DAMPIER TO BUNBURY NATURAL GAS PIPELINE

PROPOSED ACCESS ARRANGEMENT SUBMISSION UNDER THE NATIONAL ACCESS CODE

Submission No. 3
17 March 2000

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Submission to the Western Australian Independent Gas Access Regulator

1. INTRODUCTION

1.1 By the close of business on 14 March 2000, the Western Australian Office of Gas Access Regulation (OffGAR) had published, on its web site, twelve submissions on the proposed Access Arrangement for the Dampier to Bunbury Natural Gas Pipeline (the DBNGP) submitted by Epic Energy on 15 December 1999. It is appreciated that there will be more submissions after that time but time does not permit them to be dealt with in this submission. The twelve submissions dealt with a range of issues including:

- the nature of the reference service;
- terms and conditions of service;
- asset valuation;
- determination of the rate of return; and
- the structure and level of the reference tariff.

1.2 To inform further public debate, and to assist the Regulator in approving the proposed DBNGP Access Arrangement, Epic Energy provides the following commentary on a number of the issues which have been raised in those published submissions. It is not exhaustive and does not attempt to cover all matters raised in those submissions, which will be addressed over time with the Regulator.

1.3 In offering this commentary, Epic Energy remains concerned that all of its arguments supporting the form of the reference service and the reference tariffs of the proposed Access Arrangement are not in the public domain. Epic Energy has made these arguments in a detailed submission to the Regulator (this was supported by a further experts report from the Brattle Group) which was lodged with the Access Arrangement on 15 December 1999. That submission deals with, among other things, the process through which Epic Energy acquired the DBNGP from the State of Western Australia. The State has alleged that information about that process is covered by confidentiality obligations, which broad assertion is not accepted by Epic Energy. The situation remains at an impasse and as a result the Regulator has not released the Submission in any form.

1.4 Epic Energy's 15 December submission described the way in which the Government of Western Australia structured and executed the sale of the DBNGP. It set out the common understandings of the Government and potential purchasers on the gas market in the State, on the Pipeline sale process, and on the way in which the DBNGP would operate after its sale. These understandings developed in the course of interaction between the Government's sale advisers and potential purchasers during an extended sale process, commencing early in 1997, and concluding with of sale of the DBNGP to Epic Energy in March 1998. They were not the subject of formal agreements, although some of them were subsequently recorded in the DBNGP Asset Sale Agreement. The 15 December

submission also deals with Epic Energy's and the State's actions, as they related to Epic Energy, during Epic Energy's bidding for the DBNGP.

1.5 Epic Energy's submission refers to these common understandings as the "regulatory compact" between the State and the purchaser of the Pipeline.

1.6 Two key aspects of the regulatory compact, the proposed DBNGP tariffs and the future tariff path, were formally documented in Schedule 39 to the Asset Sale Agreement. Schedule 39 was released by AlintaGas, outside of the Regulator's process and despite the fact that the Regulator was not prepared to publish that submission at that time, to a number of interested parties on 23 February, as Appendix 2 to its second submission to the Regulator on Epic Energy's DBNGP Access Arrangement. That submission is not yet available on OffGAR's web site. Nevertheless, because it has now been released without restriction, Epic Energy will make explicit reference to Schedule 39 in this commentary.

1.7 Epic Energy's submission also set out detailed discussion of the capital base approach adopted for the Access Arrangement and detailed arguments as to the proposed Access Arrangement's compliance with the Code.

2. THE NATURE OF THE REFERENCE SERVICE

2.1 Central to Epic Energy's Access Arrangement for the DBNGP is the proposed reference service. That service is the Firm Service. As noted in the associated Access Arrangement Information, the Firm Service was developed after consultation with a number of existing shippers and gas producers. It is similar to – but not the same as - the firm service that was available under the earlier access regime of the *Gas Corporation Act 1994* and the *Gas Transmission Regulations 1994* (the GTRs), and under the transitional access regime of the *Dampier to Bunbury Pipeline Act 1997*, *Dampier to Bunbury Pipeline Regulations 1998* and the Access Manual.

2.2 In developing the reference service, Epic Energy sought to provide a service that was consistent with its commitments in accordance with the regulatory compact and Schedule 39 to the Asset Sale Agreement. It also sought to refine and improve on the service it committed to provide where that was appropriate.

2.3 Neither Schedule 39 to the Asset Sale Agreement, nor the common understandings of the regulatory compact, gave a precise form to the service that would be provided by Epic Energy as purchaser of the DBNGP. However, through Schedule 39, Epic Energy committed to providing:

- a forward haul firm transportation service;
- a forward haul interruptible transportation service;
- a backhaul service;
- an authorised overrun service; and
- a shipper facility service.

2.4 The Firm Service that would be offered in accordance with the proposed Access Arrangement for the DBNGP is the forward haul firm transportation service Epic Energy committed to provide at the time of Pipeline sale. It is also the backhaul service Epic Energy undertook to provide. The Firm Service of the Access Arrangement is both a forward haul and a backhaul service.

2.5 **Authorised Overrun Service**

2.5.1 Epic Energy has not provided an explicit "authorised overrun service" in the DBNGP Access Arrangement. Nevertheless, it has proposed mechanisms which allow shippers flexibility to overrun their contracted Firm Service capacities in a no less disadvantageous way. In fact it may be regarded as generally a far more beneficial way, being through the proposed secondary market.

2.5.2 Experience in operating the DBNGP has shown that shipper requirements for overrun are, in general, not clearly identifiable in advance. In consequence, they are not readily contracted for as a form of service. Most shipper requirements for overrun arise from changes in circumstances during the day that cannot be accurately predicted in advance. In response to this situation, Epic Energy has provided, through, the overrun provisions of the Access Arrangement, a mechanism whereby shippers can, to the extent that others are not deprived of their contractual entitlements, overrun their contracted Firm Service capacities.

2.5.3 If a shipper were able to anticipate a requirement to exceed its contracted Firm Service capacity on or during a day, Epic Energy would expect that shipper to seek to contract for the additional capacity it required, where short term, through acquiring the necessary capacity on the secondary market. The shipper should purchase the capacity from a seller on the secondary market, whether another party or Epic Energy, rather than rely on the ability to overrun and risk its use of capacity being interrupted by the pipeline operator so that another shipper can secure its capacity entitlement.

2.5.4 The secondary market proposed by Epic Energy is intended to facilitate the short term buying and selling of spare capacity required in these circumstances. In that market, Epic Energy would compete directly with shippers by offering any spare pipeline capacity it had available on a day. However, it would still be open for such shipper to buy the capacity outside of the secondary market if it so desired.

2.5.5 The secondary market, and the proposed non-reference Seasonal Service, would also provide access to capacity that might otherwise be made available as interruptible capacity. Accordingly, an explicit interruptible service has not been included in the proposed DBNGP Access Arrangement.

2.6 **Shipper Facilities Service**

2.6.1 Schedule 39 to the Asset Sale Agreement required a separate Shipper Facilities Service for the provision and maintenance of shipper specific facilities including laterals and metering. Again, the Access Arrangement has not included an explicit service of this type, but has sought to reflect the costs of providing metering facilities (which are shipper specific) through the Delivery Point Charge of the Firm Service reference tariff. The only significant lateral to the DBNGP, the Carnarvon lateral, is dealt with by a specific Pipeline Capacity Charge for zone 4A.

2.7 By offering the Firm Service of the proposed DBNGP Access Arrangement, by offering flexibility for shippers to overrun their firm capacity entitlements, and by creating a secondary market for the short term buying and selling of capacity, Epic has offered services consistent with the commitments it made to the State of Western Australia at the time of Pipeline sale.

2.8 **T1 Equivalent Service**

2.8.1 In Schedule 39, the forward haul firm service was labelled a “T1 equivalent reference service”, and the forward haul interruptible service was labelled a “T3 equivalent reference service”. This designation of the services to be provided by Epic Energy as being equivalent to two of the classes of service available under the access regime of the GTRs (the T1 and T3 services) requires careful consideration in view of the position taken in a number of the submissions published on the OffGAR web site. Those submissions seek the Regulator’s intervention to require of Epic Energy that it provide, as a reference service, a “T1 equivalent service”.

2.8.2 The term “T1 equivalent reference service” is an ambiguous term. It appears to have had a particular meaning early in the process of Pipeline sale. The Information Memorandum prepared for the sale advanced the view that the reference service offered by the buyer of the Pipeline would be precisely equivalent to the T1 service available under the GTRs. It stated:

> *"The Acquirer will be required by the Asset Sale Agreement to include in the initial Access Arrangement to be approved by the Regulator under the Access Code, a full haul firm Reference Service ("T1-Equivalent Reference Service) which is equivalent to the GTR's full haul T1 service on all material matters defining the nature and extent of the service, including reliability of service, force majeure, peaking and balancing limits and surcharges."*

2.8.3 This requirement for inclusion of such a service in the Access Arrangement did not appear in the Asset Sale Agreement and did not appear as a requirement in any other way during the sale process.

2.8.4 There is no reference to a requirement to include a "T1 equivalent service" in the proposed Access Arrangement in either the *Dampier to Bunbury Pipeline Act 1997* (being the legislation surrounding the sale) or the *Gas Pipelines Access (Western Australia) Act 1998* (being the legislation that imposed the obligation on Epic Energy to file an Access Arrangement for the DBNGP.

2.8.5 While it is apparent that the State had initially intended to adopt the path suggested in the various public submissions, in the end it did not impose such a requirement – a decision clearly made prior to enacting section 20 of the *Dampier to Bunbury Pipeline Act 1997*.

2.8.6 The concept of a T1 equivalent service has meaning only to the extent that the tranche method of capacity determination is retained. The tranche method was the method of pipeline capacity determination specified in the access regime of the GTRs. Under that regime, T1 capacity was capacity in Tranche 1. The tranche method of capacity determination, and the possibility of a precisely equivalent service offered as a reference service through an Access Arrangement under the Code were removed by Schedule 39 of the Asset Sale Agreement. Schedule 39 recognised, as a principle governing the future operation of the DBNGP, that:

> *"From 1 January 2000, the tranche methodology is not used to define the capacity of the pipeline."*

2.8.7 The proposed Access Arrangement does not perpetuate the tranche methodology for capacity on the DBNGP, consistent with Schedule 39.

2.8.8 Epic Energy is in the process of obtaining an independent legal review of the requirement to include a T1 equivalent service which will be provided to the Regulator shortly.

2.8.9 Epic Energy maintains that, in these circumstances, intervention by the Regulator to require inclusion of a "T1 equivalent service" in the DBNGP Access Arrangement is not justified.

2.9 In the proposed DBNGP Access Arrangement, Epic Energy has provided the services it committed to provide as part of the regulatory compact and through Schedule 39 to the Asset Sale Agreement.

3. TERMS AND CONDITIONS OF SERVICE

3.1 Submissions on the OffGAR web site, principally from existing shippers using the DBNGP, have raised issues concerning the terms and conditions on which the proposed reference service for the Pipeline would be provided. These are issues concerning, among other things:

- delivery point flexibility;
- capacity taken in excess of shipper's MDQ;
- the interruptibility of overrun;
- inflexibility in the nominations procedure;
- imbalance limits;
- trading in imbalances; and
- hourly peaking limits.

3.2 Epic Energy has been unable to make a full analysis of, and to comment on each of these issues before the closing date for submissions on the DBNGP Access Arrangement. Nevertheless, it recognises their importance to both existing and prospective shippers.

3.3 Epic Energy will continue to address these issues and inform the Regulator of its views prior to the Regulator issuing his draft decision on the proposed DBNGP Access Arrangement.

4. ASSET VALUATION

4.1 The majority of the submissions published on the OffGAR web site have commented on the approach Epic Energy has taken to the determination of the initial capital base for the DBNGP, and on its implications for the reference tariff. Although that approach is unusual in the Australian regulatory context, it has precedents both in Australia and internationally. These precedents, and the reasons why the approach was adopted in setting the initial capital base were set out in the submission Epic Energy lodged with the Regulator on 15 December 1999, and in an expert's report appended to that submission. The report developed a "regulatory model" for asset valuation in the circumstances in which Epic Energy acquired the DBNGP. It was prepared for Epic Energy by specialist regulatory consultants, The Brattle Group. Release of the submission, and of The Brattle Group's report, would have greatly assisted those commenting on the DBNGP Access Arrangement, and avoided a number of misconceptions that appear to have arisen in respect of the proposed reference tariff.

4.2 **DAC and DORC Valuations of the DBNGP and Disclosure Requirements**

4.2.1 A number of the submissions dealing with the issue of asset valuation drew attention to the fact that depreciated actual cost ("DAC") and depreciated optimised replacement cost ("DORC") valuations of the DBNGP were not given in the associated Access Arrangement Information. Some submissions went further, arguing that this precludes an adequate evaluation of the proposed reference tariff, and have made formal requests under section 2.9(b) of the *National Third Party Access Code for Natural Gas Pipeline Systems* ("the Code") that the Regulator require Epic Energy to publish the valuations as part of the Access Arrangement Information.

4.2.2 Epic Energy is of the view that neither a DAC nor a DORC valuation is necessary to understanding the DBNGP Access Arrangement and its proposed reference tariff. That view is supported by independent legal opinion.

4.2.3 Epic Energy has put to the Regulator its reasoning for there being no requirement to include DAC and DORC valuations of the Pipeline in the Access Arrangement Information lodged with the DBNGP Access Arrangement. Epic Energy set out, in detail, its compliance with Code requirements, both in respect of asset valuation, and in respect of disclosure of asset values in the Access Arrangement Information.

4.2.4 Epic Energy strongly maintains:

- understanding the reference tariff and other elements of the DBNGP Access Arrangement does not require knowledge of DAC and DORC valuations for the Pipeline; indeed, knowledge of those values could mislead a party seeking to understand, and rely on, the proposed reference tariff as they are not relevant in any way to the derivation of the tariff;

- knowledge of the DAC and DORC valuations is not required to form an opinion as to compliance of the Access Arrangement Information with the provisions of the Code; and

- Epic Energy has provided, in the Access Arrangement Information, all of the information that the Code requires be provided to assist users and prospective users understand the proposed Access Arrangement and, in particular, the derivation of the reference tariff.

4.2.5 An understanding of the reference tariff and other elements of the DBNGP Access Arrangement would, as Epic Energy has continued to argue, be assisted if the submission it lodged with the Regulator on 15 December were publicly available.

4.3 **Asset Valuation and Reference Tariff Determination**

4.3.1 Several of the submissions published on the OffGAR web site have argued that the high initial capital base derived from the price Epic Energy paid for the DBNGP results in a reference tariff that is higher than might otherwise have been the case.

4.3.2 There is here, a misunderstanding about the role of the initial capital base in determining the reference tariff proposed in the DBNGP Access Arrangement.

4.3.3 As discussed in section 2.1 of the Access Arrangement Information, the structure and level of the reference tariff were set through the process in which Epic Energy acquired the DBNGP.

4.3.4 Epic Energy's successful bid for the Pipeline was considered, by the Government of Western Australia, superior to any other bid, and was consistent with the Government's intended path for future gas transmission tariffs. That tariff path was a key component of the regulatory compact, and a key element of Schedule 39 to the Asset Sale Agreement.

4.3.5 That is supported by recent statements of the Minister for Energy, Hon. C Barnett, who has said:

> *"The Government realised for this State an enormous capital gain on that asset, and it realised a commitment that the price of transporting gas would fall by 20 per cent by 2000. We also realised an agreement that $870m would be spent on progressively doubling capacity of that pipeline between now and 2007, and that process is already underway. … … There was a glittering prize to be had. My view and the view of this Government was that that glittering prize – the extra $1b – belonged to the people of Western Australia to repay debt; and in the case of the Education portfolio, to put 32 000 computers into government and non-government schools over the next four years, plus the other things that might happen with those proceeds. …*
>
> *Mr Grill: the bottom line is that our gas prices continue to go up and the adverse differential between us and the eastern States continues to widen.*
>
> *MR BARNETT: Okay. …"*
>
> (Hansard, 16 September 1998, debate on Gas Pipelines Access (Western Australia) Bill)

and also in response to questions without notice from Mr Ripper on 14 March 2000:

"We made the judgment that a high price for taxpayers and the community of Western Australia was the first and most important component. If at the same time we doubled the pipeline capacity and delivered a 20 per cent cut in transport tariffs, it was a very good deal."

4.3.6 Schedule 39 to the Sale Agreement provide for tariffs and a tariff path of:

- a tariff of $1.00/GJ, applying from 1 January 2000, for gas transportation to Kwinana Junction;
- a tariff of $1.08/GJ, applying from 1 January 2000, for gas transportation to delivery points downstream of Kwinana Junction; and
- a price path that would see tariffs rise by no more than 67% of increases in the consumer price index.

The context of this is dealt with in the 15 December submission.

4.3.7 This list is not a complete set of tariffs for the DBNGP. For example, how are part haul tariffs to be determined? Nor does it provide a basis for the resetting of tariffs in the future. For example, what asset value should be adopted when tariffs are to be redetermined?

4.3.8 An explicit capital base, established down to the level of relevant asset classes and, in some cases, individual assets, is necessary for determining a complete set of tariffs for the current access arrangement period, and for providing a basis for subsequent tariff redetermination. The DBNGP purchase price of $2.407 billion, adjusted for new capital expenditure and depreciation from the date of purchase to commencement of the proposed Access Arrangement, and the detailed set of asset of values established by valuers Edward Rushton Australia Pty Limited consistent with the adjusted purchase price, provides a logical and clearly verifiable initial capital base. This aspect is dealt with more fully in the 15 December submission and the associated Brattle Group Report.

4.3.9 A reference tariff determined directly from that capital base would, however, exceed the tariffs of the regulatory compact and Schedule 39 to the Asset Sale Agreement.

4.3.10 If, as is proposed in the DBNGP Access Arrangement, Epic Energy adheres to the tariffs and the tariff path it committed to at the time of Pipeline sale, revenue from delivery of the reference service is likely to be insufficient to recover the capital charges (return and depreciation) on the capital base in subsequent years without growth in the demand for gas transmission services.

4.3.11 Epic Energy proposes, in these circumstances, to treat any shortfall in the recovery of its capital charges by way of economic depreciation. Economic depreciation is determined as the difference between the revenue expected given the reference tariff and the price path proposed in the DBNGP Access Arrangement, and the sum of capital expenditure on new facilities, return on the capital base, and the non-capital costs.

4.3.12 As described in section 3.4 of the Access Arrangement Information, the use of economic depreciation allows postponement of the recovery of a part of the capital base until that recovery is warranted by growth in demand for gas transmission services.

4.3.13 A number of the submissions on the OffGAR web site have concluded that the use of economic depreciation and its adjunct, the deferred recovery account, are not in accordance with the requirements of the Code. This conclusion is tenuous. The relevant Code provisions dealing with depreciation, sections 8.32 and 8.33, are quite general. They require

depreciation of the assets comprising the capital base of a covered pipeline over the economic lives of those assets. They do not mandate a particular depreciation method, or a particular way of accounting for depreciation. The service provider has discretion to choose a depreciation method provided the resulting reference tariff meets the objectives set out in section 8.1 of the Code. Epic Energy has adopted, on the basis of advice from The Brattle Group, a particular approach to depreciation: economic depreciation and deferred asset recovery. That approach is consistent with the requirements of the Code. In its draft decision on the access arrangement for the Central West Pipeline, the Australian Competition and Consumer Commission noted that it had considered the use of economic depreciation by AGL Gas Pipelines and concluded:

> *". . . the proposal to apply a form of levelising to eventually recoup under-recoveries accrued in the early period of the life of the CWP is consistent with Code principles."*

4.3.14 It is for the Regulator to consider whether the reference tariff consistent with the approach adopted by Epic Energy meets the objectives of section 8.1. Epic Energy has argued in its submission lodged with the DBNGP Access Arrangement on 15 December that it does.

4.3.15 In setting the reference tariff of the DBNGP Access Arrangement, Epic Energy has recognised the commitment in respect of gas transmission tariffs it made to the State of Western Australia at the time of Pipeline sale. If that commitment is to be effectively recognised, asset values must be established that are consistent with the tariffs and tariff path of the regulatory compact and Schedule 39 to the Asset Sale Agreement. The use of a capital base derived from the DBNGP purchase price, and the treatment of any shortfall in the recovery of capital charges as economic depreciation, effect that consistency.

4.3.16 Because the reference tariff and the tariff path are fixed in accordance with the commitments Epic Energy has made to the State of Western Australia, Epic Energy's shareholders, and not shippers, bear the risk of failure to recover, through the depreciation policy proposed, an initial capital base derived from the price paid for the DBNGP. Epic Energy's shareholders bear the "volume risk" associated with the Pipeline until market growth permits full recovery of the initial capital base. If expected growth in the demand for gas transmission services materialises, shareholders will fully recover their investment, and real reductions in the reference tariff should be possible. If expected growth fails to materialise, reference tariffs follow the tariff path of the regulatory compact and Schedule 39 to the Asset Sale Agreement, and Epic Energy's shareholders are unable to recover their investment in the Pipeline. A part of that investment will have been shown to be "imprudent", and shareholders will not be compensated for it.

4.3.17 Epic Energy acknowledges that the approach it has taken – the regulatory model advanced by the Brattle Group – may not be the only approach that might be taken to the issue of an asset valuation consistent with the tariffs and tariff path of the regulatory compact and Schedule 39 to the Asset Sale Agreement. A number of the submissions on the OffGAR web site appear to acknowledge the primary importance of the reference tariff and the tariff path. They suggest that, in these circumstances, the capital base required for a complete reference tariff specification, and for tariff redetermination in the future, be imputed from the forecast net revenue stream. This is effectively the approach taken, in the Regulator's draft decision, to establishing the capital base of the Parmelia Pipeline. An imputed capital base approach provides shippers with a degree of certainty in respect of the basis for future tariffs,

but may not secure full recovery of the investment made by Epic Energy's shareholders. However, such may alleviate the unfounded concerns of some parties to the possibility of tariffs in future regulatory periods being raised on the back of the then total capital base. This fear may arise due to the fact that the parties have not had the opportunity to review the submission and the associated Brattle Group Report, which clearly demonstrate that that is not possible.

5. DETERMINATION OF THE RATE OF RETURN

5.1 In the Access Arrangement Information supporting the DBNGP Access Arrangement, Epic Energy advised that it had used a pre-tax real weighted average cost of capital of 8.5% in its reference tariff calculations.

5.2 A number of the submissions made to the Regulator appearing on the web site have questioned the appropriateness of this rate. They have argued that:

- the rate is excessive, especially when compared with the pre-tax real rate of return of 7.75% allowed by the Australian Competition Consumer Commission and the Victorian Office of the Regulator-General in their final decisions on access to Victorian gas pipelines in October 1998;
- the high rate of return is, in part, a result of a high market risk premium; and
- it is also the result of an assessment that investment in the DBNGP is relatively more risky than in other infrastructure assets.

5.3 Determination of the rate of return – the weighted average cost of capital – for a regulated business is a complex matter. It requires both a sound knowledge of corporate financial theory, and experience in applying that theory in the context of a specific business and a particular set of capital market conditions. Accordingly, Epic Energy appointed The Brattle Group, to undertake a comprehensive determination of the weighted average cost of capital to be used in setting the reference tariff for the DBNGP.

5.4 The Brattle Group's report, *The Cost of Capital for the Dampier to Bunbury Natural Gas Pipeline*, was lodged with the Access Arrangement on 15 December 1999 and forms part of the Access Arrangement Information. It is available on OffGAR's web site.

5.5 This report was prepared some twelve months after the work establishing the rates of return set in the final decisions on access to the Victorian gas pipelines. In those twelve months, conditions in Australian and international capital markets have changed. Interest rates have risen and, based on current yields on Australian Government bonds, the Brattle Group recommended a risk free rate of return of 6.4%. Twelve months earlier, bond yields were lower, and the Australian Competition Consumer Commission and the Victorian Office of the Regulator-General were able to set a risk free rate of 6.0%.

5.6 In its report, The Brattle Group noted that bond yields were continuing to rise, and recommended that the estimated risk free rate be updated at the time of the Regulator's final decision on the DBNGP Access Arrangement.

5.7 The Brattle Group recommended use of a market risk premium of 6.5% in determining a weighted average cost of capital for the DBNGP. This recommendation was made with the knowledge that:

- estimates of the risk premium for the Australian equities market have generally been in the range 6% to 8%, and
- corporate financial advisers usually work with a figure in the range 6% to 7%.

5.8 Regulators in other jurisdictions have, however, adopted a lower rate. A market risk premium of 6.0% was used in setting the allowed rate of return for the Victorian pipelines, and a rate of 5.5% has been advanced by the Australian Competition and Consumer Commission in its September 1999 draft decision on the Access Arrangement submitted by AGL Pipelines for its Central West Pipeline. The rationale for this lower rate appears to be research indicating a fall in the risk premium in recent years.

5.9 The Brattle Group has cautioned against placing great reliance on this research at the present time. The Group's report advises:

> *". . . caution in making adjustments that move the market risk premium away from the figure implied by market evidence. Driven in part by the inability to explain the high asset prices in stock markets in recent years, economists and non-practitioners have made intuitive arguments about why the market risk premium should be reduced below the historical average. Scholarly attempts to use historical data to identify changes in the market risk premium, however, have not generally succeeded. There is some weak evidence that the market risk premium is higher than average when the stock market is more volatile than average, but the evidence is also consistent with the view that the market risk premium never changes at all. There is simply no reliable way to quantify just how much the market risk premium might differ from the average value at any given time."*

5.10 The weighted average cost of capital for a regulated business may be high not only because interest rates are high and equity investments command a high risk premium. It may also be high because investment in the business is perceived to be inherently more risky than investment in other lines of business. This perceived risk of specific equity investments (relative to the risk of investment in an equity market portfolio) is measured by the asset and equity betas used in the determination of the cost of capital.

5.11 The asset and equity betas used by The Brattle Group in determining the weighted average cost of capital for the DBNGP were 0.585 and 1.153, respectively. These are similar to the values of the betas adopted by the Australian Competition and Consumer Commission in its final decision on the Victorian gas transmission system (asset beta 0.55, and equity beta 1.20), and similar to the values adopted by the Regulator in its draft decision on the Parmelia Pipeline (asset beta 0.60, and equity beta 1.00). They are lower than the values adopted by the Australian Competition and Consumer Commission in its draft decision on the Central West Pipeline (asset beta 0.60, and equity beta 1.48).

5.12 Epic Energy has not sought to maintain that its investment in the DBNGP is more risky than other pipeline investments. Other service providers have been vague on the determination of the betas, and have proposed high values for them reflecting specific risks to which they believe they are exposed. In contrast, Epic Energy has, through the work of The Brattle Group, been explicit in the way in which the asset and equity betas for the DBNGP have been determined, and has not made ad hoc adjustments to the results to reflect perceived specific risks. Indeed, The Brattle Group report on the cost of capital for the DBNGP appears unique in its documenting a method for determination of the betas, and in providing quantitative estimates derived by applying that method.

5.13 Epic Energy's proposed rate of return for its investment in the DBNGP is not excessive. It reflects:

- current financial market conditions;
- a value of the market risk premium consistent with most of the available evidence, and with current financial market practice; and
- an assessment of relative risk that is consistent with assessments made by regulators for other Australian gas transmission pipelines.

6. STRUCTURE AND LEVEL OF THE REFERENCE TARIFF

6.1 A number of the submissions published on the OffGAR web site have expressed concerns about particular aspects of the structure and level of the reference tariff proposed by Epic Energy. These concerns include:

- the proposed reference tariff is high relative to the current tariff;
- a much larger proportion of the proposed reference tariff does not vary with Pipeline throughput;
- Pilbara charges are higher than the distance related charges of the GTR and transitional access regimes;
- the use of pricing zones does not produce an equitable result across all users; and
- the level of the proposed reference tariff makes gas less competitive to industry in the South West of the State.

6.2 In developing the reference tariff of the proposed DBNGP Access Arrangement, Epic Energy sought to achieve a tariff design which:

- met the objectives for reference tariffs set out in section 8.1 of the Code; and
- was consistent with its commitments under the regulatory compact and Schedule 39 to the Asset Sale Agreement.

6.3 Section 8.1 of the Code requires, among other things, that a reference tariff provide a revenue stream that recovers the efficient costs of delivering the reference service over the expected lives of the assets comprising a covered pipeline.

6.4 Efficiency in the reference tariff is to be achieved through its being set at a level which permits recovery of no more than the efficiently incurred costs of the resources used to provide the reference service.

6.5 Epic Energy has sought to achieve efficiency in its proposed reference tariff by:

- dividing the DBNGP into ten zones for pricing purposes; and
- adopting a multi-part tariff.

6.6 With zone-based pricing, a shipper pays a charge for each pipeline zone between, between its receipt point and delivery point, through which gas transported.

6.7 Epic Energy's proposed multi-part tariff comprises:

- a gas receipt charge;
- a pipeline capacity charge;
- a compression capacity charge;

- a compressor fuel charge; and
- a delivery point charge.

6.8 The gas receipt charge is to be payable by all shippers using the DBNGP. It recovers costs which are not specifically attributable to segments of pipe or to individual compressor stations. These costs, which include the costs of system operation, marketing costs, head office costs, and allocated corporate overheads, are semi-fixed costs. They do not vary directly with Pipeline throughput, or with the distance over which gas is transported.

6.9 The pipeline capacity charge recovers from each shipper, the costs of the segments of the pipe through which gas is transported for that shipper. These costs comprise the return and depreciation on each pipe segment, and the costs of maintaining the segments. They are fixed costs; they do not vary with Pipeline throughput.

6.10 Similarly, the compression capacity charge recovers from each shipper, the costs of providing the compression facilities required between its delivery point and receipt point. These costs are also essentially fixed.

6.11 Compressor fuel costs are the only variable costs associated with DBNGP operation. They are recovered from each shipper on the basis of the quantity gas transported through each compressor station for that shipper.

6.12 Finally, the delivery point charge recovers the capital costs of facilities at each delivery point. It is a fixed charge payable by each shipper using a particular delivery point.

6.13 When combined with a multi-part tariff of the type proposed by Epic Energy, zone based pricing ensures that a shipper pays only for those Pipeline facilities used to transport gas from its receipt point to its delivery point.

6.14 A larger rather than a smaller number of zones ensures that a shipper pays only for the provision and maintenance of those pipe segment used in providing it with the reference service. Because the capital and maintenance costs of both the pipe segments and the compressor stations are not uniform along the length of the DBNGP, zone based pricing with a sufficiently large number of zones achieves a more accurate allocation of costs to shippers than the distance related tariff of the earlier access regime of the GTRs. Contrary to the view expressed in a number of the submissions published on the OffGAR web site, zone based pricing with the multi-part tariff proposed by Epic Energy produces a more equitable allocation of costs to shippers than the distance related tariffs of the GTR and transitional access regimes.

6.15 Introduction of a more cost reflective reference tariff does, however, result in:

- a much larger proportion of the tariff not varying with pipeline throughput; and
- a Pilbara tariff which is higher than the corresponding distance related tariffs of the GTR and transitional access regimes.

6.16 In respect of the first of these two points, the GTR tariff and the tariff of the transitional access regime did not accurately reflect the fixed and variable costs of the DBNGP. The fixed/variable split for those tariffs was originally established without reference to Pipeline

costs. It is important to note that these tariffs were fixed by Government fiat and were not the result of a regulatory examination. The tariffs applying in the short haul areas were simply not cost reflective.

6.17 Does the way in which Epic Energy has structured the proposed DBNGP reference tariff result in a tariff that is high relative to the current tariff, or a tariff that makes gas less competitive to industry in the South West of the State?

6.18 Epic Energy acknowledges that its reference tariff is higher than the current tariff (applying from 1 January 2000), but that tariff was not set by reference to costs nor was it set with Epic Energy's agreement. It was set by administrative decree against the objections of the Service Provider.

6.19 Epic Energy has proposed, in the DBNGP Access Arrangement, a reference tariff that is lower than DBNGP tariffs applying before 1 January 2000, being the tariff path that was in place at the time Epic Energy acquired the DBNGP, that is, as set out in the *Dampier to Bunbury Pipeline Regulations 1998*.

6.20 Furthermore, it is a tariff that is consistent with both the regulatory compact and the tariff commitments of Schedule 39 to the Asset Sale Agreement. In fact in a number of places the proposed reference tariff is lower than that set out in Schedule 39. Schedule 39 requires a tariff that is both zone based and multi-part. Epic Energy has proposed a tariff with this structure. Schedule 39 requires a tariff of $1.00/GJ to delivery points in the Perth metropolitan area upstream of Kwinana Junction. Epic Energy has proposed a zone 9 tariff of $1.00/GJ. Schedule 39 also requires a tariff of about $1.07/GJ downstream of Kwinana Junction. Epic Energy has proposed a zone 10 tariff of $1.08/GJ. At the time of development of Schedule 39, the need for CS10 for the expansion due to restrictions flowing from the WLPG plant, was not appreciated and this has therefore needed to be covered.

6.21 Epic Energy cannot offer a definitive opinion on whether its proposed DBNGP reference tariff makes gas less competitive to industry in the South West of the State or what expectations (right or wrong) customers in that area may have had.

6.22 However, it notes that the DBNGP tariff is significantly lower than the reference tariffs proposed for other gas transmission pipelines in Western Australia. A comparison of reference tariffs, made using data reported in the various Access Arrangements, is presented in Table 7.1 of the Access Arrangement Information and in the following table. For purposes of direct comparison, each tariff has been expressed as a per kilometre rate for a shipper with a load factor of 100 per cent.

6.23 The table also shows that the proposed DBNGP reference tariff is comparable with:

- the reference tariff for East Australian Pipeline Limited's Moomba-Sydney Pipeline; and
- the current tariff posted by Kern River Gas Transmission which operates a major pipeline system in the western states of the United States.

DBNGP Reference Tariff Comparison

Pipeline	Reference Tariff At 100% Load Factor ($/GJ km)
DBNGP	0.000585
Goldfields Gas	0.002245
Parmelia	0.001322
Tubridgi	0.002450
Moomba-Sydney	0.000545
Kern River Gas Transmission	0.000664

6.24 In the Access Arrangement it has lodged with the Western Australian Independent Gas Access Regulator, Epic Energy has:

- reduced the DBNGP reference tariff to a level below the levels of previous tariffs for the Pipeline;
- reduced the DBNGP reference tariff to a level that is significantly lower than the reference tariffs proposed for other Western Australian pipelines, and
- reduced the DBNGP reference tariff to a level consistent with the tariffs of other major transmission pipeline systems.

6.25 A comparison of reference tariffs of Australian transmission pipelines was provided in Table 7.1 of the DBNGP Access Arrangement Information. That comparison also showed the proposed DBNGP reference tariff to be relatively low. The highest of the reference tariffs in Table 7.1 was supposedly for AGL's Queensland pipeline. Epic Energy now understands that the AGL tariff shown in Table 7.1 was for a gas distribution system. In a brief submission to OffGAR, AGL has pointed out the error and provided the published tariff for its Roma-Brisbane Pipeline. Epic Energy appreciates the information provided by AGL and apologises for the error. It will ensure the error is rectified in any revision of its DBNGP Access Arrangement Information.