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ExxonMobil
Gas Marketing

5 June 2002

Proposed GasNet Australia
Access Arrangement from
January 1, 2003

Ms Kanwaljit Kaur
Acting General Manager
Regulatory Affairs - Gas
Australian Competition and Consumer Commission
PO Box 1199
DICKSON ACT 2602

Dear Kanwaljit,

Further to your letter of May 9, 2002, ExxonMobil Gas Marketing thanks the ACCC for granting an extension to enable us to provide a considered submission in relation to the proposed GasNet Australia Access Arrangement proposal for commencement January 1, 2003.

In considering the proposed access arrangement we highlight to the ACCC the importance of any precedent that this decision will set in relation to existing and future transportation systems, the industry they are part of and the right regulatory incentives for efficient new investment.

The revised GasNet tariff proposal outlines an incremental tariff structure whereby all costs associated with the SouthWest Pipeline asset (SWP) are allocated to SWP tariffs. In proposing such a system GasNet has effectively conceded that the materiality of any system wide benefits to non-SWP users is such that it is unlikely to justify recovering any SWP costs from non-SWP users.

This is consistent with the ACCC June 2001 final decision on the 2000 GPU GasNet tariff proposal. The ACCC stated at the time that it was not convinced that the SWP would pass the system wide benefit test.

The Allen Consulting Group has prepared an independent report into the proposed tariff principles for the SWP. A copy of the report is enclosed. The Allen Consulting report identifies that there remains significant scope for cross subsidisation of the SWP by other users of the GasNet systems.

We believe that the potential for cross-subsidisation of the SWP by non-SWP users where revenue expectations are not met, as proposed by GasNet, is counter to proper competition principles and could lead to inappropriate and inefficient investment decisions. We believe it is important to the industry and in support of proper competition principles that the ACCC use the discretion granted to it under the code to consider fully the major issues raised within this submission when reviewing the access arrangements proposed by GasNet. It is our view that the GasNet proposal is inconsistent with the principles underpinning the Code and should be rejected.

If you have any questions regarding the issues raised in this submission please contact Nigel Collins on 03 9270-3682 or myself on 03 9270-3388.

Yours sincerely,

Frank Slebos
Gippsland Gas Marketing Manager
Esso Australia Pty Ltd
for and on behalf of
Esso Australia Resources Pty Ltd

June 2002

An Independent Review Commissioned by ExxonMobil

GasNet Australia

Implementation of Incremental Pricing for the Southwest Pipeline

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Acronyms & Abbreviations

ACCC	Australian Competition and Consumer Commission
GasNet	GasNet Australia (Operations) Pty Limited
GNS	GasNet system
MSOR	Market System and Operations Rules
PTS	Principal Transmission System
SWP	Southwest Pipeline
WTS	Western Transmission System
WUGS	Western Underground Gas Storage Facility

Executive Summary

Background

GasNet Australia (GasNet) recently submitted a proposed access arrangement to the Australian Competition and Consumer Commission (ACCC) for its gas transmission system for the five-year period from 1 January 2003. Amongst other things, the access arrangement addresses the proposed treatment of the Southwest Pipeline (SWP) which connects the Principal Transmission System (PTS) with the Western Transmission System (WTS).

In deriving the tariffs for the next regulatory period, GasNet has proposed allocating all of the costs associated with the SWP to the tariffs for the use of the services provided by the SWP assets (and thus excluding the cost of the SWP assets from the tariffs for the use of the other parts of its system). GasNet's proposal also implies an intention that the costs associated with the SWP will be quarantined from non-SWP tariffs over the life of the asset. This form of pricing — whereby the cost of a new project (such as the SWP) is quarantined from the tariffs paid for the use of the remainder of the system — is referred to in this report as *incremental pricing*.

This Review

The Allen Consulting Group (the Group) has been commissioned by ExxonMobil to provide an independent assessment of whether the detailed provisions in GasNet's access arrangement could be expected to shield non-SWP users from the costs associated with the SWP, both over the next access arrangement period as well as over the longer term.

The treatment of the SWP should be considered a major issue by the ACCC that requires particularly careful attention for two reasons. Firstly, the potential impact on prices is material, and second, this matter provides the opportunity to set an important precedent regarding the right regulatory incentives for efficient new investment.

Incremental Pricing

In proposing a system of incremental pricing for the SWP, GasNet has effectively conceded that the materiality and certainty of any system-wide benefits to PTS users from the SWP is such that it is unlikely that the recovery of any of the SWP costs from other PTS users could be justified to the regulator. As stated in our previous report, The Allen Consulting Group supports the adoption of an incremental pricing approach under such circumstances.

While GasNet has made clear *statements* of its intention to exclude the costs associated with the SWP from the tariffs applicable to non-SWP, whether these statements are likely to be translated into reality requires a careful assessment of the details of the provisions. This includes an assessment of the provisions included in GasNet's proposed access arrangement, as well as an assessment of the likely implications for future periods.

The main focus of the Group's analysis has been, therefore, on the degree to which the proposed pricing arrangements achieve this outcome. That is, in practice, whether these arrangements will quarantine the SWP costs to SWP users so that they are not recovered from PTS users either in the access arrangement period or over the longer term. In addition, the Group also analysed the extent to which the pricing arrangements for the SWP users otherwise conform with economic efficiency principles and the provisions of the Code. A summary of the key issues and findings is provided below, with supporting detail in the body of the report.

Form of Price Control

GasNet has proposed continuing its current *revenue yield* form of price control into the next regulatory period, and including the tariffs for the SWP under this cap. Under this form of control, a cap is placed on the *average revenue* (in $ per GJ terms) that is received across all tariffs, rather than on any individual tariff. The implications of this form of price control include:

- the revenue that GasNet is permitted to earn from transporting a GJ of gas is independent of the tariff that is charged for a particular unit; and
- GasNet would have the flexibility to rebalance tariffs, albeit subject to some rebalancing controls proposed by GasNet.

The operation of price control is complex and the information provided by GasNet is inadequate to enable a clear understanding of their operation (which is an issue in itself). However, analysis by the Group has revealed that the combined effect of these factors is that a significant reallocation of the costs associated with the SWP to non-SWP users would occur over the period under certain scenarios.

GasNet has not disclosed sufficient information in its submission to permit the average tariff for the SWP to be computed with any degree of precision. The Group has attempted to calculate the average tariff for the SWP that is consistent with GasNet's *statements* in its submission to be about $12/GJ (although this appears implausibly high), whereas the system-wide average is about $0.43/GJ. Assuming this average price for the SWP is correct, then if GasNet's revenue from the SWP were to fall by *a dollar* (and this demand were not made up elsewhere), then GasNet would only bear about 4 cents of this loss – the revenue yield price control would permit GasNet to raise its tariffs and recover the remaining 96 cents (which would be expected to be predominantly from non-SWP users).

Worse still, a more realistic scenario is that much of any reduction in demand for the SWP (or the failure in demand to materialise) would correspond to higher demand for other parts of the GasNet system — such as a switch in sourcing of gas from injection points along the SWP to injection points along the non-SWP. If demand for the use of the SWP falls, but this is made up with an offsetting (i.e. switching) demand elsewhere on the system, then the revenue GasNet would be permitted under the price control would be unchanged, even though the loss of tariff revenue from the reduction in use of the SWP would far exceed the extra tariff revenue it would receive from the higher than expected demand on the non-SWP system.[1] Under the revenue price control proposed by GasNet, the amount of revenue GasNet is permitted to earn under its tariffs only depends upon the volumes that flow through its system, not on where those volumes flow. Thus, GasNet would not suffer any reduction in revenue from the reduction in demand for the SWP — even if the SWP were to become completely unused over the regulatory period (but had been included in the regulatory asset base when setting the price controls during the current review). Again, under the revenue yield price control, it would be permitted to recover its shortfall of revenue from the SWP by raising its non-SWP tariffs.

Furthermore, the design of the rebalancing controls (and their interaction with the K-factor) means that they offer no effective protection against the above scenarios.

The only robust means of ensuring that the operation of the price control in respect of the SWP (and the remainder of the system) precludes the passing on of SWP costs to non-SWP users would be to apply a separate price control to the SWP (and to quarantine any K factor remaining at the end of the period to future SWP tariffs). Provided that the control is separate, then the precise form of the control is irrelevant to the question of whether the SWP costs are quarantined effectively.

Recommendation — A separate price control should apply to the tariffs in respect of the SWP assets, and any K factor in the price control should be quarantined to future SWP tariffs.

Future Price Reviews

Incremental pricing requires that the costs associated with the SWP should be quarantined to SWP users not just in the current review period, but also *over the longer term* (i.e. beyond 1 January 2008*)*. In this respect, there is an important question concerning whether GasNet may have a legal right under sections 8.38 and 8.1(a) of the Gas Code to set prices for all users such that it is able to recover the costs associated with all past investments, irrespective of statements it may have made at the time about its future pricing intentions.

While an alternative (and arguably better) interpretation exists that balances the above against economic efficiency objectives, particularly in 8.1(d), if the matter was to proceed to litigation, then the outcome would not be free from ambiguity.

[1] Again, there will be a net reduction in tariff revenue if load transfers from the SWP to the remaining system because of the difference in the average tariffs for the different assets.

Another alternative would be for the ACCC to provide additional protection against GasNet subsequently being able to allocate part of the SWP costs to non-SWP users through the *redundant capital policy* (sections 8.27 to 8.29). In particular, the ACCC could require GasNet to establish a redundant capital policy that required the value associated with the SWP assets to be written down to the extent that this is necessary to permit the costs to be borne by the SWP users.

Recommendation — That GasNet be required to establish a redundant capital policy that requires the value associated with the SWP assets to be written down to the extent that this is necessary to permit the costs to be borne by the SWP users.

More generally, if incremental pricing is to be achieved over the long term then the SWP costs will need to be effectively quarantined for all future periods. The Regulator could provide additional protection for future users by requiring GasNet to include some 'fixed principles' to this effect (under sections 8.47 and 8.48). These fixed principles should cover the form of price controls and capital redundancy policy as discussed above. While a future regulator would have the power to amend or remove these fixed principles (with the agreement of the service provider), the regulator would also have to show that it was in the interest of users.

This approach would provide a clearer indication to future regulators, users and the service provider of the clear intent of the regulator for incremental pricing at the time the new investment was included in the capital base

Recommendation — That GasNet be required to include fixed principles in the access arrangement to ensure that the SWP is effectively quarantined in future periods.

Section 1

Introduction

1.1 Introduction

An *access arrangement* describes the terms and conditions on which the owner/operator (service provider) of a gas pipeline must provide access for third parties to spare capacity under the National Third Party Access Code for Natural Gas Pipeline Systems (the Gas Code) and related legislation. An important component of any access arrangement is the price for the transportation of gas through a pipeline.

The Australian Competition and Consumer Commission (ACCC) approved an access arrangement for the gas transmission system operated by GasNet Australia (GasNet) in 1998. This system comprises the Principal Transmission System (PTS) and the Interconnect with the NSW network. The initial term of that access arrangement ends on 31 December 2002. However, providers are able to submit revisions for the regulator's consideration within the term of the access arrangement.

In September 2000, GasNet proposed a number of changes to its existing access arrangement to accommodate the newly constructed Southwest Pipeline (SWP).[2] A key component of its proposal was to recover part of the cost of the SWP project by raising the price for users of its existing system (namely, the price charged to transport gas from Gippsland in the *east* to Melbourne).

In response to this proposal, The Allen Consulting Group[3] pointed out that this could lead to a distortion in the sourcing of gas away from the Gippsland Basin producers (including ExxonMobil). The Group also noted that such an outcome could only be justified if substantial system-wide benefits to PTS users could be clearly identified, and that the SWP was the lowest cost provider of these benefits — however, the Group found that GasNet had not made a convincing case in this respect.

Following consideration of GasNet's proposal and public submissions, the ACCC released a Final Decision on 29 June 2001[4], in which it rejected GasNet's proposed charging arrangements for the SWP.

GasNet has now submitted its proposed access arrangement for the five-year period from 1 January 2003 with the ACCC. With respect to the SWP, GasNet has revised its proposed charging arrangements and appears to have accepted the principle that only users of the SWP should bear the cost associated with this project. That is, when deriving the tariffs for the next regulatory period, GasNet has proposed allocating all of the costs associated with the SWP to the tariffs for the use of the services provided by the assets (and thus excluding the cost of the SWP assets from the tariffs for the use of the other parts of its system).

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2 GPU GasNet Pty Ltd (2000), *Application for Revision to Access Arrangement by GPU GasNet Pty Ltd for the Principal Transmission System: Southwest Pipeline*, 11 September. A summary of this previous proposal is provided in Appendix A.

3 The Allen Consulting Group (2001), *GPU GasNet's Proposal to Roll-in the Southwest Pipeline: An Independent Review*, commissioned by ExxonMobil, February. A summary of the Group's analysis of the previous proposal is provided in Appendix A.

4 Australian Competition and Consumer Commission (2001), *Final Decision — Access Arrangement for the Principal Transmission System: Application for Revision by GPU GasNet Pty Ltd, Southwest Pipeline*, 29 June. A summary of the ACCC's decision is provided in Appendix A .

GasNet's discussion also implied an intention that the costs associated with the SWP would be quarantined from non-SWP tariffs over the life of the asset. This form of pricing whereby the cost of a new project (such as the SWP) is quarantined from the tariffs paid for the use of the remainder of the system is referred to in this report as *incremental pricing*.

The Allen Consulting Group has been commissioned by ExxonMobil to provide an independent assessment of whether the detailed provisions in GasNet's access arrangement could be expected to shield non-SWP users from the costs associated with the SWP, both over the next access arrangement period as well as over the longer term. Where a shortcoming in the existing provision is identified, recommendations are made as to the changes to the existing arrangement that may provide appropriate safeguards to ensure the continued quarantining of the cost of the SWP assets from non-SWP prices.

It should be noted that the findings of the ACCC and The Allen Consulting Group in the context of GasNet's original submission — and the arguments supporting the findings — remain relevant and thus apply to GasNet's current submission, as reflected in the analysis presented in Section 4 of this report.

1.2 Context and Importance of ACCC's Decision

It is important to note that the treatment of the SWP should be considered a major issue by the ACCC that requires particularly careful attention for two main reasons.

Firstly, the potential impact on prices is material. The capital expenditure on the SWP at $82.8 million is very significant when compared to the existing PTS capital base of around $400 million.[5] As such, the way these costs are recovered could have a material impact on prices for both SWP and PTS users.

Second, this matter provides the opportunity to set an important precedent. Major investments in new transmission pipelines in Australia are underway or are being planned for the next decade. There has been a vigorous debate in recent years about the adequacy of incentives for efficient investment under the Code. This is one of the first major decisions under the Code regarding the treatment of new investment. As such, industry, consumers and other regulators will be watching this decision very closely. It is critical that an approach be adopted that is consistent with giving the right incentives for encouraging efficient new investment.

1.3 The Structure of this Report

The remainder of this paper is structured as follows.

Section 2 provides some background on the SWP project.

Section 3 summarises the economic principles that are relevant to an assessment of the proposed pricing arrangements for the use of SWP (and, related to this, how the cost associated with the SWP should affect non-SWP tariffs), and so summarises the efficiency-related arguments for incremental pricing. References are included to the sections of the Gas Code that direct regulators to this outcome.

[5] GasNet Australia Pty Ltd (2002), *GasNet Australia Access Arrangement — Submission*, 27 March, p. 43.

Section 4 then assesses whether the provisions of GasNet's proposal (or omission of provisions) provide comfort that its stated intention of incremental pricing for the SWP will be delivered over the next five year period, and over the longer term.

Appendix A to the report summarises the history of GasNet's applications in relation to the SWP, and Appendix B demonstrates the Group's estimates the average revenue from SWP tariffs (but attention is drawn to the caveat on this estimate discussed in footnote 13, and the surrounding text).

Section 2

The Southwest Pipeline and Proposed Charging Arrangements

2.1 The Southwest Pipeline Project

Prior to the completion of the Southwest Pipeline (SWP), the GasNet transmission system consisted of two separate networks, namely the Principal Transmission System (PTS) supplied from the offshore Bass Strait fields and from NSW, and the smaller Western Transmission System (WTS) supplied from the onshore Otway basin fields.

The SWP (see Figure 2.1) connects these two systems via the Port Campbell reservoirs, including the Western Underground Gas Storage Facility at Iona (WUGS) and a number of small fields in the Otway basin. The SWP connects with the PTS at Lara and with the WTS at North Paaratte. The SWP consists of the Lara-Iona Pipeline (the "Southwest Link"), the Iona-North Paaratte Pipeline (the "Western System Link"), and the associated facilities.

The Southwest Link was commissioned in June 1999. It is a 500 mm diameter gas transmission pipeline with a length of approximately 144 km, constructed to a MAOP of 10,000 kPa. Associated pressure and flow control regulators at Lara and Brooklyn are necessary for the operation of the Southwest Link. The Brooklyn regulator, although not connected to the pipeline, is essential to the functioning of the Southwest Link. The Western System Link was also commissioned in June 1999. It is a 150 mm diameter gas transmission pipeline with a length of approximately 8 km. It is associated with a regulator and a small compressor station, both located at Iona.

The total construction costs for the SWP were $82.8 million. However, the Victorian Government compensated GasNet for an amount of $7.3 million to cover additional costs incurred due to the accelerated timetable. GasNet proposes that this amount be deducted from the total construction cost and that, for the purposes of the Code, the construction cost of the SWP is $75.5 million.[6]

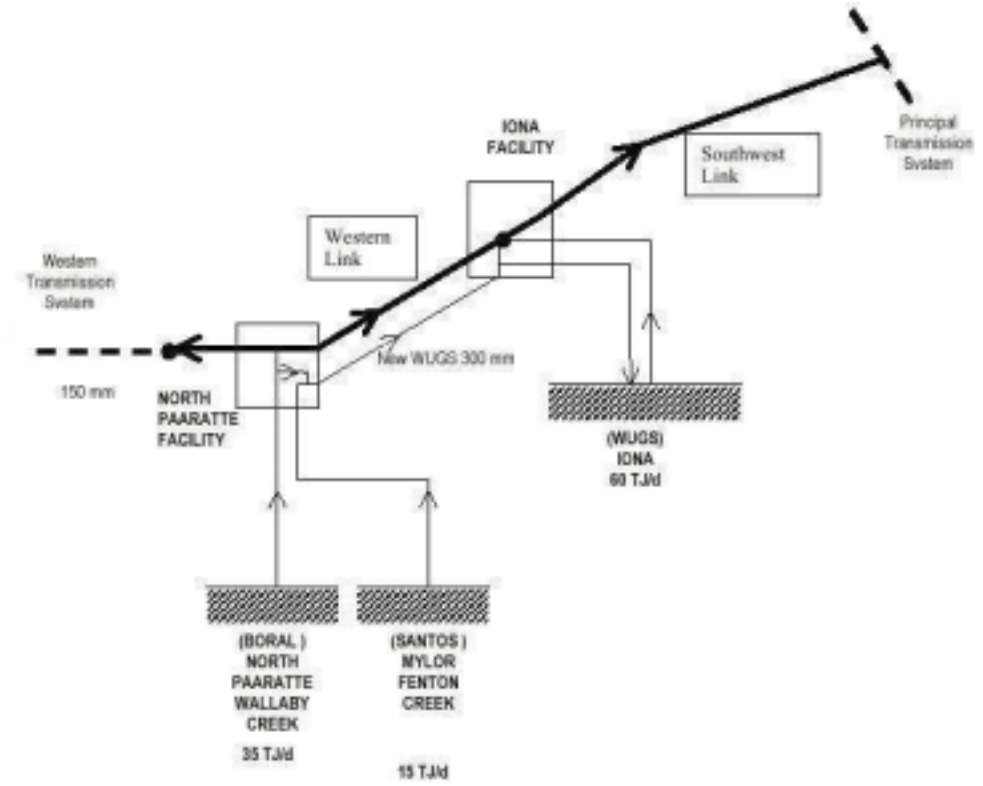
The SWP serves a number of functions:

- connecting the underground storage at Iona to the Victorian market;
- connecting the North Paaratte fields to the Iona facility, and from there to the Victorian market; and
- providing an additional gas supply to the Western System from Longford or Moomba.

[6] GPU GasNet Pty Ltd (2000), *Application for Revision to Access Arrangement by GPU GasNet Pty Ltd for the Principal Transmission System: Southwest Pipeline*, 11 September.

Figure 2.1

SOUTHWEST PIPELINE AND INTERLINKED ASSETS



Source: GPU GasNet Pty Ltd (2000), *Application for Revision to Access Arrangement: Southwest Pipeline*, Annexure 1 — Description of Assets and Design Philosophy.

Currently, the injections into the SWP are made at the WUGS facility at Iona, which has sufficient installed compressor power to inject gas at the maximum allowable operating pressure of the Iona-Lara pipeline of 10 MPa. However, in future it is anticipated that there will be a number of other connection points established in the vicinity of Port Campbell that will enable injection into the SWP. These connection points will access gas from the new fields being developed at Port Campbell (Santos), Minerva (BHPP), and Thylacine–Geographe (Origin/Woodside).[7]

2.2 Proposed Charging Arrangements

Revenue requirement

GasNet proposes that the SWP will be allocated the full direct costs of the SWP assets (return on and of capital) and the incremental operating costs.

GasNet proposes three initiatives to generate the lowest possible tariff on the SWP:

- the economic life of the SWP is set to end in 2052. This is more than 20 years longer than the economic life of the rest of the GasNet pipelines, which will impose a greater level of risk on GasNet;

[7] GasNet Australia Pty Ltd (2002), *GasNet Australia Access Arrangement — Submission*, 27 March, p. 43.

[8] GasNet Australia Pty Ltd (2002), *GasNet Australia Access Arrangement — Submission*, 27 March, p. 43.

- the revenue requirement relating to the SWP is levelised over the first 20 years at a flat real rate. This has the effect of deferring revenue recovery to the future, on the assumption that the volumes will grow faster as a result of the lower tariff. Based on this levelisation procedure, the depreciation allowance in the early period of the life of this asset is negative. This means that GasNet is effectively adding capital to the pipeline over time in order to encourage future utilisation; and
- GasNet will set an X-factor for the injection charge of zero, which has the effect of reducing the charge in the early years of the second access arrangement period.

Tariff Structure

GasNet appears to be proposing a number of tariffs to recover the SWP costs:

- a Port Campbell Injection Tariff;
- a Southwest Withdrawal Tariff; and
- a WUGS Transmission Refill Tariff.

However, the Port Campbell Injection Tariff is anticipated to account for the great majority of the revenue.

Port Campbell Injection Tariff

The Port Campbell injection tariff is levied on any injections made in the vicinity of Iona. However, where injections are matched by withdrawals either from the WTS or from off-takes in the vicinity of Port Campbell, then no injection charge is incurred.

The Port Campbell injection charge is set at $4.0860/GJ for 10-day injection MDQ. The 10-day injection MDQ calculated from the ten peak day flows through the Iona-Lara pipeline over the winter period (June-September, inclusive). These flows will be calculated from the total injections made within the Port Campbell injection zone, less the withdrawals from the WTS or from other off-takes at or in the vicinity of Port Campbell.

Southwest Withdrawal Tariff

Also called the Transmission Delivery Tariff for the Southwest Zone, the purpose of this tariff is to recover the cost of transmission pipelines (other than the injection pipeline) in the zone.

Withdrawals from the Southwest Zone are charges on actual withdrawals at $0.1142 /GJ for Tariff D users and $0.1158 /GJ for Tariff V users.

WUGS Transmission Refill Tariff

Withdrawal into storage at WUGS is subject to a tariff on actual withdrawals of $0.1210 $/GJ instead of the withdrawal tariff.

This tariff is intended to recover the incremental costs of the operating the Brooklyn compressor to allow the transportation of gas to WUGS via the SWP.

Form of Price Control

GasNet has proposed continuing with the revenue yield form of price control that has applied during the current period, and to apply this control to all of its tariffs (including those charged for the use of the SWP). A feature of this control is that it places a cap on the average (per GJ) revenue that GasNet is permitted to charge across its whole system, that is, making no distinction between units transported on the existing system and the SWP. Another feature is that it permits the rebalancing of charges (that is, implicitly, the reallocation of costs) within the regulatory period.

Section 3

Framework for Analysis

3.1 Pricing and Economic Efficiency

Economic efficiency, in general terms, refers to a condition under which society's limited resources are used such that the net benefit to society is maximised, for a given distribution of wealth. An efficient use of society's resources is generally accepted as one in which:

- the mix of goods and services that an economy produces reflects the relative value that society places on those goods and services given the extent of society's resources required to produce the respective goods and services (*allocative efficiency*);[9]
- firms produce the goods and services for the minimum cost, which implies that the lowest-cost combination of society's resources (typically defined generically as land, labour and capital) is used, and the best technology is employed (*productive* or *technical efficiency*); and
- the mix of goods and services produced, and the production processes employed by firms, change over time in response to changes in tastes, technology and other like factors — that is, so that *allocative* and *productive efficiency* is maintained at each point in time (*dynamic efficiency*).

Pricing can play an important role in ensuring that the least-cost combination of inputs is employed to provide the 'delivered gas service' (that is, technical or productive efficiency is obtained).

Just as in other markets, users (and final customers) will choose the cheapest means of providing the service they desire, and only choose to take that service where the benefits exceed the costs. The relevant 'service' for the matter at hand is the delivered gas service at a particular point, and at a particular point in time. There may be a number of options for providing this service, which may include sourcing gas from alternative producers, taking gas out of a storage facility, as well as reducing (or avoiding) consumption over a period or altogether.

Where the price that users (and final customers) are charged for one of the modes of providing a service reflects the cost associated with any possible 'mode' for providing its service, then the user's incentive to select the *lowest priced* mode naturally will lead it to select the *lowest cost* mode (from society's point of view). In turn, where the only option for a provider of any of the modes to recover the cost of providing its service is from the users who select that service, then it would only proceed with any particular project where the revenue from users of the new project was expected to deliver a reasonable return on investment.

[9] A further requirement for allocative efficiency is that the allocation of factors between producing current consumption, and investment (in order to permit higher levels of future consumption), reflects households' preferences for current versus future consumption, given the rate at which current consumption can be converted into future consumption.

Therefore, by ensuring that a provider is only able to recover the costs associated with a new pipeline project from the users of that asset (and not subsidise a project by raising prices to existing, captive customers), projects should only proceed where it is the lowest mode out of the range of possible substitutes for providing the service, and where the decentralised users of the asset — rather than a central planner, such as GasNet or the ACCC — in effect determine the benefits associated with the project.

It follows that by requiring *incremental pricing* of new facilities, the pressure is created for the 'delivered gas service' to be provided at least-cost, and with this decision drawing upon the private information held by market participants about the cost of substitutes for this service, as well as the value those participants place upon the service in question.[10]

Moreover, in Australia, pipeline proponents are free (subject to the necessary planning, safety and like approvals) to construct whatever pipelines they like, which stands in contrast with jurisdictions like the USA, where an approval on *economic grounds* is required before a pipeline can be built. While it is considered desirable that there be as few barriers as possible to the construction of new pipelines, the absence of any form of economic approval does imply that *pricing signals* have a significant role in ensuring that only efficient projects proceed.

3.2 Incremental Pricing and the New Investment Provisions of the Code

As pointed out in The Allen Consulting Group's 2001 report, *GPU GasNet's Proposal to Roll-in the Southwest Pipeline: An Independent Review*, the ACCC's administration of the new investment tests in the Code have an important impact upon whether or not new projects are able to be subsidised by raising tariffs to the general customer base, and thus whether prices for the use of pipeline assets will generate signals consistent with the pursuit, as discussed above.

Section 8.16(b) of the Code specifies three conditions under which the cost of a new project may be included in a service provider's regulatory asset base and reflected in regulated charges. These are as follows:

(i) the Anticipated Incremental Revenue generated by the New Facility exceeds the New Facilities Investment; or

(ii) the Service Provider and/or Users satisfy the Relevant Regulator that the New Facility has system-wide benefits that, in the Relevant Regulator's opinion, justify the approval of a higher Reference Tariff for all Users; or

(iii) the New Facility is necessary to maintain the safety, integrity or Contracted Capacity of Services.

'Anticipated Incremental Revenue' is defined (in section 10.8) as:

[10] A caveat to this conclusion is where the use of a particular asset creates *economic externalities* — that is, where benefits are provided to parties other than the users of that asset. The Allen Consulting Group's 2001 report, *GPU GasNet's Proposal to Roll-in the Southwest Pipeline: An Independent Review*, noted that, in principle at least, the presence of positive externalities could create an argument for subsidising a particular project. It also discussed a number of practical problems and issues to consider, and proposed a number of safeguards to minimise the likelihood that the subsidisation of any project may crowd-out alternative, lower-cost options of providing the service. However, as GasNet and the ACCC appear to have accepted that the SWP should not be subsidised by raising non-SWP tariffs, issues associated with possible externalities are not discussed further in this report.

> "… the present value (calculated at the Rate of Return) of the reasonably anticipated future revenue from the sale of Services at the Prevailing Tariffs which would not have been generated without the Incremental Capacity, minus the present value (calculated at the Rate of Return) of the best reasonable forecast of the increase in Non Capital Costs directly attributable to the sale of those Services."

The second and third of the conditions set out in section 8.16 are not directly relevant to the issues being addressed in this report. The second is the condition that would permit a new project to be subsidised by the general customer base where the use of that project is considered to generate a positive economic externality (see footnote 10), while the third condition deals with the replacement of existing assets.

The remaining condition — section 8.16(b)(i) — precludes the cost associated with a new project from being included in the calculation of general tariffs unless the incremental revenue generated by the project is expected to recover an amount greater than the incremental cost. This can be interpreted as implying that the regulator has to be satisfied that the provider does not expect to subsidise a particular facility by raising charges for the use of its existing system prior to the cost being included in the calculation of tariffs.

This provision, however, leaves open how the regulator should determine in practice whether the 'reasonable anticipated' revenue from a project exceeds its cost (in present value terms). In terms of the pursuit of economic efficiency discussed above, the provision also leaves open how the regulator can assess whether the provider *expects* a particular project to generate sufficient revenue to cover its costs at the time the project is undertaken, and thus whether or not it expects that it may be able to subsidise the project at some future date (for example, if the project was undertaken without firm commitments from users, and the market for the services did not emerge as expected).

Requiring incremental pricing for new projects (like the SWP) would ensure that a provider would not undertake a new project on the expectation that it may be able to subsidise that project in the future — by its very nature, incremental pricing rules this out. In addition, if incremental pricing is required, then it is possible for the regulator to *infer* that any new projects undertaken meet the requirements of section 8.16(b)(i), and to avoid the need to undertake its own detailed analysis. This follows from the fact that where incremental pricing is required, a provider would have a strong commercial incentive to undertake projects only where the expected revenue exceeds the cost (in present value terms), which is aligned precisely with the test set out in section 8.16(b)(i).

Section 4

Analysis of GasNet's Incremental Pricing Proposal

4.1 Form of Price Control

Implications of revenue yield price control

As discussed earlier, GasNet has proposed continuing its current *revenue yield* form of price control into the next regulatory period, and including the tariffs for the SWP under this cap. Under this form of control, a cap is placed on the *average revenue* (in $ per GJ terms) that is received across all tariffs, rather than on any individual tariff.[11]

There are a number of implications of this form of control.

The first implication of this form of control is that the revenue that GasNet is permitted to earn from transporting a GJ of gas is independent of the tariff that is charged for a particular unit. Thus, GasNet could charge nothing to transport a particular unit, but would still be permitted to receive the system-wide average revenue cap for this unit — it would recover this revenue by raising its other tariffs. In addition, the revenue that is permitted for transporting a GJ of gas is independent of where the gas was transported. Thus, GasNet is permitted to receive the same revenue for gas that is injected at Longford and withdrawn at Melbourne as it is for gas that is injected at Port Campbell and withdrawn at Melbourne.

A second implication is that GasNet would have the flexibility to reduce selected tariffs against that expected over the period and raise others, provided that the overall cap on average revenue is met (this is commonly referred to as *rebalancing*). GasNet, however, has proposed limiting the extent to which any tariff may be rebalanced during a regulatory period. While the actual rebalancing control is fairly complex, its essential feature is that GasNet would be precluded from raising the price of any tariff component by more than two per cent per annum more than the price path foreshadowed in its proposed access arrangement.[12]

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[11] GasNet's proposed price control is set out in Schedule 4 of its proposed access arrangement. Under the proposed form of control, tariffs for any year are set prior to the start of the year based upon forecasts, so that the *actual average revenue* earned in any year would be expected to diverge from the *allowed average revenue*. For this reason, the proposed price control includes a correction factor (denoted in the algebraic formulation by the letter 'K'), which adjusts prices in successive years to ensure that the allowed average revenue is received in respect of any year.

[12] GasNet has foreshadowed reducing most of its tariffs by five per cent per annum over the next regulatory period, with the exceptions including the suite of tariffs associated with the SWP, withdrawal and matched withdrawal in the Murray Valley and matched withdrawal at Wodonga and metro, injection at Dandenong, delivery into a storage facility (with a zero real change foreshadowed for these tariffs). However, the permitted level of rebalancing is increased uniformly across all tariffs (or is reduced uniformly across all tariffs) to the extent that the application of the foreshadowed price paths would be expected to result in GasNet earning an average revenue that is less (or more) than its allowed average revenue for a year (GasNet, Access Arrangement, pp. 37-38).

The combined effect of these factors — that is, the fact that tariffs charged and revenue received are independent, the same revenue is received regardless of the 'transportation' provided and the ability to rebalance charges — implies that GasNet will be *substantially shielded* from the risk associated with demand for the SWP over the next five years, and if demand for the SWP falls below that forecast, costs associated with the SWP effectively will be reallocated to non-SWP users.

Examples of potential impacts

As a first example, if the demand for the SWP is lower than that forecast over the next regulatory period (and these volumes are not made up elsewhere on the GasNet system), then the operation of the revenue yield control will permit GasNet to recover most of this shortfall from non-SWP users. This follows because if the use of the SWP declines against that forecast, then the loss of tariff revenue from SWP users will reflect the *average tariff for the SWP*. That is, if V is the loss of volume on the SWP, and if AT_SWP is the average tariff for the SWP, then the tariff revenue from these users will be:

Loss of SWP Tariff Revenue = V x AT_SWP

However, under the revenue yield, the amount of revenue that GasNet *actually will lose* will reflect the system-wide average revenue cap. That is, if AT_System is the system-wide average tariff (that is, the average revenue cap), then GasNet's actual loss of revenue will be:

Actual Loss = V x AT_System

To the extent that the loss of tariff revenue from SWP users exceeds the required actual loss of revenue, then GasNet will be able to recover the difference by raising its non-SWP tariffs.

GasNet has not disclosed sufficient information in its submission to permit the average tariff for the SWP to be computed with any degree of precision. However, The Allen Consulting Group has attempted to calculate the average tariff for the SWP that is consistent with GasNet's *statements* in its submission to be about $12/GJ (although this appears implausibly high),[13] whereas the system-wide average is about $0.43/GJ.[14] Assuming this average price for the SWP is correct, then if GasNet's revenue from the SWP were to fall by *a dollar* (and this demand were not made up elsewhere), then GasNet would only bear about 4 cents of this loss – the revenue yield price control would permit GasNet to raise its tariffs and recover the remaining 96 cents (which would be expected to be predominantly from non-SWP users).[17] Even if the average tariff for the use of the SWP were something more modest – like $4/GJ – then GasNet would only bear the first 11 cents in the dollar of any loss of revenue from the SWP, with the remaining 89 cents borne by (predominantly non-SWP) users, or a split of about 45 cents and 55 cents is the average tariff is $1/GJ.

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13 Appendix B explains how this figure was derived. The reasons an average price of $12/GJ seems implausible is because gas is normally considered to be uneconomic against alternative fuels at delivered prices above $15-16/GJ (which includes gas commodity, distribution and retail), and because this average price appears inconsistent with the tariffs that GasNet has proposed for the use of the SWP. Indeed, it is not obvious as to how GasNet could generate revenue sufficient to recover the cost of the SWP – even with revenue levelised over the next twenty years and the life of the asset assumed to be 50 years – given the low forecast usage of the SWP system.

14 This is merely the forecast revenue for 2003 of $93.92 million (GasNet, Submission, p. 104) divided by the forecast total throughput of 216,190 TJ (GasNet, Access Arrangement Information, p. 15), which is consistent with the constant in the 'ATT' calculation (GasNet, Access Arrangement, p. 34).

15 Appendix B explains how this figure was derived.

16 This is merely the forecast revenue for 2003 of $93.92 million (GasNet, Submission, p. 104) divided by the forecast total throughput of 216,190 TJ (GasNet, Access Arrangement Information, p. 15), which is consistent with the constant in the 'ATT' calculation (GasNet, Access Arrangement, p. 34).

17 That is, if use of the SWP fell by 1TJ, then the revenue from the SWP users would fall by about $13,000 (1000GJ x $13/GJ). However, GasNet's allowed revenue across all of its tariffs (under the operation of the revenue yield price control) would only fall by about $430 (1000GJ x $0.43/GJ) – and GasNet would be permitted to raise its tariffs to recover this amount (subject to the rebalancing control, which is discussed below). Hence, GasNet's share of the reduction in revenue from the SWP would only be $430/$13,000, or a little over 3 per cent. Under the revenue yield control, GasNet could raise any tariff it liked to recover this shortfall. However, there are two reasons that it is likely to favour raising non-SWP tariffs. First, if demand is falling on the SWP, then GasNet may not be able to raise additional revenue from those users – and, indeed, is likely to favour *price reductions* to those users (this is discussed further below). Secondly, by spreading any shortfall across all users, GasNet would reduce any problems associated with meeting its proposed rebalancing controls.

Worse still, the example above assumed that the reduction in demand for the SWP just disappeared, and was not substituted with higher usage on other parts of GasNet's system. A more realistic scenario is that much of any reduction in demand for the SWP (or the failure in demand to materialise) would correspond to higher demand for other parts of the GasNet system — such as a switch in sourcing of gas from injection points along the SWP to injection points along the non-SWP. If demand for the use of the SWP falls, but this is made up with an offsetting (i.e. switching) demand elsewhere on the system, then the revenue GasNet would be permitted under the price control would be unchanged, even though the loss of tariff revenue from the reduction in use of the SWP would far exceed the extra tariff revenue it would receive from the higher than expected demand on the non-SWP system.[18] Under the revenue price control proposed by GasNet, the amount of revenue GasNet is permitted to earn under its tariffs only depends upon the volumes that flow through its system, not on where those volumes flow. Thus, GasNet would not suffer any reduction in revenue from the reduction in demand for the SWP — even if the SWP were to become completely unused over the regulatory period (but had been included in the regulatory asset base when setting the price controls during the current review). Again, under the revenue yield price control, it would be permitted to recover its shortfall of revenue from the SWP by raising its non-SWP tariffs.

Indeed, the fact that GasNet's revenue depends upon the volumes transported irrespective of which part of the system is used or what is charged for those volumes – may provide GasNet with an incentive to reduce prices to SWP users during the regulatory period. In particular, if it subsequently emerged that some of the market for the SWP was more price sensitive than expected, then a logical strategy would be for GasNet to reduce the price that it charges for SWP users. Provided GasNet maintains the volume on the SWP – even if it gives away its SWP services – then its allowed revenue will be unaffected. And, again, GasNet would be permitted to raise its tariffs generally to recover the shortfall in revenue from the SWP, and in this case, those rises would occur only for non-SWP tariffs.

Impact of rebalancing controls and K factor

On the face of it, GasNet's proposed rebalancing control could be considered to alleviate concerns about the potential for the recovery of SWP costs to shift from SWP users to non-SWP users throughout the regulatory period. This follows because 'costs' are transferred (in effect) by raising non-SWP tariffs to recover shortfalls from the SWP. Hence, a constraint on raising non-SWP tariffs logically must constrain the ability to pass SWP costs off onto non-SWP users. However, any comfort taken from the existence of the rebalancing control would be misplaced for three reasons.

First, GasNet has proposed that it be permitted to raise any tariff by 2 per cent per annum from its foreshadowed tariff paths, which would permit a rise in each tariff by approximately 8 per cent from the 2003 levels over the regulatory period. An 8 per cent increase in non-SWP tariffs would account for upwards of 80 per cent of revenue expected from SWP tariffs.[20]

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[18] Again, there will be a net reduction in tariff revenue if load transfers from the SWP to the remaining system because of the difference in the average tariffs for the different assets.

[19] Note that the $0.43/GJ quoted above is the system-wide average revenue, including the SWP. The average of the non-SWP tariffs is estimated to be marginally over $0.40/GJ.

[20] If average SWP tariffs are $12/GJ, then the 8 per cent rise in non-SWP tariffs would account for about 84 per cent of expected SWP revenue. If the average SWP tariff is lower than this, then the 8 per cent rise in non-SWP tariffs would account for an even greater share.

Secondly, any under-recovery from a particular year (for example, arising from a switch in injections from Port Campbell to Longford or Culcairn) would be reflected in a 'K' factor in the algebra of the proposed revenue yield for price control, and in turn would be reflected in an increase in the allowed average revenue for the next year (with a further error correction in the second year). As noted earlier (see footnote 12), the rebalancing restriction on each tariff component that has been proposed by GasNet increases proportionately to permit the average revenue to be recovered, which should ensure that much of the shortfall could be recovered.

Thirdly, any shortfall in revenue that remains unrecovered over the period will (in effect) be banked as a 'K' factor and carried forward (with interest) to the end of the next regulatory period. GasNet has proposed a 'fixed principle' that would require the ACCC to provide an allowance for any 'K' factor remaining at the end of the next regulatory period when it assesses tariffs for the subsequent period.[21] The application of this principle would ensure that GasNet would recover any shortfalls against the revenue it is allowed under the revenue yield, if not in the next regulatory period, then in the one thereafter.

Possible solution

The only robust means of ensuring that the operation of the price control in respect of the SWP (and the remainder of the system) would preclude the passing on of SWP costs to non-SWP users is to apply a separate price control to the SWP (and to quarantine any K factor remaining at the end of the period to future SWP tariffs). Provided that the control is separate, then the form of the control is irrelevant to the question of whether the SWP costs are quarantined effectively.

Recommendation — A separate price control should apply to the tariffs in respect of the SWP assets, and any K factor in the price control should be quarantined to future SWP tariffs.

4.2 Allocation of Costs — Future Price Reviews

Incremental pricing implies that the costs associated with the SWP would be quarantined from other tariffs not just for the next review period, but for all future periods. In this respect, two key issues arise:

- first, there is an important question concerning whether GasNet may have a legal right under the Gas Code to set prices for all users such that it is able to recover the cost associated with all past investments, irrespective of statements it may have made at the time about its future pricing intentions; and
- second, how can the quarantining of assets be made to clearly apply in future periods.

Each of these issues is dealt with in turn below.

[21] GasNet Australia Pty Ltd (2002), *GasNet Australia Access Arrangement — Submission*, 27 March, p. 10.

Opportunity to Recover Costs

If the SWP is a success and usage increases as GasNet has forecast, then there would be no barrier to the ACCC requiring the continued quarantining of the SWP into the future. While the average tariffs for the use of the SWP assets may continue to be higher than the system-wide average tariffs, the requirement for continued quarantining of the SWP would not lead to GasNet failing to recover its investment, and so not breach any of the objectives in section 8.1 of the Code.

However, there is a question concerning whether the ACCC could require the SWP to be quarantined if the project turns out not to be a success, and where GasNet is unable to recover the SWP costs from SWP users. The act of quarantining the SWP in this case would imply that a regulator would have to require costs to be allocated to SWP tariffs where there was no reasonable expectation that these costs would be recoverable from users.

Under this scenario, GasNet would be expected to claim that it has a right under the Code for tariffs to be set in such a way that would permit it to have a reasonable expectation of recovering all of its costs (including the SWP). In particular, section 8.38 states that the allocation of costs between services and users should be designed to achieve *inter alia* the objectives stated in section 8.1 of the Gas Code, and it is noted that if the SWP is included in the capital base, then this includes the SWP costs. The first objective of section 8.1 is that tariffs should be designed to provide the service provider with the "opportunity to earn a stream of revenue that recovers the efficient costs of delivering the reference service over the expected life of the assets used in delivering that service". Clearly, allocating costs to the SWP where there was no reasonable expectation that these costs could be recovered would breach section 8.1(a). If an appeal body were to adopt this interpretation, then the regulator would have no alternative but to allow the costs to be recovered from other users.

An alternative argument (and, in the view of The Allen Consulting Group, the more meritorious argument) is that the ability to quarantine costs of new projects to specific users is consistent with providing signals for economically efficient investment, and that this is supported by a number of objectives in the Code, including 8.1(d). This would require compromising to some degree the section 8.1(a) objective in order to achieve the section 8.1(d) objective. However, the outcome, should the matter proceed to litigation, would not be free from ambiguity.

Another alternative would be for the ACCC to provide additional protection against GasNet subsequently being able to allocate part of the SWP costs to non-SWP users through the *redundant capital policy* (sections 8.27 to 8.29). In particular, the ACCC could require GasNet to establish a redundant capital policy that required the value associated with the SWP assets to be written down to the extent that this is necessary to permit the costs to be borne by the SWP users.

Recommendation — That GasNet be required to establish a redundant capital policy that requires the value associated with the SWP assets to be written down to the extent that this is necessary to permit the costs to be borne by the SWP users.

Fixed Principles

More generally, if incremental pricing is to be achieved over the long term then the SWP costs will need to be effectively quarantined for all future periods. The Regulator could provide substantial additional protection for future non-SWP users by requiring GasNet to include fixed principles to this effect.

Establishing the quarantining of SWP costs through fixed principles is valuable as it provides a clear indication to future regulators, users and the service provider of the intent of the regulator at the time the new investment was included in the capital base.

While a future regulator would have the power to amend or remove these fixed principles (with the agreement of the service provider), this power is not unfettered and the regulator must be able to demonstrate that a change is "in the interests of the service provider and the interests of users and prospective users". In addition, the existence of fixed principles would mean that the regulator would not need to justify the use of discretion at each review in order to continue the quarantining policy, as it would happen automatically.

Recommendation — That GasNet be required to include fixed principles in the access arrangement to ensure that the SWP is effectively quarantined in future periods.

4.3 Other Pricing Issues

Prudent Discounts

The purpose of prudent discounts is to allow for reduced tariffs for price sensitive users to avoid these users withdrawing from using the service, and so not contributing incremental revenues which would increase prices for the remaining users.

In essence, prudent discounts involve a Ramsey pricing approach whereby the Reference Tariff implicitly involves a two-part structure with one part reflecting the marginal cost of supply, and the second part recovering the remaining revenue requirement. To minimise distortions to customers' behaviour, the second component is charged inversely to the sensitivity of price elasticities of demand. Therefore, users with relatively elastic demands are more likely to be charged a lower tariff component over and above the marginal cost of supply as a discount to retain their contribution to this remaining revenue.

Under such an approach, a 'range' of prices (and therefore, discounts) can be established, outside of which prices can be defined as inefficient. At a minimum, the price charged should recover the incremental costs of supplying that customer. At a maximum, prices should not exceed the costs to the customer of alternatives (the stand-alone cost). If prices lie within this range, then a customer is covering the directly attributable costs of their supply, as well as contributing to the fixed costs (e.g. overheads) of the business (and thus reducing the burden of common costs on other customers).

It appears that none of the currently proposed prudent discounts apply to SWP tariffs. However, such a case may arise in the future. The question that may arise in relation to prudent discounts is how GasNet would propose to recover the discounts. That is, from SWP users and/or from other users. Consistent with incremental pricing principles, to the extent that a prudent discount to a SWP user is recoverable from other users, it should only be recovered from other users of the SWP. This condition would be satisfied if the SWP assets were quarantined, as recommended above.

Asset Life

GasNet have derived an asset life for the SWP assets of 50 years on the basis of the desired tariff profile — that is, providing the lowest possible tariff on the pipeline to encourage growth.

It would appear somewhat unusual to determine the economic life of an asset on the basis of the desired tariff profile. However, this is incidental if the SWP assets are fully quarantined because GasNet would have an incentive to minimise the risk of not earning a return by charging in accordance with efficient pricing — that is, in accordance with intertemporal or Ramsey pricing.

Appendix A

Summary of the History of GasNet's Proposals

A.1 Description of GasNet's Previous Proposal

In September 2000, GasNet applied to the Australian Competition and Consumer Commission (ACCC) for revisions to the Access Arrangement that would include the costs of the Southwest Pipeline (SWP) in the revenue requirement for the Principal Transmission System (PTS) and to recover the additional costs from a combination of new Reference Tariffs to apply to the use of the SWP and well as from increases in PTS Reference Tariffs. This section describes the costing assumptions and methodology behind the proposal, and the rationale GasNet provided at the time for the revisions to the Access Arrangement.

The Cost/Revenue Base

At the time of its original submission, GasNet stated that the gross capital cost of the SWP was approximately $82.8 million. However, GasNet proposed to increase the capital base by only $75.5 million to reflect a payment of $7.3 million from the Victorian Government to compensate for the cost of accelerating the project's construction as part of the Winter '99 Project. GasNet's anticipated incremental operating cost in relation to the SWP was approximately $0.35 million per annum.[22]

Revised Reference Tariffs

GasNet proposed setting tariffs for the use of the Southwest Pipeline that were expected to recover only about $30 million of the project cost in NPV terms. It proposed recovering the remaining $45 million by raising the Longford injection charge.[23] The inclusion of this asset was projected to raise GasNet's total transmission revenue by 12.8 per cent (in NPV terms over the life of the project).[24]

GasNet's Justification for the Revisions

GasNet claimed that the proposed increase in the Longford injection charge was justified by the system-wide benefits provided by the SWP. GasNet submitted that these system-wide benefits were two-fold:

- enhanced system security to all users of the GasNet system (GNS) from additional sources of gas supply from the Otway basin (including the Western Underground Storage) to all natural gas users in Victoria; and

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22 The annual allowances for incremental operation and maintenance costs include: pipelines (including valves) — $0.14 million; facilities (regulators and compressors) — $0.11 million; and compressor and heater fuel — $0.10 million.

23 These figures have been calculated as 40 per cent and 60 per cent respectively of the total project cost, as noted by: GPU GasNet Pty Ltd (2000), *Application for Revision to Access Arrangement for the Principal Transmission System Southwest Pipeline*, page 25.

24 GPU has stated in its proposal that it has revised its depreciation methodology in relation to these assets in order to create a more appropriate time-profile of tariffs. As the choice of depreciation methodology affects the timing of GPU GasNet's revenue receipts, but not their value, this report refers only to net present values rather than to the projected tariffs at a particular point in time.

- increased competition by enabling the gas reserves from the Otway basin to compete with Bass Strait production, and by facilitating significant competition for peaking and seasonal gas supply between Esso-BHP at Longford and the Western Underground Storage at Iona.

GasNet also claimed that equating the injection charges (at Longford and the Southwest zone) was justified on the grounds that users become indifferent to the source of their gas (at least with respect to transmission charges). Further, GasNet argued that the two pipelines have almost the same length and supply the same market (they claimed that under the commonly accepted volume-distance pricing model, it is argued the same tariff would apply to both pipelines despite the different vintage of each pipeline). GPU GasNet believed that equating the injection charges would facilitate competition between the two gas sources and encourage downward pressure on gas prices.

Other than the revised tariffs outlined above, GasNet did not believe it was appropriate to increase the Interconnect injection charge. Along with the liquefied natural gas (LNG) facility, the Interconnect is the remaining source of gas supply in Victoria. Injections through the Interconnect are not likely to significantly exceed the current 20 TJ/day. The LNG facility is of limited capacity, and in practice most of this capacity will be reserved for severe winter scenarios. GasNet submitted that an increase in the Interconnect injection charge would detract from the economics of this competitive source of supply.

In summary, GasNet argued in its previous proposal for an increase in the Longford injection charge to reflect its belief that all gas users benefit from the SWP via increased system security in the event of a system failure at Longford or elsewhere, and via increased competition in the gas market (which applies downward pressure on prices).

A.2 Analysis by The Allen Consulting Group

In early 2001, ExxonMobil commissioned The Allen Consulting Group to undertake an independent review of GasNet's initial submission. The review was submitted to the ACCC for use in its assessment of the proposed revisions outlined in GasNet's initial proposal submitted in September 2000.

The Allen Consulting Group concluded that GasNet's proposal to include the costs of the SWP and to recover them more broadly from PTS users on the basis of system-wide benefits was inconsistent with the principles underpinning the Code and should be rejected. The key findings of the Group's review included:

- the proposal failed to clearly identify and quantify the external system security benefits to PTS users. It was not clear that these benefits were material. It was not clear that these benefits were not available from a number of other sources at a potentially lower cost and no competitive process has been used to determine the best value alternative;

- the proposal failed to include any hard evidence that significant external benefits from competition would be generated. In fact, the proposal may have provided dis-benefits by potentially distorting upstream and downstream consumption and investment decisions;

- the actual users of the SWP would bear only a small proportion of the incremental cost of the pipeline, yet there appeared to be a reasonable prospect of significant incremental revenue from a range of users for the SWP over the life of the pipeline;

- the costs were not recovered from users in a way that least distorted consumption decisions. In fact, by recovering most of the cost from the Longford injection charge it potentially distorted upstream investment decisions by an artificial bias in favour of Otway producers; and

- under the proposal, interruptible customers who paid for firm service would have borne their full share of the costs of the project. However, such users clearly did not benefit from the potentially enhanced system security that the project provided.

The Allen Consulting Group's report proposed an alternative approach that was consistent with the Code. The key elements of that approach were:

- the Western Link provides little if any benefits to PTS users. If it is to be included in the PTS then there is no reason why the users of the Western Link should not bear its entire cost. Alternatively, the Western link could be separated from the Southwest Link and the issue reconsidered at the same time as the foreshadowed proposal to incorporate the WTS into the PTS;

- the Southwest Link should be established as a separate zone and specific injection charges (from WUGS or Otways gas), withdrawal charges and matching adjustments (for towns along the route) should be designed to ensure that the maximum revenue is gained from the users of the service while maximising usage of the pipeline;

- subject to the point immediately below, to the extent the revenue from these participants is expected to be insufficient to recover the cost of the project, the residual should be placed in GasNet's 'speculative investment fund'. This will permit GasNet to recover the value of some or all of this residual in the future if usage of the facility improves against the currently projected demand; and

- if significant external benefits from this project can be clearly identified and quantified, and if the Southwest Link is demonstrated to be the least-cost means of providing these benefits, then the lesser of the external benefit and any residual (referred to in the point immediately above) should be included in the regulatory asset base.

The Group recommended that these costs (if any) should be recovered in a way that least distorts upstream or downstream decisions. Given the current tariff structure, the least distorting option appeared to be to allocate the cost of the Southwest Link to all Zones and recover it through a small increase in the maximum demand component of the withdrawal charges. Such an approach would have a lesser impact on interruptible customers that pay full charges but that clearly do not benefit from the potential system security benefits of the project.

A.3 The ACCC's Final Decision

The ACCC released a Draft Decision on 11 May 2001 following consideration of GasNet's original proposal and the submissions that followed, in which it proposed not to approve the revisions.

Shortly thereafter, the ACCC released its Final Decision regarding the proposed revisions. The ACCC stated that it was not convinced that GasNet's investment in the SWP would pass the system-wide benefits test. For this reason in particular, the ACCC made a final decision under section 2.38(a)(ii) of the Code that it did not approve the revisions to the PTS Access Arrangement. The ACCC also expressed reservations about the prudency of the investment and was uncertain as to the portion of the investment that would pass the economic feasibility test. In addition, the ACCC considered that the proposed tariff structure was inconsistent with the principles of the Code.

> The Commission considers that the reference tariff structure proposed by GPU GasNet is inconsistent with the pricing principles set out in section 8 of the Code as it would result in the majority of the cost of the Southwest Pipeline being recovered through increased charges on Longford injections.
>
> ACCC (2001), *Revisions to Access Arrangement for the Principal Transmission System — Final Decision*, 29 June.

In handing down its decision, the ACCC recommended that GasNet submit amended revisions regarding the investment in March 2002 at the time of the scheduled review when a reasonable period of operational history would be known and a more appropriate proposal could be established on the basis of available information.

> The Commission considers that it would be inappropriate to introduce any major change to the balance of charges faced by users at this stage. This issue will be subject to detailed scrutiny as part of the scheduled review of the PTS Access Arrangement in 2002 by which time a reasonable period of operational history will exist under the Access Arrangement and the Market and System Operations Rules (MSOR). By the time of the 2002 review the PTS and its users will have considerable experience operating with multiple injection points.
>
> ACCC (2001), *Revisions to Access Arrangement for the Principal Transmission System — Final Decision*, 29 June.

Appendix B

Derivation of the Average Revenue from SWP Tariffs

GasNet's discussion suggested the following assumptions were adopted to derive the revenue benchmarks for SWP tariffs.

- Inflation-indexed cost of the SWP assets as at 1 January 2003 of $85 million (GasNet, Submission, Annex 3, p. 17);
- Incremental operating and maintenance costs of $0.35 million in mid-1999 dollars (GasNet, Application for Revision to Access Arrangement for the Principal Transmission System Southwest Pipeline, Annexure 3, p 28);
- Pre tax WACC of 8.22 per cent (GasNet, Access Arrangement Information, p. 6);
- Volumes over the SWP increasing from 216,190 TJ in 2003 to 241,346 TJ in 2007 (GasNet, Access Arrangement Information, p. 15); and
- 'Levelised' revenue requirement (in real terms) over the 20 years from 2003 to 2022 inclusive (GasNet, Access Arrangement Information, p. 6).

The 'levelised' revenue requirement *over the economic life* of the pipeline was calculated to be about 7.6 million per annum (in constant prices as at 1 July 2003). This amount was calculated by finding the constant (in real terms) annual revenue stream than delivers future net cash flows with a present value equal to the cost of the SWP asset (with a zero residual value in 2052). The average (per GJ) price for the use of the SWP was calculated by dividing the annual revenue requirement by the forecast demand in each year – which produced an average price of between $13.40/GJ and $9.70/GJ, or a levelised average price of $12.10/GJ.

GasNet's statements suggested that, rather than calculating the levelised revenue requirement over 50 years, it levelised the revenue stream over the first 20 years, and assumed a residual value at the end of the year 2022. In turn, this residual would appear to have been set at the depreciated value at that time, using a straight-line current cost depreciation method. The levelised revenue requirement consistent with these assumptions was calculated to be approximately $8.2 million, which was calculated using the same approach as that described above, except that the cash flows were projected over 20 years rather than 50, and a residual value equal to the depreciated value was assumed at the end of year 20. The average (per GJ) price for the use of the SWP consistent with this revenue requirement ranged between $14.40/GJ and $10.50/GJ, or a levelised average price of $13/GJ.

The lower number – $12.10/GJ – has been used in this report.