Your Ref: 1048/98
Our Ref: 98/1047

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Dear Ken

TUBRIDGI PIPELINE SYSTEM: PROPOSED ACCESS ARRANGEMENT

Thank you for notifying the Office of Energy (the OOE) of the receipt of the proposed Access Arrangement and the applicable Access Arrangement Information for the Tubridgi Pipeline System, and the invitation for public submissions.

Please find attached the OOE's submission in respect of the proposed Access Arrangement and Access Arrangement Information.

The attached draft submission presents what are considered by the OOE to be the key arguments and assumptions of the proposed Access Arrangement, and the OOE comments on those matters. The key aspects of the draft submission relate to matters associated with:

- the structure, the level and the key inputs to the derivation of the proposed Reference Tariffs;

- establishing the Initial Capital Base in the context of the expected long term demand for the transportation services of that Tubridgi Pipeline System;

- the Weighted Average Cost of Capital (WACC), with comments made in general terms citing determinations made in other places and in Western Australia on access matters;

- accelerated depreciation of assets proposed by the Tubridgi Parties;

- the proposed incentive mechanism and with the proposed annual variations of Reference Tariffs; and

- the timing of the next review of the Access Arrangement.

The comments outlined in the draft submission are aimed at suggesting some possible measures for achieving a reduction in the Reference Tariffs in the short term and at the same time preserving the commercial interests of the Tubridgi Parties.

Yours sincerely

LES FARRANT
COORDINATOR OF ENERGY

10 December 1999

OFFICE OF ENERGY – WESTERN AUSTRALIA

SUBMISSION ON THE PROPOSED ACCESS ARRANGEMENT:

TUBRIDGI PIPELINE SYSTEM

The Office of Energy (OOE) submits the following comments in respect of the proposed Access Arrangement for the Tubridgi Pipeline System. The key arguments and assumptions of the access information are summarised below with comments made by the OOE presented in bold and italicised text.

It is noted that the purpose of the Access Arrangement Information is to permit interested parties to understand the derivation of the "elements" in the proposed Access Arrangement and to form an opinion as to the compliance of the Access Arrangement with provisions of the Code. It is from this perspective that the following comments are made.

Background

The Tubridgi Pipeline System consists of the Griffin Pipeline (WA:PL 19) and the Tubridgi Pipeline (WA:PL 16) owned by the Tubridgi Parties (SAGASCO South East Inc, Boral Energy Petroleum Pty Ltd, Boral Energy Amadeus NL, Pan Pacific Petroleum NL and Tubridgi Petroleum Pty Ltd) and operated by SAGASCO South East Inc.

1. Reference Tariffs

The Tubridgi Parties have proposed that the Reference Tariff for the Haulage Reference Service will be set out in a Tariff Schedule from time to time. The initial Reference Tariff set out in Annexure C to the Access Arrangement, which will apply from 1 July 1999 to 30 June 2000, comprises a charge ($0.322) for each GJ of MDQ plus a charge ($0.105) for each GJ of gas delivered ie $0.427/GJ for a 100% load factor. The Reference Tariff will change each year by the percentage change in the CPI. The Tubridgi Parties have stated that the proposed Reference Tariff is commensurate with the tolling charge, which applies for the existing third party user – the 'Thevenard Producers'.

The Tubridgi Parties have utilised the cost-of-service methodology to calculate the Reference Tariff, whereby the total revenue is calculated as equal to the cost of providing all services, with this cost calculated as the sum of a return on the capital base, depreciation of the capital base, and non-capital costs.

Because current forecast demand for the Tubridgi Pipeline declines in each year of the Access Arrangement Period, the resultant total price per gigajoule for the Reference Service rises in order to achieve the total revenue for that year. As shown in table 9 in the Access Arrangement Information the real average price would increase from $0.328/GJ in 1999/2000 to $3.072/GJ to 2003/04, ie would result in Reference Tariffs reaching commercially unrealistic levels in the later years of the Access Arrangement.

The Tubridgi Parties suggest that a better outcome is achieved by adopting an approach to establishing tariffs which earns the same NPV of revenue, but 'smooths' the price path of the tariff so it is constant in real terms throughout the Access Arrangement Period. This will enable Pipeline Users to avoid the significant price shocks that they would otherwise experience. The resultant 'smoothed' two-part tariff for 1999/00 is $0.427/GJ (for a 100% load factor), which is significantly higher than the average price without "smoothing" the price path of the tariff.

As pointed out in the Issues Paper published by the Office of Gas Regulation (the Issues Paper), in the setting of reference tariffs there is a need to strike a balance between the interests of the service provider, users and the broader community. If an Access Arrangement proposes a reference tariff that is higher than appropriate it:

may unreasonably discourage downstream uses or consumers of gas; and

may lead to lower employment and growth opportunities for the State.

The OOE considers that the Reference Tariff proposed by the Tubridgi participants is higher than appropriate and may unreasonably discourage downstream uses or consumers of gas. The OOE considers that the proposed Reference Tariff may also unreasonably discourage developments in the upstream gas industry. In his decision for continued coverage of the Tubridgi Pipeline the WA Minister for Energy considered that access to the Tubridgi Pipeline is likely to promote competition amongst gas producers by encouraging exploration and the development of additional gas fields in the Carnarvon basin. The OOE considers that the level of the proposed Reference Tariffs would reduce that likelihood.

The comments outlined below are aimed at suggesting some possible measures for achieving a reduction in the Reference Tariff in the short term and at the same time preserving the commercial interests of the Tubridgi Parties.

In addition to the measures suggested below the Regulator may wish to consider the reasonableness of the currently proposed Reference Tariff structure in the context of the extensive unutilised capacity of the Tubridgi Pipeline System. The Tubridgi Parties have elected to adopt a structure whereby 80% of the Haulage Reference Service tariff is based on MDQ booked capacity, and the remaining 20% of the tariff is based on daily throughput. The OOE considers that in terms of encouraging the utilisation of the Tubridgi Pipeline System it may be beneficial if the initial tariff structure is based on a higher proportion of the throughput charge, with no penalties for overruns, and that the currently proposed structure (80%:20% capacity:throuput charge) is introduced at the time of the review of the initial Access Arrangement.

(a) Initial Capital Base

The Tubridgi Parties have elected to use the Depreciated Optimised Replacement Cost (DORC) methodology, which results in an initial Capital Base, as at 1 July 1999, of $23.76 million. This valuation, is based on optimising the separate Tubridgi and Griffin Pipelines into a single pipeline with the same capacity as the combined existing pipelines. The

Tubridgi Pipeline System has a combined capacity of 120 TJ/day based on the Tubridgi Pipeline nominal capacity of 30 TJ/day and the Griffin Pipeline nominal capacity of 90 TJ/day.

There is currently a high level of unused capacity in the Tubridgi Pipeline System, which is forecast to increase over the initial Access Arrangement Period. Each of the pipelines currently transports approximately 15 TJ/day. The Tubridgi Pipeline System is expected to carry a total average of around 30TJ/d during each of the next two years. In the remaining three years of the initial Access Arrangement Period, demand is expected to decline to around 17 TJ/day in 2001/2002, around 8 TJ/day in 2002/03 and just 3 TJ/day in 2003/04.

The Tubridgi Parties have optimised the Tubridgi Pipeline System as a single pipeline with a nominal capacity of 120 TJ/day based on the market's perception that in the medium term there is substantial potential for growth in usage of the Tubridgi Pipeline System such that its full capacity may be utilised. BHP and Mobil, both participants in the Macedon Joint Venture, have indicated the development of the Macedon offshore gas field will require pipeline capacity of up to 120 TJ/day, which is equal to the total nominal capacity of the Tubridgi Pipeline System.

The OOE notes the observation in the Issues Paper that the initial capital base for the Tubridgi Pipeline System will be a major determinant of the revenue to the service provider and tariffs paid by users for both the current and future access arrangement periods.

The Code requires the value assigned to existing assets (the initial Capital Base) to be normally within the range of the Depreciated Actual Cost (DAC) and the DORC. The Tubridgi Parties have stated that assuming a useful economic life of 80 years for both pipelines, depreciating the actual construction cost of the Tubridgi Pipeline System produces a Depreciated Actual Cost (DAC) figure of $22.57 million as at 1 July 1999. The OOE considers the Regulator should request additional information on how the DAC value was derived. The OOE suggests that the Regulator consider whether adopting the DAC value would be more appropriate in the case of the Tubridgi Pipeline System given it incorporates relatively new assets.

The OOE agrees that an initial Capital Base valuation based on the combined capacity of the existing Tubridgi and Griffin Pipelines is appropriate given the expected medium term demand for the total capacity of the Tubridgi Pipeline System.

However, an argument raised by the Tubridgi Parties in their application to the NCC for revocation of Code coverage in respect of the Tubridgi Pipeline was that it might decommission or abandon the Tubridgi Pipeline after 2001 when the Tubridgi gas field is depleted. In its decision in respect of that application, the WA Minister for Energy considered that Coverage and the development of an Access Arrangement for the Pipeline should not prevent the Tubridgi Parties from either decommissioning or abandoning the Tubridgi Pipeline in the event that in 2001 there is no reasonably foreseeable demand for its services. The Minister also considered that the Access Arrangement may be able to be developed in a way that accommodates the possibility of

subsequent recommissioning of the Tubridgi Pipeline in the event increased demand warrants this.

Under section 8.27 of the Code the Regulator may require that the Reference Tariff Policy include a mechanism that will, with effect from the commencement of the next Access Arrangement Period, remove an amount from the Capital Base (Redundant Capital) for a Covered Pipeline so as to:

(a) ensure that assets which cease to contribute in anyway to the delivery of Services are not reflected in the Capital Base; and

(b) share costs associated with a decline in the volume of sales of Services provided by means of the Covered Pipeline between the Service Provider and Users.

Where redundant assets subsequently contribute to or enhance the provision of services, the Code (section 8.28) allows the assets to be added back to the capital base as if they were new facilities investment subject to the associated Code criteria.

The OOE submits that the Regulator should consider including in the Access Arrangement a trigger mechanism whereby the Tubridgi Parties must submit revisions to the initial Access Arrangement at the time the Tubridgi Pipeline ceases to contribute to the Services of the Tubridgi Pipeline System (which the Tubridgi Parties suggest is likely to occur in late 2001).

Given recent indications that industry may be interested in developing an industrial gas quality pipeline from the North West Shelf to the South West of the State, the trigger mechanism may require the Tubridgi Parties to submit revisions to the Access Arrangement only in the event that known additional demand for the Services of Tubridgi Pipeline System is unlikely to exceed the nominal capacity of the Griffin Pipeline in the period leading to 1 July 2005. The OOE understands that given the current gas quality specification applying to the DBNGP the Macedon gas field is unlikely to be developed before that date. This is subject to the possible development of an industrial quality gas pipeline, as previously mentioned.

In addition, the OOE submits that the Regulator should also consider requiring that the Reference Tariff Policy include a mechanism that will, with effect from the commencement of the next Access Arrangement Period (which includes the commencement of revisions to the Access Arrangement), remove a specified amount from the Capital Base. The specified amount could either correspond to the capacity of the Tubridgi Pipeline or be proportionate to that part of the capacity of the Tubridgi Pipeline System that at the time of the review is unlikely to be utilised in the short term.

(b) Economic Depreciation of Assets (Return of Capital)

The Tubridgi Joint Venture Parties have proposed accelerated depreciation schedules for groups of assets that form the Tubridgi Pipeline System. The accelerated depreciation is argued to reflect the risk associated with the assets being made redundant when existing gas fields are depleted.

The Tubridgi Parties have elected to accelerate the depreciation rate from 1.25% per annum ('straight-line' depreciation rate) to 5% per annum ('accelerated' depreciation rate) on transmission pipelines and meter stations. On this basis, depreciation for the first year of the Access Arrangement Period will be $1.31 million increasing to $1.44 million in the last year of that period.

The OOE estimates that accelerating the depreciation rate from 1.25% to 5% has had the effect of increasing the proposed Reference Tariffs by between 26% and 29% over the Access Arrangement Period.

Section 8.33 of the Code establishes principles for depreciating the Capital Base for the purposes of determining a Reference Tariff consistent with the Cost of Service method chosen by the Tubridgi Parties. Under section 8.33, the Depreciation Schedule should, amongst other things, be designed:

> ***so as to result in the Reference Tariff changing over time in a manner that is consistent with the efficient growth of the market for the Services provided by the Pipeline (and which may involve a substantial portion of the depreciation taking place in future periods, particularly where the calculation of the Reference Tariffs has assumed significant market growth and the Pipeline has been sized accordingly).***

The OOE considers that the accelerated depreciation chosen by the Tubridgi Parties, is inconsistent with the principles of the Code and with section 8.33 (above) in particular, and as such the Regulator should consider requiring amendments to the proposed Access Arrangement to correct that inconsistency.

The OOE also suggests that the Regulator may wish to consider deferring a substantial portion of the depreciation to the future periods of the Access Arrangement.

As noted by the Tubridgi Parties in the Access Arrangement Information, there is evidence to suggest that there will be a long-term requirement for gas haulage Service on the Tubridgi Pipeline System. Accordingly, the Tubridgi Parties have adopted an economic life for the Tubridgi Pipeline of 80 years.
Further, as noted above, the Tubridgi Parties have elected initial Capital Base valuation based on optimising the separate Tubridgi and Griffin Pipelines into a single pipeline with the same capacity as the entire combined capacity of the two pipelines. The OOE considers that the accelerated depreciation chosen by the Tubridgi Parties, based on the argument that it reflects the risk associated with the assets being made redundant when existing gas fields are depleted, is inconsistent with the rest of the assumptions in the proposed Access Arrangement. Those assumptions have already lead to substantially higher proposed Reference Tariffs. For example, if there was a strong risk associated with the assets being made redundant when existing gas fields are depleted, then the initial Capital Base would have been reduced to reflect that risk, which would have produced substantially lower Reference Tariffs.

It should be noted that straight-line depreciation over the economic useful life of the respective assets has been used by the Tubridgi Parties in depreciating the optimised replacement cost of the asset base.

(c) Regulatory Rate of Return

The Tubridgi Parties have adopted a real pre-tax Weighted Average Cost of Capital (WACC) of 8.75%. It has been calculated using a WACC/Capital Asset Pricing Model (CAPM) approach, in line with that adopted in recent regulatory decisions in the gas industry.

i. Cost of Debt

The debt premium, or risk margin, of 1.2% used by Tubridgi is the same as that used in the determination of the Victorian gas Access Arrangements by the ACCC and ORG. The OOE considers this figure to be reasonable although the Regulator needs to undertake a review of the debt premium being proposed.

ii. Capital Structure

The standard debt to equity ratio for the gas transportation industry is considered to be 60/40 and the Tubridgi Parties have used this structure.

iii. Dividend Imputation

The Tubridgi Parties have used a dividend imputation figure, which does not appear to be standard industry practice in Australia. The gamma value for the value of imputation credits used by the Tubridgi Parties is 0.3 or 30%. The OOE does not consider that the Tubridgi Parties have substantiated the use of 30%. The OOE considers that a more appropriate value would be 50%, consistent with the general approach in Australia. This has been the recommended approach for past gas distribution access arrangements in Western Australia and is consistent with recent determinations across Australia, including the ACCC's determination in relation to the Victorian gas transmission Access Arrangements.

iv. Risk Free Rate

The Tubridgi Parties have not substantiated the method of averaging past bond yields over 2 months in calculating the risk free rate that is proposed. The Capital Asset Pricing Model is a forward looking model and as such it is considered acceptable practice to use a point estimate for the ten year Commonwealth bond or to use an average over a shorter period eg 20 business days, as used recently by IPART and supported by OOE for Western Power's 1998/99 and 1999/00 electricity access pricing re-determinations.

v. Beta Value

The Tubridgi Parties have used an equity beta of 1.3. This is inconsistent with the equity beta used in past Western Australian gas transmission and distribution access arrangements. Also this value is higher than 1.2 used in the determination of the Victorian gas transmission and distribution Access Arrangements. The Regulator needs to review and assess the equity beta being used and whether or not it adequately reflects the riskiness of the business. In this respect it is important to note that the

Tubridgi Parties have proposed their Access Arrangement based on the evidence, which suggests that there will be a long-term requirement for gas haulage Service on the Tubridgi Pipeline System.

It is noted that the proposed equity beta has also produced a higher asset beta.

vi. Market Risk Premium

The assumed typical market risk premium of 6.0% appears to be consistent with accepted industry values. The Regulator needs to be satisfied that there is wide acceptance of 6.0% as used by the Tubridgi Parties.

vii. Inflation Rate

The inflation rate of 2.5% assumed by the Tubridgi Parties is the same as the most recent Commonwealth Treasury forecast of 2.5%. The Regulator may also need to consider the potential impact of the GST on the inflation rate at the relevant time.

viii. Calculation of WACC

Using the typical input values quoted in the proposed Access Arrangement Information and using a deterministic model for the WACC formula gives outcomes for the real pre tax WACC of 8.02% and 9.39%. This compares with the Tubridgi Parties real pre tax result of 8.01% and 9.38%.

(d) Operations and Maintenance Expenditure

Table 5 in the Access Arrangement information summarises the forecast Non-Capital Costs for the Tubridgi Pipeline System. Assuming the table shows nominal values, the Tubridgi Parties have forecast constant Non-Capital Costs in real terms for the entire period of the initial Access Arrangement.

The Regulator should satisfy himself that the forecast Non-Capital Costs for the Tubridgi Pipeline System reflect prevailing industry best practice and that there is a reasonable basis for the forecasts. Further, the OOE considers that the Regulator should verify whether it is reasonable to forecast constant Non-Capital Costs in the context of the Tubridgi Pipeline ceasing to transport gas in late 2001, which has been reflected in the calculation of the Reference Tariffs for that, and later, years.

(e) Incentive Mechanisms

The Tubridgi Joint Venture Parties have proposed two incentive mechanisms in the Access Arrangement:

the absence of adjustments to total revenue or tariffs over the access arrangement period, thus allowing the Tubridgi Parties to capture benefits of efficiency gains within the period; and

a ‘glide path’ approach to the setting of tariffs such that reductions in non-capital costs achieved in one access arrangement period are shared with users over the subsequent access arrangement period.

Under the proposed Access Arrangement, revenue for the Access Arrangement Period is adjusted annually to take account of inflation, which, for the purposes of preparing the Access Arrangement, has been assumed at 2.5%. The proposed Access Arrangement provides that the Reference Tariff for the Haulage Reference Service will be adjusted on 1 July each year by the percentage change in the CPI, taking effect from 1 July 2000.

The Code encourages the inclusion in Access Arrangements of mechanisms for providing the service provider with incentives to improve the efficiency of pipeline operation. Incentive mechanisms typically provide for a sharing of the benefits of efficiency gains between the service provider and users both within an access arrangement period (such as through a CPI–X incentive mechanism) and across access arrangement periods.

The OOE considers that the currently proposed incentive mechanism does not provide for a sharing of the benefits of efficiency gains between the service provider and users within the initial access arrangement period. Therefore, the OOE suggests that the Regulator consider requiring amendments of the Access Arrangement to provide for an alternative CPI-X incentive mechanism. In addition it should be considered whether or not the incentive mechanism should apply to the capital costs, given the associated costs cannot be “minimised”, or it should only apply to non-capital costs.

2. Review of an Access Arrangement

The Access Arrangement makes a provision for revisions to the Access Arrangement to be triggered by a demand forecast report to be completed by 31 March 2002. The Access Arrangement proposes a ‘trigger event’ whereby the Tubridgi Parties will commission an independent report forecast demand for the Tubridgi Pipeline System. If this report, which will be completed by 31 March 2002, identifies that demand for the Tubridgi Pipeline System is likely to exceed 20TJ/day, for each day over any period of three consecutive months between 01 July 2002 and 30 June 2004 then the Tubridgi Parties will submit revisions to the Access Arrangement to the Regulator by 30 June 2002.

The OOE considers that in principle the proposed trigger event for a review of the Access Arrangement is appropriate. However, based on the demand forecasts in table 10 of the Access Arrangement, a demand of 20 TJ/day would represent increases of 270% and 670% over the currently projected demand levels for 2002/03 and 2003/04, respectively. The OOE considers that the demand trigger should be reduced to a much lower level to reduce the risk of the Tubridgi Parties receiving windfall gains in the event the actual demand is substantially higher than the currently projected throughput underlining the level of the proposed Reference Tariff.

The OOE also suggests that the Regulator consider requiring amendments to the Access Arrangement to include an additional trigger as discussed above under 1(a) "Initial Capital Base".