Final Recommendations

Applications for Revocation of Tubridgi and Beharra Springs Pipelines in Western Australia from coverage under WA Gas Access Regime

July 1999

National Competition Council

Summary

This document contains the National Competition Council's final recommendations regarding applications for revocation of coverage of the Tubridgi (PL 16) and Beharra Springs (PL 18) gas pipelines under the Western Australian gas access regime.

While the applications are separate, the Council has found it convenient to deal with both of them in this document.

After consideration of the applications and submissions lodged by interested parties, the Council concludes that the Tubridgi pipeline continues to meet all of the criteria for coverage listed in section 1.9 of the National Code. However the Council considers that the Beharra Springs pipeline does not meet criteria (a) or (d). Consequently, the Council recommends revocation of the Beharra Springs pipeline, but not of the Tubridgi pipeline.

This document comes in two parts.

Part A explains:

- the legislative background to the WA Gas Access Regime;
- the concepts of coverage and revocation under the Regime;
- details of the two applications, including specification of the two pipelines; and
- the process to be followed from here.

Part B contains the Council's detailed consideration of the criteria on which the Council's Final Recommendations are made.

Part A – Coverage and Revocation under the Gas Access Regime

Legislative Background

Western Australia has enacted a gas access regime to provide parties with a method for seeking access to gas transmission and distribution pipelines located in Western Australia. The regime is contained in the *Gas Pipelines Access (Western Australia) Act 1998* (the WA Gas Pipelines Act) and the *National Third Party Access Code for Natural Gas Pipeline Systems* (the National Code), at Schedule 2 of the WA Gas Pipelines Act.

The regime assists parties that wish to transport gas to negotiate a fair and reasonable contract of transportation with pipeline owner/operators. For example, a mining company may wish to buy gas from gas producers on the North West Shelf and transport it to a gas-fired power station at their mining site. Under the gas access regime, they have the opportunity to negotiate a contract for transport of the gas with the owners/operators of pipelines covered by the regime. In the absence of the regime, the owners/operators of pipelines might, by virtue of their monopoly over the transport of gas between the particular geographic regions, refuse to transport gas or demand a monopoly price for the transport of gas.

Coverage of Pipelines

Pipelines can become covered under the WA gas access regime where they are listed in Schedule A of the National Code or meet the coverage criteria in section 1.9 of the National Code (see Appendix 1).[1]

The two pipelines the subject of the revocation applications are listed in Schedule A.

Where pipelines are covered, the owners/operators of the relevant pipelines must comply with certain obligations under the WA Gas Pipelines Act and the National Code. The WA Gas Pipelines Act and the National Code contain rules determining whether pipelines should be covered by the gas access regime, the operation and content of access arrangements (which specify the terms, conditions, and prices on which owners/operators must offer access), the provision of information by the owner and/or operator of a pipeline to parties seeking access, dispute resolution principles, and pricing principles.

Revocation of Coverage of a Pipeline

The Code allows any party to seek revocation of coverage of a pipeline. The party must apply to the National Competition Council asking the Council to recommend to the relevant Minister that coverage of a pipeline be revoked. On receipt of the

[1] Pipelines can also become covered in other ways.

Council's recommendations, the relevant Minister must then decide the matter. In this case, the relevant Minister is the Western Australian Minister for Energy, Resources Development, and Education.

In reaching its recommendations, the Council is required to consider the criteria for coverage in section 1.9 of the National Code. Where it considers that a pipeline does not meet all the criteria, the Council must recommend revocation of coverage of that pipeline.

Where the Minister grants revocation, the owner/operator of the pipeline is released from its obligations under the WA Gas Pipelines Act and the National Code.

The Council's detailed assessment of the two applications against the criteria in section 1.9 is contained in Part B of this document.

The Applications

The revocation applications relate to two gas transmission pipelines listed in Schedule A of the National Code – the Tubridgi (PL16) and Beharra Springs (PL18) pipelines.

The applicant in respect of the Tubridgi pipeline is SAGASCO South East Inc, and the applicant in respect of the Beharra Springs pipeline is Boral Energy Resources Ltd.

In both cases, the applicant is the operator of the relevant pipeline.

Table 1 summarises details of the Tubridgi and Beharra Springs pipelines.

TABLE 1 Pipelines Subject to Revocation Applications

Pipeline Owner	Pipeline Licence	Location/Route	Length (km)	Diameter (mm)
SAGASCO SE Inc	WA – PL 16	Tubridgi to DBNGP Compressor Station No 2	87.5	168
Boral Energy Developments Ltd	WA – PL 18	Beharra Springs to CMSG Pipeline	1.6	168

The Tubridgi pipeline (PL16) is located 25 kilometres south of Onslow in Western Australia.[2] It carries gas from the offshore Tubridgi gas field to the Dampier to Bunbury Natural Gas Pipeline (DBNGP), where it is transported south towards Perth. The pipeline has a nominal transport capacity of 30 TJ per day.

[2] The following information about the Tubridgi pipeline is drawn from SAGASCO South East Inc.'s application for revocation.

Gas deliveries through the Tubridgi pipeline are limited to about 23 TJ per day because of the high level of inert gases in the gas from the Tubridgi gas field. The Tubridgi joint venture that operates the field has an exemption from the gas specification requirements of the DBNGP until the end of 2001 to enable it to deliver this level of off-specification gas to the DBNGP. By this time, the field is expected to be mostly depleted.

Running parallel to the Tubridgi pipeline is the Griffin pipeline (PL19). Both pipelines are around 87 kilometres in length and run from the Tubridgi gas processing facility to the DBNGP. The Griffin pipeline has a nominal capacity of 80 TJ per day, and carries gas from the Griffin gas field, and the gas processing facility at Thevenard Island to the DBNGP.

The Beharra Springs pipeline (PL18) was constructed by the Beharra Springs joint venture (BSJV) as part of the development of the Beharra Springs gas field.[3] It is a 1.6 kilometre pipeline that connects the Beharra Springs gas plant to the CMS-owned Parmelia pipeline. The pipeline has a transport capacity of about 35 to 40 TJ per day.

The Beharra Springs joint venture has contracted to provide the total gas reserves of the Beharra Springs gas field to Alcoa.

Revocation Process to be followed under National Code

The process for dealing with revocation applications is specified in sections 1.24 to 1.33 of the National Code.

To date, the Council has received an application for revocation and notified interested parties of the application. The Council released an Issues Paper inviting submissions and nominating relevant issues to be considered by the Council in making its recommendation. On 30 June, the Council released Draft Recommendations setting out its preliminary views on the applications. The Draft Recommendations recommended revocation of the Beharra Springs pipeline but not revocation of the Tubridgi pipeline.

In response to the Council's Draft Recommendation, Boral Energy Resources Ltd and a number of the initial submitters made further submissions contesting or supporting the Council's draft recommendation in relation to the Tubridgi pipeline. No submissions were received challenging the Council's draft recommendation in relation to the Beharra Springs pipeline.

After release of these final recommendations, the following steps will be taken:

- the Minister must make a final decision to revoke or not revoke coverage within 21 days;

[3] The following information about the Beharra Springs pipeline is drawn from Boral Energy Resources Limited's application for revocation.

- the Minister's decision (if it is to revoke coverage) cannot take effect until at least 14 days after his decision.

- The Minister must provide copies of his decision and reasons to relevant parties, including the owner/operator and any party who made a submission.

- Under section 38 of the *Gas Pipelines Access (Western Australia) Act 1998*, (contained at Schedule 1 of the WA Access Act) any person adversely affected by the Minister's decision may appeal to the Western Australian Gas Review Board.

Part B – Consideration of the Criteria under Section 1.9 of the National Code

Under the National Code, the Council must consider whether the relevant pipelines meet the criteria for coverage in section 1.9. The Council must recommend revocation in respect of a pipeline unless it meets all of the criteria.

In considering these criteria, the Council has taken into account the views of the applicants, and of parties that made submissions. A list of the parties that made submissions is at Appendix 2.

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

Background

The rationale for this criterion is that access regulation is only warranted where access is likely to generate tangible benefits (for example, reduced prices or improved quality) which will flow through to at least one market beyond the market for the services of the particular gas pipeline.

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

- the service to which access is sought is not in the same market as the market in which competition is promoted; and
- access would actually promote more competitive *outcomes* – such as lower prices – in that other market. Greater competition in another market will be less likely where that other market is already highly competitive, or where the other market is a monopoly (in the second case because cost savings are unlikely to be passed on to consumers).

The Council must also consider whether access charges are a sufficiently significant input into the other market to have a material effect on competition. In general, while a trivial increase in competition would not be sufficient, the Council considers access would not need to substantially promote competition in order to satisfy this test.

The Council’s approach is to:

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

Tubridgi Pipeline

Views put to the Council

The applicant submitted a number of reasons why it considered that access to the Tubridgi pipeline would not promote competition in another market.

First, it considered that, because the Griffin pipeline runs along the same route as the Tubridgi pipeline from the Tubridgi gas processing facility to the DBNGP, the Griffin pipeline could provide all the services provided by the Tubridgi pipeline. It noted that it intends to submit an access arrangement in respect of the Griffin pipeline.

Second, it considered there were practical and cost issues in mixing gas from other sources with the off-specification gas from the Tubridgi gas field that currently flows through the Tubridgi pipeline. It argued that:

> *Transporting third party gas, with a different gas specification, through the Tubridgi pipeline would require additional capital expenditure for control systems to enable the proportionate measurement of the two gas streams. … it is possible transporting two gas streams with different specifications could result in both gas streams being shut-in from the DBNGP if one of the streams was off-specification.*

Third, it is considering abandoning the Tubridgi pipeline in late 2001 when the contract to supply AlintaGas with the gas from the Tubridgi gas field expires.

Submissions from Mobil Exploration and Producing Australia Pty Ltd (Mobil), BHP, CMS Gas Transmission of Australia (CMS), and Western Power opposed revocation of coverage of the Tubridgi pipeline.

Mobil nominated a number of ways in which it considered access to the Tubridgi pipeline could promote competition in other markets.

First, Mobil considered access to the Tubridgi pipeline could promote competition among gas producers in the region around Tubridgi. Mobil argued that the current gas specifications for the DBNGP are very restrictive, but that these restrictions will be relaxed after 1 July 2005. As a result of relaxation of the current gas specifications, it will be possible to exploit a number of gas fields that contain gas that would be off-specification under the DBNGP's current specifications. According to Mobil, these fields include "offshore gas fields such as Macedon, Nimrod and other gas resources around Thevenard Island".

Mobil considered that continued coverage of the Tubridgi pipeline would facilitate exploitation of these gas fields. It argued that that it was important for potential gas field operators to know in advance the applicable tariffs for the Tubridgi pipeline to assist them to decide if exploitation of new gas fields was economic.

Mobil was concerned that the Griffin pipeline may not have the capacity to meet demand for gas transportation services once fields such as the Macedon field are developed.

BHP argued that access to the Tubridgi pipeline could promote competition in upstream gas markets. It based this argument on the wide range of possible services that it considered the Tubridgi pipeline could offer. These services could include:

> *gas commingling, [and] for backhauls and/or reversible gas flows from the DBNGP or the Goldfields Gas Transmission Pipeline (GGT) to utilize the depleted Tubridgi gasfields as storage.*
>
> *Alternatively, the Tubridgi pipeline could be used (beyond 2001) with a wider specification than the Griffin pipeline [to] supply otherwise off-spec gas from existing/new gas suppliers into the GGT (via a lateral) whereas the Griffin pipeline might supply a narrower-specification gas solely into the DBNGP. The converse of this alternate is also available; the choice of which pipeline has the wider gas specification being largely dependent on the respective gas quantities available for transport at either the narrower or wider specification.*

Western Power considered that access to the Tubridgi pipeline could promote competition for the provision of energy and energy services to consumers in the Onslow region. In Western Power's view, third party gas transported through the Tubridgi pipeline could be used to generate electricity in the Onslow region. Transport of gas through the Tubridgi pipeline may facilitate the generation of electricity at a lower price than via other methods of energy provision in this region.

Western Power also considered the provision of cheaper electricity could have a flow-on effect to competition in other markets. For example, the provision of cheap electricity to Onslow Salt, a "future large user of electricity", may promote competition in the markets supplied by Onslow Salt.

Western Power also considered access to the Tubridgi pipeline may promote competition upstream in the "undeveloped gas reserves in the Carnarvon basin in close proximity to the Tubridgi gas facilities", and nominated the Macedon gas field as an example. In Western Power's view, "[I]nclusion of coverage of the Tubridgi pipeline will increase total carrying capacity of the region and would encourage competition in the gas production market".

CMS considered that access to the Tubridgi pipeline may promote competition between gas producers in the market for gas sales, especially given:

the comparatively large number (by Australian standards) of oil and gas producers operating in the Tubridgi region and the extremely high prospectivity of the Carnarvon Basin (which holds the fields held by the North West Shelf joint venture, the Harriet and East Spar fields, the BHPP Griffin field, the WAPET Thevenard Island and Barrow Island fields, and the yet to be developed Gorgon and Macedon fields.

CMS also considered "lower delivered gas prices [promote] competition in the markets served by end users of gas", for example "gas retailers, electric power generators, refiners of alumina, and makers of bricks (all of whom are indirectly connected to the Tubridgi pipeline via their connection(s) to the Dampier to Bunbury Natural Gas Pipeline …".

After the release of the Council's Draft Recommendation, Boral made a submission on behalf of SAGASCO which deal with some of the arguments raised by Mobil, BHP, Western Power, and CMS.

Boral argued that access to the Tubridgi pipeline was unlikely to stimulate greater competition in the markets in which gas producers compete until at least 2005 (if at all). This was because onshore or offshore gas fields in the region of the Tubridgi gas processing plant (which is the start of the Tubridgi and Griffin pipelines) were unlikely to be developed before 2005.

Boral's submission discussed the parameters for the development of the Macedon field given it had been referred to in several submissions. It stated that the Macedon field was technically difficult to develop, contained gas of moderate quality, and development could not proceed prior to the relaxation of the gas specifications of the DBNGP in 2005. Boral cited a report by Wood Mackenzie arguing development of Macedon could not be expected "until at least post-2005".

Boral also argued there was no evidence to support the conclusion in the Council's draft recommendation that access to the Tubridgi pipeline would foster greater competition amongst producers by encouraging the development of additional gas fields. First, it cited the lack of firm enquiries to date for transport solely through the Tubridgi pipeline. Second, it referred to the fact that the Griffin pipeline had had a minimum spare capacity of 40 TJ per day since it began operating five years ago, and noted that this was greater than the nominal capacity of the Tubridgi pipeline. Third, it argued onshore transport costs were only a small factor when deciding whether to develop gas reserves.

Analysis

The submissions opposing revocation identified two markets in which competition would be promoted by access to the Tubridgi pipeline. These markets were identified primarily in terms of the competitors in those markets. The markets were:

- the market or markets in which gas producers in the Carnarvon Basin compete;

- the markets in which gas users (for example, gas retailers, electric power generators, refiners of alumina, and makers of bricks) compete.

The first issue for the Council is whether these markets are separate from the market for gas transportation services and other services provided by the Tubridgi pipeline.

In considering this, the Council has been guided by a test developed by Professor Henry Ergas.[4] In essence, the Ergas test points to a separate market if:

- the services supplied by the gas pipeline are separable, from an economic point of view, from the other service or services. This involves an assessment as to whether the transaction costs in separate provision at the two layers would not be so great as to prevent such separate provision from being feasible; and

- the assets used to provide the gas pipeline service are sufficiently specialised that supply side substitution is not achievable so readily as to unify the field of rivalry between the two layers.

The Tubridgi pipeline provides services that may include gas transportation, storage of gas in the pipeline (linepack), and some measure of system stability for the gas transportation system.

The Council is satisfied that these services, in particular the gas transportation service, is sufficiently different from the services provided in the markets occupied by gas production and gas usage that these other services can be considered to occupy separate markets.

First, the Council considers that gas production services require specialised production and processing facilities that are different to the facilities required for gas transport services along the Tubridgi pipeline. Second, the Council considers the Tubridgi pipeline is sufficiently specialised that other facilities could not readily be used to provide the gas transportation services provided by it.

The next issue is whether access to the Tubridgi pipeline promotes competition to a non-trivial extent in the markets identified in the submissions.

The Council considers that, to the extent that access to the Tubridgi pipeline gives a party the right to negotiate and to have prices determined in an independent and transparent process, access would promote competition to a non-trivial extent in at least the market occupied by gas producers in the Carnarvon Basin.

Gas producers located in the Carnarvon basin depend on gas transportation services to reach markets for gas usage in the Mid West and South West of Western Australia. The ability of the producer or the end user to negotiate effective access is necessary to

[4] Ergas, H, submission to the NCC in support of an application by Carpentaria Transport Pty Ltd, pp. 1-3.

enable gas producers to compete for sales of gas. Access promotes competition amongst producers by encouraging the development of additional gas fields in the Carnarvon basin. From the evidence available to the Council, this appears likely.

The Council also considers that the ability to obtain access to the Tubridgi pipeline may promote competition in the market or markets in which gas is used, in particular markets such as the energy market. Gas at more competitive tariffs may compete effectively with other energy sources, and the presence of additional sources of gas may place competitive pressures on gas producers to supply gas at cheaper rates or on better terms.

The applicant submitted that the Griffin pipeline (PL19) could fully meet the gas transportation requirements of the producers in the Carnarvon Basin, obviating the need for access to the Tubridgi pipeline.

However, the Council is persuaded by the arguments raised by the submissions opposing revocation that the Griffin pipeline may not be able fully to meet the requirements of gas producers in the Carnarvon Basin, and that access to the Tubridgi pipeline may therefore promote competition. In particular, the Council accepts the arguments that:

- the Tubridgi pipeline could provide additional gas transport capacity if the Griffin pipeline became capacity constrained. The Council accepts that this is a reasonable likelihood given the relaxation of gas specification requirements for the DBNGP in 2005, and the possibility that gas delivered through the Tubridgi pipeline could supply gas to the GGT pipeline if a further lateral is built to connect the two pipelines;

- the Tubridgi pipeline could provide backhaul services to enable the depleted Tubridgi gas field to be used for gas storage; and

- the Tubridgi pipeline could be used to transport gas of a different specification to the Griffin pipeline where this was necessary to meet the requirements for delivery of gas.

The applicant raised two other arguments against granting access to the Tubridgi pipeline:

- that access would present technical and cost problems given the off-specification gas currently carried in the pipeline; and

- the applicant may abandon the pipeline after 2001 when the Tubridgi gas field is depleted.

The Council does not find these arguments convincing. In relation to the first argument, the Council finds compelling the arguments raised in submissions opposing revocation. In particular, the Council accepts BHP’s argument that commingling of other gas with the Tubridgi gas may enable *more* gas to be carried in

the Tubridgi pipeline. This would be true wherever the new gas introduced to the Tubridgi pipeline was closer to the specifications of the DBNGP than the gas currently carried in the pipeline. The Council also accepts BHP's argument that continued access to the Tubridgi pipeline may facilitate the transport of different specifications of gas from gas transported in the Griffin pipeline where commingling might present a problem. This would be the case where the gas transported in the Griffin and Tubridgi pipelines was transported to different locations.

The Council considers that where access does present technical or cost problems, such as the need for additional metering equipment, that this can be made a condition of granting access.

The Council does not find the applicant's second argument compelling. It would be unlikely for the applicant to abandon the Tubridgi pipeline in circumstances where third parties were interested in seeking access to it, given that access prices could be set to more than cover any costs associated with continuing to operate the pipeline.

Boral raised a number of other arguments on behalf of the applicant. It argued there had been little interest to date in access to the Tubridgi pipeline, and that the Griffin pipeline had had spare capacity greater than the Tubridgi pipeline for the five years of its operation.

The Council considers that in assessing the likelihood that access to the Tubridgi pipeline will encourage competition amongst gas producers, it is important to focus on likely future developments rather than focus on what has occurred historically. While history may be a guide to likely future developments, it is also reasonable when assessing likely future developments to take into account the views of current gas producers in the region. On the evidence available to it, the Council considers that it is reasonably likely that third party access to the Tubridgi pipeline will be sought within a reasonable period. The timing of access, and possible costs in the interim of maintaining coverage, is discussed further under criterion (d).

The Council concludes that the Tubridgi pipeline meets criterion (a).

Beharra Springs Pipeline

Views put to the Council

The applicant considered that access to the Beharra Springs pipeline would not promote competition in another market because there is unlikely to be third party demand to transport gas in the pipeline. This is because there "are no other gas fields adjacent to the pipeline which could require its use and remaining field life is limited". Elsewhere in the application, the applicant noted that the "closest known gas reserves to Beharra Springs are at Dongara, some 25 km away, which has its own gas treatment and pipeline facilities".

CMS supported this argument in its submission. It argued that the Beharra Springs "is completely surrounded by the permit covering the Beharra Springs field", suggesting that apart from the BSJV, which holds the permit over the Beharra Springs field, it was unlikely another party would be interested in seeking access to the pipeline for transporting gas:

> *For a third party to reasonably seek access to the Beharra Springs Pipeline, that third party would require access to an alternate supply of gas within the permit covering the Beharra Springs field. On this basis it is extremely unlikely that any third party would legitimately wish to seek access to the Beharra Springs Pipeline.*

However, Western Power opposed revocation of coverage of the Beharra Springs pipeline.

It stated that access may promote competition "if the gas reserves in the Beharra Springs gas field were made available for sale to gas users". It also considered that, while at present there is only one user of gas from the Beharra Springs field (Alcoa), this might change in the future.

Western Power also argued that once the existing gas field at Beharra Springs became depleted, the opportunity would arise to use the field for gas storage. It noted that the only gas storage facilities currently available in the Perth Basin were provided by CMS Gas Transmission Pty Ltd at its Mondarra facilities.

Gas could be stored in the Beharra Springs gas field by backhauling it up the Beharra Springs pipeline to the field.

Western Power considered that gas storage in the Beharra Springs gas field could enhance competition in the "market for gas in the Perth basin". It verbally clarified that it considered that access would promote competition in both upstream gas production markets and downstream energy markets.

Analysis

The Council has considered the question of whether access to the Beharra Springs gas pipeline would promote competition in another market.

The Council considers that if access to the Beharra Springs pipeline promotes competition it would be in either:

- the market occupied by services of gas production (including re-extraction of stored gas from gas fields after storage); or
- the market for energy.

Western Power nominated two ways in which access to the Beharra Springs pipeline may promote competition:

- if ownership of one or some of the relevant links in the supply chain changed; and/or

- by providing the possibility of gas storage in the depleted Beharra Springs field.

On the first ground, the applicant argued that as the entire reserves of the Beharra Springs gas field are contractually committed to Alcoa, access to the Beharra Springs pipeline would be unlikely to promote competition in another market.

It is possible that if ownership of gas entitlements in the Beharra Springs field or in the end-use of the gas changed that there may be some scope for greater competition. However, at this stage, given all the gas in the field is committed to the use of Alcoa, there is little real scope for enhanced competition if the only change were in ownership of currently contracted reserves.

On balance, the Council does not consider that a change in ownership, in conjunction with a scheme of access to the Beharra Springs pipeline, is likely to promote competition in a market. This situation would only be likely to change if new reserves were found in the same vicinity as existing reserves or if the Alcoa contract was re-negotiated. On present evidence, the Council considers this is sufficiently unlikely.

The Council does not consider it necessary to finally determine whether the market or markets in which changes in ownership would promote competition are separable from the market in which the Beharra Springs pipeline provides services.

The second ground is that access to the Beharra Springs pipeline may promote competition through use of the Beharra Springs gas field for gas storage.

The Council considers that the issue of whether gas storage and re-extraction occupies a separate market to the market occupied by gas transportation services depends on the circumstances of the particular markets, in particular the size of the pipeline and the amount of gas that must be stored.[5]

Large gas pipelines can provide significant storage of gas (known as linepack). However, the Beharra Springs pipeline, due to its short length, has little capacity to provide gas storage through linepack.

For storage of large amounts of gas, specialised facilities such as a large storage reservoir (such as a depleted gas field, an aquifer, a salt cavern, or a disused mine) are required. These storage facilities which are distinct from the gas transportation facilities provided by gas pipelines.

[5] Gas storage is rare in Australia. Typically gas is only extracted from gas fields when ready to be used. However, in other places (e.g. Europe), gas storage is much more common, and can be provided by depleted gas fields. Compare *Natural Gas Transportation: Organisation and Regulation*, OECD International Energy Agency, 1994, pp. 36 – 37.

On balance, therefore, the Council is prepared at this stage to accept that the storage facilities that could be provided by the Beharra Springs field are separable from the market for gas transport services and other services provided by the Beharra Springs pipeline under the terms of the Ergas test.

Western Power argued that access to the Beharra Springs field would promote competition, noting that at present only CMS Gas Transmission's Mondarra facilities provide storage facilities in the region.

Gas from storage facilities at the Beharra Springs gas field may provide an additional source of gas for the energy market.

However, the Council is not convinced by the evidence presented to it at this stage that one additional source of gas would promote competition in the relevant energy market.

Therefore, the Council concludes that the Beharra Springs pipeline does not meet criterion (a).

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

Background

The rationale for the WA Gas Pipelines Act and the National Code is that access regulation should be limited to infrastructure where it is not economically viable to build competing facilities. As such, access regulation should normally be confined to infrastructure with monopoly power, and usually to infrastructure exhibiting *natural monopoly* characteristics – that is, where a single facility can meet market demand at less cost than two or more facilities. Such a facility is normally characterised by large up-front investment costs and low operating costs, resulting in economies of scale across a broad range of output – that is, as output increases, average costs per unit of output continue to decrease across the range of output sought by the market.

The Council has interpreted this criterion consistent with its previous interpretations of section 44(G)(2) of the *Trade Practices Act 1974* (Commonwealth). The Council notes that section 44G(2) contains slightly different wording in that it provides for declaration of facilities where "it would be uneconomical for anyone to develop another facility to provide the service". However, the Council considers the words in this criterion are consistent with the Council's interpretation of the words in section 44G(2), particularly since the Gas Reform Implementation Group (in formulating the coverage criteria under

section 1.9 of the National Code) indicated that they intended to replicate the words of section 44G.[6]

In examining whether it is economic to develop another facility, the Council applies a *social* test rather than a *private* test of the costs and benefits of developing another facility. The social test looks at whether all of the benefits associated with the development of another pipeline outweigh all of the costs, for example, whether it would be better for an industry to share infrastructure because new investment would substantially raise industry costs and therefore affect the prices paid by consumers or Australia's competitiveness overseas. Where construction of a new facility might proceed in the absence of access, but would be socially wasteful because existing facilities can fully and more efficiently meet demand, the social test indicates that the development of another facility is uneconomic.

Some of the factors relevant to a consideration of whether it is uneconomic to develop another pipeline are:

- whether there is significant excess capacity in existing pipelines;
- whether current and projected levels of demand are most cheaply supplied by one party;
- whether average and marginal costs of production per unit continue to decline for all likely levels of demand;
- whether the costs of developing another pipeline to provide the transportation capacity sought by the third party outweigh the costs of expanding the capacity of the existing pipeline to meet the third parties' needs while ensuring the owner/operator and existing users do not lose amenity;
- the number of pipelines currently supplying the market for transport of gas between the regions sought by third parties;
- the height of barriers to entry (such as large upfront costs of developing another pipeline, particularly costs that cannot be recovered if the new investment were to be abandoned).

Gas pipelines are typically characterised by high construction costs and low operating costs such that the marginal cost of transporting a unit of gas is very low. Moreover, up to the point of fully expanded capacity, average costs of transportation of a unit of gas decline. This means that gas pipelines exhibit natural monopoly characteristics. In lay terms, this means it is almost always cheaper to transport gas through existing

[6] See GRIG Policy Paper on the National Gas Access regime, p. 7, quoted in *National Gas Access Regime: Recommendation to the Gas Reform Implementation Group on the National Third Party Access Regime for Natural Gas Pipeline Systems*, (National Competition Council) at p. 13.

pipelines (if spare capacity exists or can be added) than it is to build another pipeline to transport the gas.

Moreover, investment in new pipelines is, in economic language, ‘sunk’. That is, the investment is fixed or committed, and if the investment is a failure, little or none of it can be retrieved. This means that incremental or gradual entry – a common form of entry in other industries – is not feasible in the gas transportation industry.

Finally, the costs of laying a new pipeline rise slowly compared with increases in the capacity of that pipeline. In other words, it is much less expensive - per unit of capacity - to lay a large capacity pipeline than a small capacity pipeline.

In general, therefore, it is not economic to develop another pipeline where an existing pipeline has existing spare capacity (or can develop it through greater compression and/or looping), although it will always be necessary to consider the facts of particular pipelines.

General Analysis – Both Pipelines

In the Council’s view, where existing pipelines can fully meet demand, then, from a social viewpoint, it would be wasteful for new pipelines to be built simply because of refusal to provide access.

The Council notes the short length of, in particular, the Beharra Springs pipeline. However, this is not the determining factor of whether the pipelines exhibit natural monopoly characteristics.

The Council considers that the Tubridgi and Beharra Springs pipelines exhibit characteristics of natural monopoly within the geographic regions served by them. They have some excess capacity to meet demand, and construction of other pipelines along the same routes would be socially wasteful in the sense that demand could be more cheaply met by the existing pipelines.

The Council is satisfied, in terms of social costs and benefits, that where additional capacity is required beyond the existing capacity of pipelines serving the particular region, then expanding the capacity of existing pipeline is generally a cheaper and more efficient way of meeting additional demand than the construction of new pipelines. Expansion of a pipeline’s existing capacity can be achieved through looping (duplication of the most capacity constrained parts of the existing pipeline) or the addition of further compressor stations.[7]

The Council considers that, for these reasons, both the Tubridgi and the Beharra Springs pipelines exhibit natural monopoly characteristics.

[7] At some point, extra looping or compression becomes more expensive than construction of a new pipeline.

The applicant raised a number of arguments specific to each pipeline why it would *not* be uneconomic to develop another pipeline.

Tubridgi Pipeline

Views put to the Council

The applicant argued that "the existence of two parallel pipelines of the same length [and running along the same route] demonstrates that it would not be uneconomic to construct another pipeline".

Boral argued on the applicant's behalf that a new field might require the development of a much larger pipeline than the Tubridgi pipeline. In particular, to be economic the Macedon field would require a pipeline capable of carrying 120 TJ per day, while the Tubridgi pipeline had a nominal capacity of only 30 TJ per day.

Mobil's submission attacked this argument. It argued that the Griffin pipeline was built to carry gas from the Griffin field because the Tubridgi gas pipeline was at that time near full capacity, and because the gas from the Griffin field was a different specification to the gas from the Tubridgi field. It concluded that the existence of the two parallel pipelines reflected "two separate projects, which had separate timing and gas quality which therefore demanded separate pipelines".

Mobil considered that the capital investment in the construction of the Tubridgi pipeline is likely to be nearly paid off by the time of the depletion of the Tubridgi field. It considered that tariffs on the Tubridgi pipeline would then be significantly lower than on the newer Griffin pipeline because they would be calculated on a much lower capital base than the Griffin pipeline. Mobil implied that the existence of a low cost pipeline such as the Tubridgi pipeline would make alternative new investment in another pipeline uneconomic.

BHP argued that the Griffin pipeline had been constructed because there was concern the Tubridgi pipeline would not have sufficient capacity to supply the gas transportation needs of both the Tubridgi and Griffin fields.

Western Power argued it would be uneconomic to develop additional capacity when there was significant spare capacity in the Griffin and Tubridgi pipelines. It noted that of the combined approximate 120 TJ per day capacity of the Griffin and Tubridgi pipelines, only 53 TJ per day was currently being used. BHP raised the same argument.

CMS attacked the applicant's argument that it may not be feasible to mix gas from the Tubridgi field with other gas. CMS considered that there were possible benefits from commingling other gas with the off-specification gas currently transported in the Tubridgi pipeline. It argued commingling other gas with Tubridgi gas could reduce (or not increase) the degree of off-specification of gas carried in the Tubridgi pipeline, permitting more rather than less gas to be carried in the Tubridgi pipeline.

BHP argued that once the Tubridgi gas field was depleted, the Tubridgi pipeline could be used to transport gas to the field for storage. Boral responded by arguing that the Griffin pipeline could provide access to the Tubridgi gas field.

Analysis

The applicant argued that it is economic to develop another pipeline to provide the same services as the Tubridgi pipeline. It pointed to the Griffin pipeline that runs parallel to the Tubridgi pipeline as evidence that it was economic to develop another pipeline.

In the particular circumstances of this case, the Council is not convinced by the applicant's argument.

In the event that the Griffin pipeline became capacity-constrained, it would be more economic for the Tubridgi pipeline to provide access for gas transportation than for a new pipeline to be constructed to provide this service. While at the present time neither the Griffin or Tubridgi pipelines is fully committed, on the basis of the submissions made to the Council, the Council accepts that there is a sufficient likelihood in the future of demand exceeding capacity, for the Council to take this into consideration.

Boral argued on behalf of the applicant that in any event development of new fields would require construction of new and much larger pipelines than the Tubridgi pipeline (which, with a nominal capacity of 30 TJ per day, is relatively small). In particular, it argued development of the Macedon gas field would require construction of a new pipeline capable of carrying 120 TJ per day.

However, the Council notes the arguments by Mobil and CMS that a number of new fields could be developed which might too small to justify construction of a new pipeline. Further, as the Council notes above, it is likely to be more economic (up to a point) to add capacity to the Griffin and Tubridgi pipelines than construct new pipelines.

The Council concludes that it would be uneconomic for anyone to develop another pipeline to provide the gas transportation services provided by the Tubridgi pipeline. The Tubridgi pipeline meets criterion (b).

Beharra Springs Pipeline

Views put to the Council

The applicant argued that:

> *Due to the existence of one specific end user, who has contractual rights to the entire reserve of gas, it is unlikely the need would arise to construct*

> *another pipeline, unless another gas field was located within close proximity to the Beharra Springs gas field, which is not the case.*

The application noted that the nearest field was the Dongara field, which was served by its own infrastructure.

The applicant also argued that because the Beharra Springs pipeline is so short (only 1.6 km), it was likely to be more economic to construct another pipeline than to carry out modifications to the existing pipeline to cater for access. It estimated a new pipeline would cost $130,000 to build.

CMS supported the application for revocation. It considered this criterion was not relevant because it was extremely unlikely third parties would seek access to the Beharra Springs pipeline.

Western Power noted that the Beharra Springs pipeline currently had significant excess capacity. It argued that if additional customer access were sought to the Beharra Springs gas field, the Beharra Springs pipeline would provide a more economic method of meeting that need than the construction of a new pipeline.

Demand for additional access might arise if new gas reserves were discovered in the area, or the Beharra Springs gas field was used for storage once depleted.

Analysis

Criterion (a) concluded that access to the Beharra Springs pipeline could only promote competition, if at all, to the extent it enabled access to the Beharra Springs gas field for gas storage purposes.

The Council considers that, for the purpose of backhauling gas to the Beharra Springs gas field, it would be socially wasteful to construct another pipeline rather than use the Beharra Springs pipeline. The Beharra Springs pipeline could fulfill this purpose without the need for the construction of another facility.

The Council concludes that the Beharra Springs pipeline meets criterion (b).

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

Background

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

Tubridgi Pipeline - Views Put to the Council

The applicant did not address this issue.

Western Power noted that SAGASCO, as the operator of both the Tubridgi and Beharra Springs pipelines, has been actively involved in negotiating third party access to the Griffin pipeline. Impliedly, it considered access to the Tubridgi pipeline did not pose greater risks than to the Griffin pipeline.

CMS considered access could be provided safely. It noted that gas safety issues were regulated by the Department of Minerals and Energy of Western Australia, which required pipeline operators to have in place comprehensive safety management systems. CMS stated that from its long association with Boral in the operation of the Beharra Springs pipeline, it considered Boral to be a competent and safe pipeline operator.

Beharra Springs Pipeline - Views put to the Council

The applicant did not address this issue.

Western Power submitted that increased access "would not necessitate significant changes to the existing pipeline structure", and could be accommodated without "additional health or safety risks".

CMS considered that the pipeline met criterion (c) for the reasons advanced above in relation to the Tubridgi pipeline.

Analysis – Both Pipelines

Neither the applicants nor the submission-makers disputed that access could be provided safely.

Typically, pipelines operators can provide third party access safely by taking appropriate measures. Third party access to gas pipelines is currently being safely provided to many pipelines in Australia under the National Code. The Council saw nothing to displace that view in the case of these two pipelines.

The Council notes CMS's argument that the Department of Minerals and Energy oversees the safe operation of gas pipelines in WA, and CMS's comment that Boral is a competent and safe pipeline operator. It also notes that SAGASCO is currently safely providing third party access to the Griffin pipeline.

For these reasons, the Council considers that access to the Tubridgi and Beharra Springs pipelines would not pose undue risks to human health and safety.

The Council concludes that the relevant pipelines meet criterion (c).

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

Background

In revocation matters, the Council considers whether access to a pipeline is contrary to the public interest. This assessment examines, among other matters, whether any benefits of access, such as cheaper prices and more efficient use of resources, are outweighed by regulatory or compliance costs. The Council also takes into account factors such as the effect of access on the environment, regional development, and equity.

Tubridgi Pipeline

Views Put to the Council

The applicant considered the costs of providing access outweighed the benefits, and therefore it was in the public interest to revoke coverage.

The applicant (and Boral on its behalf) cited the following costs:

- costs of preparing an access arrangement and having it approved by the regulator (including the costs borne by the regulator);
- operational and maintenance costs associated with keeping the pipeline operational. These costs would have to be borne by the applicant if there was no interest from third parties in seeking access; and
- regulatory failure costs, including the costs of maintaining the pipeline in an operational state in circumstances where it might be more efficient to decommission the pipeline.

The applicant and Boral considered coverage provided few benefits. Boral argued that there had been little interest to date in obtaining access.

Boral argued that in any event the Griffin pipeline could provide any gas transport services required by third parties.

Boral argued that if a new field were developed, a larger capacity pipeline might need to be constructed than the Tubridgi pipeline in order to carry sufficient gas to make development of the field economic.

Most importantly, Boral contended it was unlikely parties would seek access to the Tubridgi pipeline prior to the review of the gas specifications on the DBNGP in 2005 because the gas in the area did not meet the current specifications of the DBNGP. In particular, it considered the Macedon field was unlikely to be developed before 2005 because of the gas quality of the Macedon field. Boral argued that it was open to the parties at this time to apply for 're-coverage' of the Tubridgi pipeline without requiring the pipeline to remain operational for a period in which no gas was flowing.

Western Power considered access to the Tubridgi pipeline would be in the public interest because it could facilitate cheaper and more reliable supply of energy to Onslow. This would facilitate the development of new industry in the Onslow region.

Mobil considered that continued coverage of the Tubridgi pipeline could facilitate development of new gas fields in the Carnarvon Basin. Development of these fields depended in part on transportation costs. Regulated access prices under the WA Gas Pipelines Act could be cheaper than if the Tubridgi pipeline were unregulated. Mobil considered it was important for producers to have information about transportation tariffs (as provided in access arrangements) when deciding whether it was economic to develop new fields.

In its second submission, Mobil responded to Boral's argument that there was little prospect of that third parties would seek access to the pipeline prior to 2005. It argued that there were more gas fields than the Macedon field in the general vicinity of Tubridgi.

Mobil argued that the issue boiled down to one of timing – whether it was more appropriate to have the pipeline covered for a period during which gas might not be flowing through it compared to the costs of seeking 're-coverage' once new fields were developed. In Mobil's view, re-coverage would take at least 6 months, and might "frustrate contract negotiations as the transportation tariff [would] be a fundamental element of any such negotiations".

Mobil, BHP, and CMS all emphasised the importance of transportation tariffs in deciding whether it was economic to develop new gas fields. They considered transport tariffs were significant in influencing whether it was viable to develop new fields.

BHP considered revocation of coverage could limit transport options available to gas producers and might reduce security of supply.

In its second submission, BHP disputed that the Macedon gas field was unlikely to be developed before 2005. It argued that the timing of development had not yet been determined but that negotiations were "currently progressing with several parties", and that development could "well be within the 5 year timeframe SAGASCO refers to".

BHP also considered that SAGASCO as the operator of both the Tubridgi and Griffin pipelines might be able to save some regulatory costs when preparing an access arrangement for the Tubridgi pipeline by borrowing from its experience in preparing an access arrangement for the Griffin pipeline.

CMS argued there were a number of fields around Thevenard Island which could be directed through the Tubridgi pipeline.[8]

Analysis

On the evidence available to it, the Council considers that there is a reasonably strong prospect *in the longer term* (i.e. post-2005) that access to the Tubridgi pipeline will be sought to carry gas from new and existing gas fields. However there may be a period during which the pipeline is covered when third parties are not seeking access. If Boral's submission is accepted, parties are unlikely to seek access (if at all) before 2005. On the other hand, if CMS's argument is accepted, there is a reasonable prospect in a shorter timeframe that third parties will seek access.

In these circumstances, determining where the public interest lies depends on:

- the timeframe within which access is likely to be sought;
- the costs that coverage will impose on the pipeline owner and operator in a period where access is not sought; and
- the best way to minimise costs under conditions of uncertainty about future demand for access.

The first step in determining where the public interest lies is to quantify the medium and long-term costs and benefits of coverage.

The applicant has indicated that the major cost of coverage is the regulatory cost associated with preparing an access arrangement.

The Council considers that the applicant may be able to reduce this cost to some extent by using its experience in preparing an access arrangement for the Griffin pipeline. In saying this, the Council recognises that there will be costs associated with matters (e.g. asset valuation, terms and conditions of access) that are specific to the Tubridgi pipeline.

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[8] Gas from fields around Thevenard Island currently flow through the Griffin pipeline.

A second major cost is said to be the cost of maintaining the pipeline in an operational state when no gas is flowing through it. These costs cannot be recouped from third party users and must be borne by the operator and/or owner.

The benefits of continued coverage depend on views about:

- the likelihood that third parties will be interested in seeking access to the Tubridgi pipeline; and
- the timeframe within which access is likely to be sought.

On the one hand, the applicant considered that there was little prospect of access being sought before 2005 at the earliest, and that in any event access to the Griffin pipeline was adequate to meet demand.

On the other hand, Mobil, BHP, and Western Power considered that demand was likely to expand significantly in the medium term due to a number of factors:

- changes in the gas specification requirements of the DBNGP enabling fields to be developed that do not currently meet DBNGP specifications;
- increasing demand in the Onslow region and elsewhere;
- the prospect the Griffin pipeline will become capacity-constrained, requiring an alternative source of transport; and
- using the Tubridgi pipeline to provide a different service to that of the Griffin pipeline (e.g. carrying gas of a different specification, or to a different location).

BHP argued the Macedon field may be developed prior to 2005, while Mobil considered that there were a number of other fields in the vicinity of the Tubridgi pipeline that might be developed prior to then. CMS argued gas from fields around Thevenard Island (both currently operating and to be developed) may be directed through the Tubridgi pipeline.

The Council recognises there is uncertainty about future demand for access to the Tubridgi pipeline. In these circumstances, Boral argues for revocation due to the costs of preparing an access arrangement and the costs of maintaining the Tubridgi pipeline in an operational state during a period of possible non-use. Boral considers re-coverage at some future time would be the most appropriate way to deal with the situation where demand for access arise in the future. On the other hand, Mobil points to the cost and inconvenience of seeking re-coverage, the delays it may impose on projects to develop gas fields, and the lack of information in the interim concerning tariffs and terms and conditions on the pipeline.

The Council considers that once it is accepted that third parties are likely to seek to the Tubridgi pipeline in the longer term, then the operator is within a reasonable timeframe to bear the cost of preparing an access arrangement.

The remaining cost relates to maintaining the pipeline in an operational state. The Council notes that under present contractual arrangements with the Tubridgi joint venture, the operator anticipates maintaining the Tubridgi pipeline in an operational state until the end of 2001. By this time, firm demands for use may have arisen.

The applicant also argued that access to the Griffin pipeline meets short and medium term requirements for transport of gas. For the reasons set out in relation to criterion (b), the Council does not accept this argument.

Overall, the Council considers there is sufficient prospect in the medium and longer term that demand will arise for access to the Tubridgi pipeline that the benefits of access outweigh the costs.

The Council concludes that the Tubridgi pipeline meets criterion (d).

Beharra Springs Pipeline

Views put to the Council

The applicant argued that it would be in the public interest to revoke coverage of the Beharra Springs pipeline because preparation of an access arrangement would consume considerable time and resources, and it was unlikely third parties would be interested in seeking access. It thus considered that any benefits of access would be outweighed by the costs of providing it.

CMS supported the application. It considered there was little prospect third parties would seek access to the Beharra Springs pipeline, and therefore access provided few benefits. On this basis, it considered the costs of preparing an access arrangement outweighed the benefits. It also considered third parties could at some future time apply for re-coverage of the Beharra Springs pipeline in the event that there was interest in third party access to the pipeline.

Western Power considered it was in the public interest for the Beharra Springs pipeline to remain covered. This was because increased access would promote competition for existing reserves and facilitate the development of other markets in the Beharra Springs gas field, such as the market for gas storage. It was possible for gas to be transported from other sources via the Beharra Springs pipeline to the Beharra Springs field and stored in the Beharra Springs field for later use.

Analysis

The major cost of continued coverage is the cost for the applicant of preparing an access arrangement, and the regulatory cost of approving that arrangement.

The most significant possible benefit of continued coverage is the possibility that access to the Beharra Springs pipeline may facilitate competition through the

provision of gas storage facilities, and therefore greater competition in the supply of gas to energy markets in Western Australia.

The Council considers that on balance the applicant has demonstrated that regulatory costs of access are significant enough, when compared to the benefits of access, that access *would* be contrary to the public interest. This follows from its view when considering criterion (a) that access would do little to contribute to greater competition.

The Council concludes that the Beharra Springs pipeline does not meet criterion (d).

Appendix 1: Criteria for Coverage in Section 1.9 of National Code

The Council must recommend revocation of coverage of a pipeline – either to the extent sought, or to a greater of lesser extent than sought in the application[9] – if the pipeline does *not* satisfy one or more of the criteria for coverage in section 1.9 of the National Code.

The criteria in section 1.9 are:

- that access (or increased access) to services provided by means of the pipeline would promote competition in at least one market (whether or not in Australia), other than the market for the services provided by means of the pipeline;
- that it would be uneconomic for anyone to develop another pipeline to provide the services provided by means of the pipeline;
- that access (or increased access) to the services provided by means of the pipeline can be provided without undue risk to human health or safety; and
- that access (or increased access) to the services provided by means of the pipeline would not be contrary to the public interest.

[9] Taking account of any part of the pipeline that is necessary to provide services that potential users may seek access to (section 1.29).

Appendix 2: Submissions received by Council

The Council received submissions from the following organisations in response to its Issues Paper and Draft Recommendations:

CMS Gas Transmission of Australia Pty Ltd (three submissions)

BHP Petroleum (two submissions)

Western Power Corporation (two submissions)

Mobil Exploration and Producing Australia Pty Ltd (two submissions)

Boral Energy Resources Ltd (two submissions)