via an alternative route will have to pay a tariff for use of the existing infrastructure.

Based upon currently published tariffs, even allowing for some reduction in these tariffs because of the increased use of the existing infrastructure, it is

obvious that the tariff paid by a Moomba gas seller to use an alternative route to the MAP will be a multiple of the MAP tariff.

6. Alternative Gas Consumption Locations

The analysis conducted above for a Moomba Shipper seeking to transport gas from Moomba to Adelaide can be repeated for all delivery points served by the MAP simply by, in the case of both Option A and Option B, adding;

- an additional pipeline segment from Adelaide to the desired delivery location for all points served by the MAP directly or north of the take off point for the Angaston lateral; and
- Providing for a connection from the SEAGas pipeline to points of consumption serviced by the Angaston lateral,

effectively duplicating the MAP in reverse to its direction of flow. This step is necessary because without it the alternative routes do not effectively by-pass the MAP and users of the MAP are still exposed to the monopoly power of the MAP.

Consideration of this task reveals that Adelaide serves as watersheds in the analysis of criterion (b). If Option A and Option B cannot incrementally serve the Adelaide market more cheaply than the MAP, then there is no market along the route of the MAP where the cost of using an alternative pipeline route is below the cost of using the MAP. The analysis outlined above provides sufficient information to reach the conclusion that the MAP offers the least cost means of serving Adelaide and all gas delivery locations along the MAP. In the case of gas consumption locations along the Angaston lateral similar conclusions can be drawn.

The assessment of the incremental cost of serving non-Adelaide delivery locations, outlined above, ignores the need to undertake comparable analysis for these locations using incremental loads consistent with expectations at each such delivery location. Adjusting for load would tend to lower the cost of incremental compression, whilst the cost of new pipeline infrastructure would not be reduced

proportionately. The results derived above, after adjusting for the relevant size of the incremental market concerned, would tend to be amplified if they were focused on delivery locations other than Adelaide and modified to take account of likely load increases at those delivery locations.

7. Analysis of Other Services

Whilst there may be merit in looking at services other than the FFH service the exercise is of limited value when it is acknowledged that most, if not all, service providers in Australia have lodged proposed access arrangements in which 100% of the costs associated with their respective pipelines are charged to FFH service shippers. The merit in considering a wider range of services is further weakened when it is recognised that an Interruptible Service on a pipeline is curtailed at the discretion of the operator of the pipeline, whereas an Interruptible Service using, say, Option A or B, would be interruptible at the discretion of the various operators of the MSP, SEAGas Pipeline, GasNet System, the Interconnect, etc. In what sense an Interruptible Service using Option A or B might be considered to be equivalent to an Interruptible service using the MAP must be seriously questioned.

For these reasons, and because the results in regard to the FFH service are so conclusive, no attempt has been made to assess the cost drivers for incremental blocks of Interruptible Service using alternative routes between Moomba and Adelaide.

8. Social Costs

A comprehensive analysis of criterion (b) requires an assessment of both the private and the social costs of any alternative means by which gas purchased at Moomba might be delivered to Adelaide and to other points along the route of the MAP. To a large extent the private and the social costs of the options considered in this report overlap. However, there are two issues, worthy of note, which are not addressed by this general observation.

First, where an option involves the construction of a new pipeline or a capacity expansion to duplicate a portion of the MAP which is not being utilised (or is being underutilised) there will generally be net social costs attached to that activity which do not attach to increased use of the MAP. Second, as the need to compress the MAP, MSP, GasNet System and EGP increases, the emissions of greenhouse gases also increases. Additional compression would be needed to increase the capacity the alternative routes whereas ABARE forecasts very little need to increase compression of the MAP.

On both of these counts, it is reasonable to conclude that the social costs attaching to increased use of the MSP will be below, in most cases significantly below, the social costs attached to Options A and B.

9. Other Demand Scenarios

The gas demand forecast data employed in the Base Case for this report has been selected primarily because it is the only such data set which consistently draws the connection between gas demand in each of Australia's eastern States, gas production in each of the relevant gas producing basins and the transportation of that gas to market. The ABARE report from which this data was taken was published in August 2002 and attracted considerable criticism from industry. As a result, the analysis was repeated and updated results were published in March 2003. Unfortunately the March publication omitted the pipeline utilisation forecasts incorporated in the August 2002 data.

In reality, however, the March 2003 update of ABARE's analysis had little impact on its gas demand forecast. In light of the modest change in the gas demand forecast, and because of the omission of the gas transmission forecasts in the March 2003 data, the Base Case considered herein continues to use the complete and consistent August 2002 data. The variation between ABARE's August 2002 and March 2003 gas demand forecasts is insufficient to have any noticeable impact on the results reported upon herein or on consideration of criterion (b) of section 1.9 of the Code.

The operators of the various pipeline systems pertinent to this report have, at different times, provided forecasts of gas demand on their respective systems as part of their proposed access arrangements. In this regard:

- EAPL presented its forecasts for New South Wales gas demand for the period 2000/01 to 2013/14 as part of its access arrangement information, published in October 1999;
- Epic Energy presented its gas demand forecasts for South Australia for the period 1997 to 2004 as part of its access arrangement information, published in April 1999;
- Duke Energy provided its forecast of New South Wales gas demand for the period 2000 to 2020 in a submission to the ACCC dated 15 November 1999;
- Vencorp, in its November 2003 Annual Gas Planning Review, provided low, medium and high gas demand forecasts for Victoria for the period 2001 to 2016; and
- EESA has provided a revised forecast of MAP usage in 2005 in the application.

With the exception of the Epic Energy and EESA forecasts, all of the above forecasts accord very closely with those used in preparing the Base Case for this report. In regard to the Epic Energy forecast, it is worth noting that:

- Epic Energy discounts the then prevailing ABARE forecasts by between 10% and 20% in all years; and
- South Australia's gas consumption in 2003 was 111 PJ compared to Epic Energy's 1999 forecast of 83 PJ, ABARE's 1999 forecast of 98 PJ and the Base Case forecast used to prepare this report of 130 PJ.

One aspect of ABARE and other forecasts of gas demand in recent years has been the tendency to consistently overestimate future demand. This tendency is not surprising when it is recognised that growth in the demand for gas is made up of:

- organic growth in the market;

- endogenous stepped changes in demand for gas as high gas using industrial activities enter and leave the market; and
- demand for gas for power generation.

ABARE and others have consistently forecast significant growth in the demand for gas for power generation. The reason for this bias in the ABARE analysis is that ABARE, when considering the potential for using gas in power generation, appears to focus on the comparative cost of gas and other power generation fuels, particularly coal.

However, given Australia's resources of black and brown coal, and the location of these resources relative to major points of electricity consumption, it is very difficult for gas to compete with coal as a fuel for base load power generation. ABARE and others acknowledge this situation but see a role for gas-fired power generation in supplying peak and shoulder electricity demand.

When considering the use of gas-fired electricity generation plant for peak, and peak and shoulder operation, the cost of maintenance and overhauls becomes the principal cost driver and the cost of gas becomes far less important. For this reason, gas demand forecasts, which focus on the cost of gas and the flexibility of gas turbine technology, and largely ignore the cost of maintenance and overhauls, tend to overestimate the role of gas as a fuel in power generation. This tendency to overestimate the demand for gas as a fuel for power generation is still common in the gas demand forecasts available in the public domain. It is probably more realistic to consider gas as a fuel for power generation:

- in remote parts of the electricity grid with favourable access to gas and limited access to coal (such as South Australia, Western Australia, the Northern Territory and Townsville);
- as a means of capping the cost of protection against VoLL events; and
- increasing in importance as artificial limits on VoLL are removed.

In spite of the probable overestimation of growth in gas demand in each of ABARE's, EAPL's, EGP's and, to a less extent, Vencorp's demand forecasts, the data used in the Base Case for this report are considered reasonable. There is

little prospect that a general reduction in the forecast would do other than reinforce the results and conclusions derived herein.

10. Other Costs Incurred by Moomba Shippers

10.1 Political Risk to Supply

For the purpose of preparing this report it has been assumed that an FFH service on the MAP is equivalent to an FFH service using the alternative routes. However, recent experience would suggest that there can be a substantial political risk in ensuring gas supplies. Recent events affecting South Australia, Victoria, New South Wales and Queensland have shown that governments are prepared to intervene in gas markets in the event of a serious curtailment in supply. Efforts to have the Council of Australian Governments adopt formal arrangements to govern such intervention have been ongoing since 1998.

The question must be asked, therefore, whether a Moomba Shipper is more likely to receive its gas in Adelaide if it uses the MAP to transport that gas or if it transports that gas through Wagga Wagga/Sydney and Melbourne et al. There is no longer any doubt, if there ever was, that, say, a Victorian government, confronted with a gas supply crisis, would idly stand by and see a Moomba Shipper transport gas through Victoria to another destination. In such a situation, the government would not hesitate to commandeer that gas for Victorian use. As a general rule, the more circuitous the route gas takes to arrive at its final destination, the greater is the political risk that it will never arrive. This risk adds to the economic rent which might be extracted from the market by MAP. Whilst once the risk of political intervention might have been considered a modest risk, this is no longer the case. To overcome this risk, Moomba Shippers may be able to find insurance to protect against this risk but the cost of this insurance, or a provision for that cost, needs to be included in the cost estimates developed herein for Options A and B.

10.2 Contract Administration

One aspect of gas contracting which is often overlooked is the transaction cost associated with negotiating and administering gas contracts. Clearly, there are substantial transaction and contract management costs associated with Options A and B relating to the negotiation and management of multiple contracts. These costs are only incurred once when using the MAP.

No provision has been made in this report for the differential cost of negotiating and managing a single contract with the MAP compared to the cost of negotiating and managing multiple contracts under Options A and B. Clearly, these differential costs could be substantial and, in some cases, will be measured in millions of dollars.

10.3 The Victorian Market Carriage Model

As a simplifying device, it has been assumed for the purpose of preparing this report that all elements of Australia's south eastern gas transmission system operate on a common set of rules. This is, however, not the case.

To inject gas into the GasNet System under Options A and B, a Moomba Shipper needs to become a licensed participant in Victoria's unique market carriage system of regulation. In the first instance, becoming a licensed participant in this market carries a significant transaction cost and, going forward, gives rise to ongoing risks and costs which are not experienced in other gas transmission markets.

Again, to complete the analysis, a provision should be added to the estimates produced herein for Options A and B to allow for the cost of, and for insuring the risk associated with, becoming a participant in the Victorian gas market.

10.4 Conclusions on other costs

Whilst some of the costs noted in this section 10 are both substantial and quantifiable, they have not been estimated in preparing this report because sufficient information already exists to arrive at a conclusion regarding criterion

(b). Adding these additional costs will only increase the cost advantage of the MAP and reinforce the results and conclusions arrived at herein.

11. Conclusion

The analysis in this report leaves no doubt that the MAP can satisfy the reasonably foreseeable demand for the FFH service from Moomba to Adelaide and points in between more cheaply than alternate pipelines, either new or existing. Accordingly, it would be uneconomic to develop another pipeline to provide the service provided by the MAP. As such, MAP satisfies criterion (b) of section 1.9 of the Code.

ABARE BASE CASE

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
New South Wales	138	142	146	150	154	159	163	167	171	175	179	187	194	202	210	218	225	233	241	248	256
Victoria	225	233	241	249	257	265	272	280	288	296	304	316	327	339	351	363	374	386	398	409	421
Queensland	69	80	91	102	113	124	134	145	156	167	178	188	199	209	219	230	240	250	260	271	281
Western Australia																					
South Australia	112	118	124	130	136	142	147	153	159	165	171	176	182	187	193	198	203	209	214	220	225
Tasmania																					
Northern Territory																					
Total	544	573	602	630	659	688	717	746	774	803	832	867	902	937	972	1008	1043	1078	1113	1148	1183
MSP	122	125	108	107	106	104	103	102	101	99	98	101	103	106	108	111	114	116	119	121	124
EGP			20	24	29	33	38	42	46	51	55	59	63	67	71	75	79	83	87	91	95
MAP	110	115	120	126	111	110	109	108	107	106	107	109	110	112	113	114	116	117	119	120	120
SEAGas					20	26	32	38	44	50	56	60	64	68	72	76	80	84	88	92	96
Longford to Melbourne	205	212	218	225	232	239	245	252	259	265	272	279	287	294	302	309	316	324	331	339	346
SWQ Ballera to Wallumbilla	20	20	21	21	21	22	22	22	22	23	23	24	24	25	26	27	27	28	29	29	30
Wallumbilla to Brisbane	28	30	32	35	37	39	41	43	46	48	50	51	51	52	52	53	54	54	55	55	56

ABARE HIGH DEMAND CASE

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
New South Wales	138	141	143	146	148	151	154	156	159	161	164	171	178	185	192	200	207	214	221	228	235
Victoria	225	232	238	245	251	258	265	271	278	284	291	302	313	324	335	346	357	368	379	390	401
Queensland	69	74	78	83	88	93	97	102	107	111	116	123	130	136	143	150	157	164	170	177	184
Western Australia																					
South Australia	112	116	120	124	128	132	136	140	144	148	152	157	161	166	171	176	180	185	190	194	199
Tasmania																					
Northern Territory																					
Total	544	562	580	598	616	634	651	669	687	705	723	753	782	812	841	871	901	930	960	989	1019
MSP	122	124	106	103	100	98	95	93	90	88	85	86	88	89	90	92	93	94	95	97	98
EGP			20	24	29	33	38	42	46	51	55	57	59	61	63	65	67	69	71	73	75
MAP	110	114	117	121	104	107	110	112	115	117	120	123	125	128	131	134	136	139	142	144	147
SEAGas					20	21	22	23	24	25	26	27	29	30	32	33	34	36	37	39	40
Longford to Melbourne	205	211	216	222	227	233	238	244	249	255	260	269	277	286	294	303	312	320	329	337	346
SWQ Ballera to Wallumbilla	20	20	21	21	21	22	22	22	22	23	23	24	24	25	26	27	27	28	29	29	30
Wallumbilla to Brisbane	28	28	29	29	30	30	30	31	31	32	32	33	34	35	36	37	38	39	40	41	42

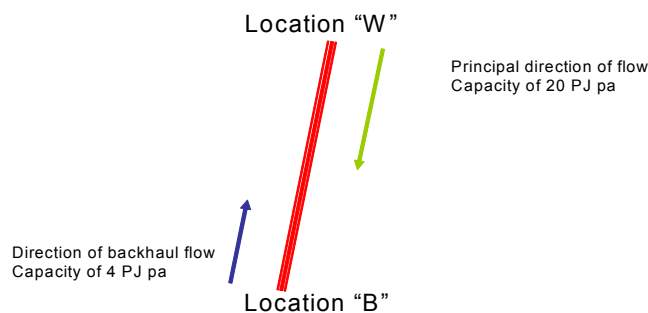
Attachment B

Swaps, backhaul and other synthetic arrangements

1. Backhaul

A backhaul service on a pipeline is a service where the direction in which gas will flow pursuant to the service is contra to the direction in which the majority of the gas in the pipeline is flowing. In such circumstances, the gas which is being backhauled does not, in fact, flow in the pipeline but it is swapped at the point at which it is intended to enter the pipeline for an equivalent quantity of gas at the “backhaul delivery point” on the pipeline. Take for example the hypothetical pipeline represented in Figure 3-1, with a predominant flow in a southerly direction from location “W” to location “B”. The gas volume transported to location “B” in this hypothetical pipeline is equivalent to, say, 20 PJ of gas per annum.

Figure 1-1 Backhaul Contract



If a gas producer, or a gas buyer, could deliver gas to location “B” at a rate equivalent to 20 PJ per annum, it could have its 20 PJ delivered to location “W” under a backhaul arrangement (such a gas producer or gas purchaser will be described hereinafter as a “Moomba Shipper”). Under this arrangement the operator of this hypothetical pipeline would take receipt of 20 PJ of gas at both locations “W” and “B” and it would deliver that gas, without transporting it, to its shippers. No gas would actually flow from location “B” to location “W”, or from location “W” to location “B”. The concept in Figure 3-1 can be taken even further if the operator of the pipeline enters a further contract to transport 20 PJ

of gas per annum north to south, whereby it would:

- take delivery of 40 PJ of gas at location “W”;
- swap 20 PJ of that gas at location “W”;
- transport 20 PJ of gas from location “W” to location “B”;
- take delivery of 20 PJ of gas at location “B”; and
- deliver 40 PJ of gas at location “B”.

In this way, a pipeline with a nominal capacity of 20 PJ per annum in a north to south direction can be contracted to deliver 60 PJ of gas per annum.

However, it should be readily apparent that the various contracts for service on this hypothetical pipeline might not all be for the same quality. More particularly, if all the shippers with contracts for services on this pipeline are to be guaranteed that they have FFH services, certain specific conditions must apply. Consider the situation, for example, where the south to north capacity of the hypothetical pipeline described above is limited to a rate equivalent to 4 PJ of gas per annum.

In that situation the Moomba shipper is only guaranteed a flow of 4 PJ of gas per annum at location “W” if the source of gas supplying location “W” is not available. If the gas source to location “W” ceases, the Moomba shipper may be delivering 20 PJ of gas at location “B” but it will only receive 4 PJ of gas at location “W”. In order to offer a FFH service using backhaul arrangements, the physical capacity must be available to receive, transport and deliver all of the shipper’s rights in both directions or the backhaul arrangement is derogated to an interruptible service.

Key to considering backhaul services as part of an arrangement to transport gas is the need to ensure the physical capacity of the alternative systems to maintain the contracted flow of gas if the primary source of gas for that system is curtailed and gas actually needs to flow in the direction of the backhaul.

2. Swaps

A swap arrangement is an alternative to entering into a backhaul contract. In many ways such a swap is analogous to a backhaul arrangement but there is no need for an interconnecting pipeline. The gas swap at locations “B” and “W” (facilitated by the operator of the pipeline in the backhaul arrangement described in Figure 1-1) is effected directly between the Moomba Shipper and a counterparty(s) with a right to receive a suitable quantity of gas at location “B”.

Like the backhaul scenario described in Figure 3-1, the swap arrangement is subject to interruption if the gas supply to location “W” is curtailed but, unlike the backhaul arrangement, there is no contracted, standby pipeline capacity to maintain the flow of gas to location “W” if the primary source of gas to location “W” is curtailed. A swap arrangement, therefore, exposes the Moomba Shipper to interruption of its service, both when its gas supply is curtailed and when the gas supply to the swap counterparty(s) is curtailed. This is not an equivalent service to a FFH service.

3. Matching Gas Profiles

The above discussion of backhaul and swap arrangements has conveniently ignored the need for:

- the gas flows at locations “B” and “W” to match reasonably well over the days, months and years of the arrangement;
- the parties involved to be able, under the existing contracts, to nominate gas for delivery and, or, manipulate pipeline services and line pack to meet the needs of their counterparty; and
- the parties being able to find counterparties with the capacity to match their desired gas supply tenor and terms.

These challenges represent substantial hurdles to putting swaps, and to a lesser extent backhaul arrangements, in place.

4. Double Counting Backhaul Capacity

Section 1 noted that, where a Moomba Shipper relies on backhaul arrangements, the physical capacity of the system to deliver the gas in the direction of the backhaul is a pre-condition to having a FFH service. The example provided paralleled the situation of the Interconnect between Barnawartha and Wagga Wagga, which has the capacity to transport 20 PJ of gas per annum in a southerly direction and only 4 PJ of gas per annum in a northerly direction. In that example the northbound capacity of the Interconnect would need to be upgraded for a backhaul service on the Interconnect to form part of an FFH service on, say, an alternative pipeline route from Moomba to Adelaide.

There is sometimes a tendency to require that this increase in northbound or backhaul capacity be available when the Interconnect is flowing gas in a southerly direction. To adopt this approach would be in error. For as long as the Interconnect flows any gas from north to south, that gas can be swapped at location “W” for gas delivered to location “B” by the Moomba Shipper. The worst case condition exists when no gas is delivered to location “W” and all of the Moomba Shipper’s gas needs to be transported from location “B” to location “W”. When considering the need to upgrade backhaul capacity on a pipeline system, it is essential that the flow of gas in the principal direction of flow for that pipeline is assumed to be zero. This will avoid double counting the need for backhaul capacity.