Final Decision

Access Arrangement for the Principal Transmission System

Application for Revision by GPU GasNet Pty Ltd

Southwest Pipeline

29 June 2001

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Commissioners:
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Abbreviations and glossary of terms

access arrangement	Arrangement for access to a pipeline provided by a pipeline owner/operator that has been approved by the regulator
BHPP	BHP Petroleum Pty Ltd
CAPM	capital asset pricing model
Code	National Third Party Access Code for Natural Gas Pipeline Systems
Commission	Australian Competition and Consumer Commission
covered pipeline	pipeline to which the provisions of the Code apply
DEI	Duke Energy International
EAPL	East Australian Pipeline Ltd
EGP	Eastern Gas Pipeline
EUAA	Energy Users Association of Australia
GJ	gigajoule
GPAL	Gas Pipelines Access Law
Interconnect Assets	Interconnect Pipeline, Springhurst compressor and valves
MDQ	maximum daily quantity
MMAP	Melbourne – Moomba augmentation program
MSOR	Market and System Operations Rules
MSP	Moomba to Sydney Pipeline system
NPV	net present value
PTS	Principal Transmission System
PJ	petajoule (equal to 1 000 000 GJ)
Southwest Pipeline	The Southwest Link (from Lara (near Geelong) to Iona) and the Western System Link (from Iona to North Paaratte) and associated facilities
TJ	terajoule (equal to 1 000 GJ)
TPA	Transmission Pipelines Australia Pty Ltd
Victorian Code	Victorian Third Party Access Code for Natural Gas Pipeline Systems
VoLL	value of lost load
WACC	weighted average cost of capital
WTS	Western Transmission System
WUGS	Western Underground Gas Storage Pty Ltd

Executive summary

On 12 September 2000 GPU GasNet submitted revisions to the access arrangement for the Victorian Principal Transmission System (PTS) to the Commission for approval under the *National Third Party Access Code for Natural Gas Pipeline Systems* (the Code). The objective of GPU GasNet's revisions is to roll-in its $75.5 million Southwest Pipeline investment to the capital base of the PTS. If approved, revenues and tariffs on the PTS would rise on average by 12.8 per cent in net present value terms over the life of the assets. The Commission released its *Draft Decision* that it proposed not to approve the revisions on 11 May 2001.

The Southwest pipeline

The Southwest Pipeline comprises the Southwest Link (from Lara near Geelong to Iona), the Western System Link (from Iona to North Paaratte) and associated facilities. It links the PTS with the Western Underground Gas Storage Pty Ltd (WUGS) facility at Iona, Otway Basin gas fields and the Western Transmission System (WTS).

The Southwest Pipeline was built under direction by the Victorian Government as a direct consequence of the September 1998 explosion and fire at the Longford gas processing plant. Its purpose was to supplement supply to the PTS during the winter of 1999 in the event that Longford supplies were not sufficiently restored at that time. The Government had in the previous year determined that no expenditure should be planned for this project during the initial access arrangement period for the PTS ending in 2003. GPU GasNet considers it a 'moot point' whether the Southwest Pipeline would have been built if the Government had not required it.

The Government contributed $7.3 million towards the total $82.8 million cost to GPU GasNet as compensation for additional costs arising from the accelerated construction program. The Government initiated substantial take-or-pay contracts between the three foundation retailers and GPU GasNet's predecessor for half the capacity of the pipeline for five years to help underwrite the investment in the Southwest Pipeline.

Construction of the Southwest Pipeline and the other winter 1999 projects was completed on time. These facilities were initially largely unused as the Longford facility was able to meet demand during the mild winter that year. The Southwest Pipeline has since been used to supply the WUGS facility and the WTS. However, it has largely been in a bedding down phase and there is as yet no operational history to demonstrate the annual cycle of injecting gas into the WUGS facility and withdrawal of that gas for supply to customers of the PTS.

GPU GasNet's proposal

GPU GasNet submits that the Southwest Pipeline would not pass the Code's economic feasibility test as stand alone tariffs high enough to generate a return on its investment would be more than shippers would be willing to pay. GPU GasNet instead contends that it passes the system-wide benefits test. It considers substantial system security and

competition benefits arise from the creation of a link with the underground storage facility and with existing and prospective gas fields in the Otway Basin by reducing reliance on Esso/BHP's Bass Strait gas supplied from Longford.

GPU GasNet proposes to recover the costs of its investment in the Southwest Pipeline (net of the $7.3 million compensation) by increasing the existing injection tariff charged at Longford and by creating a new tariff at that level for gas injected at Iona and the Otway Basin. Most of the additional revenue would be generated from injections at Longford.

Economic feasibility test

GPU GasNet contends that the Southwest Pipeline does not pass the economic feasibility test. Under the extensions and expansions policy set out in the access arrangement for the PTS, that portion of new facilities investment that passes the test may be included in the capital base and charged at the reference tariff. The remainder could be recovered through a surcharge, a capital contribution, placed in a speculative investment fund, or by a combination of these options. New facilities investment that does not pass the economic feasibility test may alternatively be rolled-in if it passes the system-wide benefits test or is necessary to maintain the safety, integrity or contracted capacity of the reference services. However, GPU GasNet's access arrangement does not allow for part of a new facilities investment to be recovered pursuant to the economic feasibility test and for another part to be rolled-in under the system-wide benefits test.

In this instance, assessment of the economic feasibility test depends heavily on the assumptions made about usage levels and the prices users are willing to pay. In the absence of any substantial operational history to date the Commission considers the extent to which the investment in the Southwest Pipeline would pass the economic feasibility test is currently uncertain.

Prudency of investment

GPU GasNet's investment in the Southwest Pipeline appears to be prudent in a technical and engineering sense. Its capacity, which matches that of the WUGS facility, is appropriate for its function. Its construction costs were reasonable taking into consideration its accelerated development and construction timetable and the Government's contribution.

The Commission acknowledges that the Government's decision to construct the Southwest Pipeline was primarily to provide supply insurance during the winter of 1999. Consistent with this decision the Government has provided compensation to GPU GasNet by way of direct payment and through substantial transportation contracts to help underwrite the investment. However, the Government's published policy considerations in this case provide little if any guidance for assessment under section 8.16 of the Code.

Prior to the Longford emergency construction of the Southwest Pipeline and the WUGS facility had been proposed on the basis of expanding the peak deliverability of the PTS and of providing an additional source of supply. The Commission has

estimated that the cost of achieving 200 TJ/day of additional system peak deliverability by the alternative approach of looping the remaining unlooped section of the Longford to Pakenham pipeline would be approximately $50 million, substantially less than the $75.5 million costs of the Southwest Pipeline. On the basis of this comparison the Southwest Pipeline would not be cost-effective if the only relevant output were additional system peak deliverability. Accordingly, as part of its assessment of the prudency of the investment, the Commission has also examined the value of additional outputs provided by the Southwest Pipeline in the form of system security and competition benefits. These elements are assessed in detail as part of the system-wide benefits test.

System-wide benefits

Prudent investment that does not pass the economic feasibility test may be rolled-in if the regulator is satisfied that the new facility has system-wide benefits that justify the approval of a higher reference tariff for all users. GPU GasNet has identified system security and competition benefits which it considers justify roll-in.

The Southwest Pipeline, in conjunction with the WUGS facility, has the capacity to inject up to 200 TJ/day, which is equal to about 20 per cent of the PTS's total system capacity. The Commission is of the view that the Southwest Pipeline does have the potential to generate system security benefits. However, this capacity is largely dependent on the level of reserves held in the WUGS facility. Otway Basin gas developments may also contribute.

The WUGS facility is operated commercially to provide a source of peaking gas. Unlike the LNG facility at Dandenong, there is no reserve quantity held for system security purposes. It is expected that users of the WUGS facility would endeavour to fully inject their booked allocation prior to winter each year and then to utilise all (or nearly all) their stocks by the end of winter. Experience over time with the WUGS facility will indicate the likely level of usage and the annual storage profile and hence its contribution to system security. However, it is difficult at present to form an assessment of the contribution that these assets would make to security of supply given that, for much of each year, there may be little, if any, gas in storage and hence little, if any, supply security capacity.

The Commission is also of the view that the Southwest Pipeline may have the potential to generate competition benefits. These would primarily accrue through use of the WUGS facility to supply peak delivery gas in competition with the Longford producers. Otway Basin gas developments may also contribute. The extent of competition benefits will depend on factors such as the level of usage of the WUGS facility and the extent of Otway Basin gas developments.

The Commission considers the high cost of the WUGS facility may substantially inhibit usage beyond that already contracted and limit the major apparent source of competition benefits. This would appear to largely depend on the market behaviour of buyers and sellers of peak delivery gas which is unknown at this stage.

After considering all the information available to it, the Commission has concluded that the Southwest Pipeline does generate some system-wide benefits. However it is not

satisfied that likely benefits are sufficient to justify roll-in of the entire Southwest Pipeline investment and a commensurately higher reference tariff for all users. GPU GasNet's access arrangement does not allow for part of a new facilities investment to be rolled-in under the system-wide benefits test and for the remainder to be recovered pursuant to other Code provisions (such as through the economic feasibility test and the speculative investment fund).

Tariff structure

GPU GasNet notes that gas sourced from the Otway Basin would face a $0.08-0.13/GJ transmission price disadvantage if stand-alone pricing was adopted for the Southwest Pipeline. It considers that price relativities would be a major driver of participants' behaviour and contends that equal tariffs are necessary for injections at Iona and Longford to encourage usage of the Southwest Pipeline.

The Commission notes that, while such a differential appears substantial compared with existing tariffs on the PTS, it is questionable whether it would, in practice, have a substantial impact on usage. While the differential would add to the high cost of using the WUGS facility, it would be expected to represent a comparatively small portion of the total charge for using underground storage. In the context of current well-head prices of approximately $2.70/GJ and the prospect of substantially higher transmission prices (at least for peak deliverability gas), the price differential would be expected to have only a marginal impact on average for existing and prospective Otway Basin producers.

The Commission has also considered the tariff structure proposal in terms of the Code's reference tariff principles. It is concerned that GPU GasNet's proposal to fund the majority of its investment in the Southwest Pipeline through increased Longford charges is inconsistent with cost allocation and cost-reflectivity principles and would be likely to distort investment decisions.

Foundation retailers' take-or-pay obligations

The Government imposed substantial take-or-pay obligations on the three foundation retailers to help underwrite GPU GasNet's investment in the Southwest Pipeline. GPU GasNet has advised that it will offer to remove these obligations if the Commission approves the revisions. The Commission agrees that it would be inappropriate for GPU GasNet to 'double-dip' by continuing to receive revenue under the contracts while earning additional revenue from higher Longford injection charges. However, it is unclear how the removal of these obligations could be ensured.

The Commission understands that the foundation retailers support GPU GasNet's proposed revisions. In contrast, the new entrant retailers ENERGEX and AGL are concerned that removal of these obligations would provide the incumbent retailers with a windfall competitive advantage at the expense of second tier retailers and their customers. AGL also expresses its support for the principle that regulatory decisions should not override pre-existing commercial arrangements.

The Commission notes the intention of the Government that these contracts should help underwrite GPU GasNet's investment in the Southwest Pipeline. It also notes that GPU GasNet and the foundation retailers were aware of these obligations when they purchased the Victorian businesses and that they would be expected to have taken these obligations into consideration when bidding for the assets. While the Commission would be hesitant to be involved in the unwinding of existing contracts it recognises that these parties are free to do so if they so decide.

GPU GasNet will continue to achieve a substantial return from these contracts while they are in force which is not currently included in its regulated revenues.

Final decision

The Commission is not convinced that GPU GasNet's investment in the Southwest Pipeline would pass the system-wide benefits test. For this reason in particular, the Commission has now made a final decision under section 2.38(a)(ii) of the Code that it does not approve the revisions to the PTS access arrangement. The Commission also has reservations about the prudency of the investment and is uncertain as to the portion of the investment that would pass the economic feasibility test. In addition, the Commission considers that the proposed tariff structure is inconsistent with the principles of the Code.

This *Final Decision* sets out the reasons why the Commission does not approve the revisions. The Code does not require the Commission to specify amendments to be made, or that GPU GasNet submit amended revisions in this instance as GPU GasNet submitted the Southwest Pipeline revisions voluntarily.

The Commission recommends that GPU GasNet submit amended revisions regarding this investment in March 2002 at the time of the scheduled review when a reasonable period of operational history will be known and a more appropriate proposal can be established on the basis of available information.

1. Introduction

On 12 September 2000 GPU GasNet Pty Limited (GPU GasNet) submitted to the Australian Competition and Consumer Commission (the Commission), for approval under the *National Third Party Access Code for Natural Gas Pipelines Systems* (the Code), revisions to the access arrangement for the Victorian Principal Transmission System (PTS) and associated supplementary access arrangement information.

An access arrangement describes the terms and conditions on which a service provider makes access to its pipeline available to third parties. The Commission's assessment of the proposed revisions to the access arrangement for the PTS and the supplementary access arrangement information is in terms of the principles in the Code and the provisions of the access arrangement.

The Commission issued its final approval for the PTS access arrangement on 16 December 1998, with the initial access arrangement period extending to 2002. At that stage the system was respectively owned and operated by Transmission Pipelines Australia (Assets) Pty Ltd and Transmission Pipelines Australia Pty Ltd. The access arrangement came into effect on 1 March 1999. GPU GasNet acquired the PTS on 2 June 1999 and also operates the business. The access arrangement as approved by the Commission continues to apply to the system notwithstanding the change in owner and operator.

GPU GasNet is proposing in this application to expand the capital base of the PTS and to amend the PTS reference tariffs, to take account of the Southwest Pipeline, on the basis that it passes the Code's system-wide benefits test. These assets were commissioned after approval of the PTS access arrangement and link the PTS with the Western Underground Gas Storage Pty Ltd (WUGS) facility at Iona and the Western Transmission System (WTS). The WTS is also owned by GPU GasNet. The Southwest Pipeline comprises the Southwest Link (from Lara near Geelong to Iona), the Western System Link (from Iona to North Paaratte) and associated facilities. The map at Appendix A illustrates GPU GasNet's transmission pipeline network.

GPU GasNet considers that the Southwest Pipeline is primarily an injection pipeline as it allows principally for the seasonal injection of gas from the WUGS facility into the PTS, and for injections from the Otway Basin.

On 28 April 2000 the Commission issued its *Final Decision* to approve an earlier application by GPU GasNet to include the Interconnect Assets in the asset base of the PTS and to increase the reference tariffs on average by approximately ten per cent. The Interconnect Assets link the Victorian and NSW natural gas transmission systems and allow gas from Moomba in SA to be transported into Victoria, with the potential for reverse flows. That application was also made on the basis of system-wide benefits.

On 11 May 2001 the Commission issued a *Draft Decision* that it proposed not to approve the Southwest Pipeline revisions. It has now considered submissions from interested parties in response to that decision. This document sets out the Commission's final decision that it does not approve the revisions to the PTS access

arrangement and the reasons for this decision. It also identifies in broad terms a course of action that GPU GasNet is recommended to follow in order to incorporate some or all of its investment in the regulated asset base of the PTS in the future.

This introduction includes:

- a description of the current assessment process;
- a description of relevant aspects of the Victorian gas industry structure and regulatory framework;
- an outline of the GPU GasNet revisions submitted for approval;
- a summary of the criteria for assessing revisions to an access arrangement under the Code;
- a summary of the consultative process undertaken as part of the Commission's assessment; and
- the Commission's final decision.

1.1 The current assessment process

Under the Code the Commission is required to:

- inform interested parties that it has received proposed revisions to the PTS access arrangement from GPU GasNet;
- publish a notice in a national daily newspaper which at least describes the covered pipeline to which the access arrangement relates, states how copies of the documents may be obtained, and specifies a date requests by which submissions are required in the notice;
- after considering submissions received, issue a draft decision which either proposes to approve the revisions to the access arrangement or not to approve the revisions; and
- after considering any additional submissions, issue a final decision that it either approves or does not approve the revisions.

1.2 Victorian gas industry structure and regulatory framework

Relevant aspects of the Victorian gas industry structure include:

- GPU GasNet operates the PTS in Victoria which until recently solely transported gas supplied from the Esso-BHP fields in the Gippsland Basin. The recent completion of the Interconnect Pipeline and the Southwest Pipeline also allows Cooper Basin and Otway Basin gas to be supplied via the PTS;
- GPU GasNet also operates the WTS which until recently solely transported gas supplied from the on shore Otway Basin gas fields. Since completion of the Southwest Pipeline, Gippsland Basin gas is being supplied via the WTS;
- Since July 1998 the Interconnect Pipeline has linked the PTS with the Moomba to Sydney Pipeline (MSP) which is operated by East Australian Pipeline Ltd (EAPL). GPU GasNet owns and operates the section of the Interconnect Pipeline from

Barnawartha to Culcairn and EAPL owns and operates the remainder from Culcairn to Wagga Wagga. It allows southward flows of gas supplied by the Cooper Basin producers to Victoria and for northward flows of Gippsland Basin gas to NSW; and

- Duke Energy International (DEI) owns and operates the Eastern Gas Pipeline (EGP) which commenced operations supplying Gippsland Basin gas to customers in NSW in 2000.

The main legislation and relevant documents regulating access to the Victorian gas transmission industry are:

- the Code, under which transmission service providers are required to submit access arrangements to the Commission for approval;
- the *Gas Pipelines Access (South Australia) Act 1997;*[1] and
- the *Gas Pipelines Access (Victoria) Act 1998*.[2]

In addition, certain provisions of the *Victorian Third Party Access Code for Natural Gas Pipeline Systems* (the Victorian Code) under which the Commission approved the PTS access arrangement in December 1998 have been 'grandfathered'. Sub-section 24A(3) of the *Gas Industry Acts (Amendment) Act 1998* provides that access arrangements approved under the Victorian Code (such as the access arrangements for the PTS and WTS) continue to be subject to sections 3, 8 and 9 (so far as it applies to sections 3 and 8) and to sections 2.33 and 2.48A of the Victorian Code. These sections are not subject to the corresponding provisions of the Code until the first scheduled review of the access arrangements under section 2 of the Code. The convention has been adopted in this *Final Decision* of identifying relevant Victorian Code provisions where they differ from current provisions of the Code.

The Code and appeals bodies in Victoria with respect to transmission pipelines are:

- the Commission – regulator and arbitrator;[3]
- the National Competition Council – Code advisory body;
- the Commonwealth Minister – coverage decision maker;
- the Federal Court – judicial review; and
- the Australian Competition Tribunal – administrative appeal.

1.3 Proposed revisions

GPU GasNet has proposed revisions under its extensions and expansions policy to incorporate the Southwest Pipeline in the PTS access arrangement.

A new Southwest Pipeline zone is proposed by GPU GasNet with the PTS capital base expanded to include the cost of the Southwest Pipeline.

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1 South Australia acts as lead legislator for the national gas access legislation.
2 Victoria enacted legislation applying the SA legislation in Victoria.
3 The Commission is also regulator and arbitrator with respect of transmission pipelines in other states and territories with the exception of Western Australia.

As incremental revenue from the Southwest Pipeline is only expected to cover part of the costs associated with these assets, reference tariffs for all users of the PTS are proposed to be increased to recoup the balance of the costs associated with these assets.

1.4 Criteria for assessing proposed revisions

The Commission may approve revisions to an access arrangement only if it is satisfied that the access arrangement as revised would contain the elements and satisfy the principles set out in sections 3.1 to 3.20 of the Code, which are summarised below. Revisions to an access arrangement cannot be opposed solely on the basis that the access arrangement as revised would not address a matter that section 3 of the Code does not require it to address. Subject to this, the Commission has a broad discretion in accepting or opposing revisions to an access arrangement.

An access arrangement, or a revised access arrangement, must include the following elements:

- a policy on the service or services to be offered which includes a description of the service(s) to be offered;
- a reference tariff policy and one or more reference tariffs. A reference tariff operates as a benchmark tariff for a particular service and provides users with a right of access to the specific service at the specific tariff. Tariffs must be determined according to the reference tariff principles in section 8 of the Code;
- terms and conditions on which the service provider will supply each reference service;
- a statement of whether a contract carriage or market carriage capacity management policy is applicable;
- a trading policy that enables a user to trade its right to obtain a service (on a contract carriage pipeline) to another person;
- a queuing policy to determine users' priorities in obtaining access to spare and developable capacity on a pipeline;
- an extensions/expansions policy to determine the treatment of an extension or expansion of a pipeline under the Code;
- a date by which revisions to the arrangement must be submitted; and
- a date by which the revisions are intended to commence.

In considering whether a revised access arrangement complies with the Code, the Commission must take into account the provisions of the access arrangement and, pursuant to section 2.24 of the Code, the following factors:

- the legitimate business interests and investment of the service provider;
- firm and binding contractual obligations of the service provider or other persons (or both) already using the covered pipeline;
- the operational and technical requirements necessary for the safe and reliable operation of the covered pipeline;
- the economically efficient operation of the covered pipeline;

- the public interest, including the public interest in having competition in markets (whether or not in Australia);
- the interests of users and prospective users; and
- any other matters that the Commission considers are relevant.

1.5 Consultative process

Pursuant to the requirements of the Code, in November 2000 the Commission published a notice in a national newspaper and informed interested parties that it had received GPU GasNet's proposed revisions to the PTS access arrangement and invited submissions from interested parties. In addition, in order to help foster the consultative process, the Commission released an *Issues Paper* in November 2000. Pursuant to section 2.31(b)(iii), the Commission specified 15 December 2000 as the date by which submissions should be lodged. In response to requests from major stakeholders, the Commission subsequently agreed (pursuant to section 2.34) to also consider later lodgements. These included submissions and commissioned consultants' reports from BHP Petroleum Pty Ltd (BHPP) and ExxonMobil which were received on 17 January and 9 February 2001 respectively. GPU GasNet provided a response to submissions from interested parties on 2 March 2001. BHPP lodged a further submission on 9 April 2001 to which GPU GasNet responded on 24 April 2001.

The majority of submissions received from interested parties supported GPU GasNet's proposed revisions and recommended that the Commission approve the proposed revisions to the access arrangement. These parties generally were of the view that the Southwest Pipeline was a valuable addition to the PTS as it introduced a means of potential gas supply competition. Other parties opposed the revisions on grounds such as that roll-in would represent a subsidy and distort price signals. The consultants raised broad concerns about roll-in and the assessment of the system-wide benefits test.

The Commission released its *Draft Decision* on 11 May 2001 and specified that responding submissions should be received by 1 June 2001. Submissions were lodged by BHPP, ENERGEX, AGL and TXU. GPU GasNet did not provide a submission in response to the *Draft Decision.*

1.6 Final decision

The Commission has now issued a *Final Decision* under section 2.38(a)(ii) of the Code that it does not approve the revisions to the PTS access arrangement. The provision in that section concerning stating amendments to the revisions (that might be made in order for revised amendments to be approved) does not apply in this instance as the current revisions were not required by GPU GasNet's access arrangement. This *Final Decision* sets out the reasons why the Commission does not approve the proposed revisions relating to the Southwest Pipeline.

The Commission recommends that GPU GasNet submits its amended roll-in proposal at the time of the scheduled review of the access arrangement in 2002 when there should be sufficient operational history known to provide a sound basis for assessing its claims.

The remainder of this *Final Decision* comprises: the revisions proposed by GPU GasNet (chapter 2); assessment criteria (chapter 3); assessment of the proposed revisions (chapter 4); and chapter 5 sets out the Commission's final decision.

2. Revisions proposed by GPU GasNet

2.1 Purpose of revisions

GPU GasNet has proposed revisions under its extensions and expansions policy to incorporate the Southwest Pipeline, which is described below, in the PTS access arrangement. While the Southwest Pipeline now links the PTS and the WTS, the WTS is currently subject to a separate access arrangement. GPU GasNet has advised that it expects to apply to include the WTS in the PTS access arrangement in the first half of 2001 when a new compressor station becomes operational at Iona which will boost westerly flows.

A new Southwest zone is proposed by GPU GasNet with the PTS capital base expanded by $75.5 million to include the Southwest Pipeline. GPU GasNet states that incremental revenue from the Southwest Pipeline would only be expected to cover part of the costs associated with these assets. GPU GasNet proposes to increase the reference tariff at the Longford injection point to recoup the balance of the capital and non-capital costs associated with these assets. The same injection tariff would apply at Longford and for the Southwest zone. GPU GasNet states that, as a result, users of the PTS would be indifferent to the transmission price when sourcing their gas supplies.[4] The current Metro anytime charge would apply on the Southwest zone.

GPU GasNet's proposed commencement date of 1 October 2000 for the revised reference tariffs preceded the potential revisions commencement date. GPU GasNet advised that this apparent timing discrepancy was not expected to impact on the tariff calculations as all the incremental costs on the Southwest Pipeline would be recovered from the injection charges, which are applied from June to September (as is the Longford injection charge). While the calculation of the net present value (NPV) of revenues to be recovered would commence on 1 October 2000, the tariff would not be affected by a revisions commencement date up to 1 June 2001, the date on which injection revenues would commence.

Under GPU GasNet's proposal, users would receive rebates as appropriate if the Commission approved a tariff that was below that charged from 1 October 2000.

2.2 The Southwest Pipeline

2.2.1 Background to construction

The Commission understands that Gas and Fuel Corporation Victoria first investigated the Southwest Pipeline/WUGS approach in 1988.[5] A feasibility study was commenced in July 1996. The Victorian Government supported development of the proposal '[t]o assist in meeting anticipated peak load requirements and facilitate the development of a

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[4] GPU GasNet does not expect substantial flows from Moomba in the immediate term.

[5] Energy Projects Division, Department of Treasury and Finance, *Victoria's gas industry: Implementing a competitive structure, Information paper No. 3, Second edition*, April 1998, p. 53.

competitive gas market.'[6] Other potential benefits cited were competition benefits and connection with the WTS.

TPA (the former owner of the PTS) included capital expenditure for the Southwest Pipeline/WUGS proposal (and a number of other projects totalling $500 million) in its business plan for the five years to 31 December 2002.[7] The Energy Project Division (EPD) of the Victorian Department of Finance and Treasury commissioned consultants Stone & Webster to review the need for these expenditures when preparing the access arrangement for the PTS for submission to the Commission. EPD commented: 'Stone & Webster concluded that, given the security factor built into forecast demand and the ability of the Longford/Dandenong pipeline to deliver significant volumes in excess of requirements, TPA in the past has provided an ample supply of gas, as well as capacity, to meet all the Transmission System's requirements.'[8] Consequently EPD excluded any projected expenditure for the Southwest Pipeline/WUGS projects from the target revenue calculation for the initial access arrangement period.

The rights to development and ownership of the Southwest Pipeline/WUGS were to be sold as a package as part of the Victorian Government's gas reform process.[9] However, in November 1998, following the Longford explosion, the Victorian Government entered into agreements for the sale and development of the WUGS facility to TXU for a total price of $58.5 million (including $26.9 million for the acquisition of the rights to the Iona reservoir gas reserves).[10] TXU agreed to further capital expenditure estimated at about $85 million.[11] TXU also agreed to enter into contracts to supply gas from the WUGS facility representing about half its capacity at agreed prices for five years to GASCOR.

GPU GasNet has stated that completion of the Southwest Pipeline was originally planned for May 2000. It also stated its understanding that:

> … before the Longford emergency, the Victorian Government intended only to give the buyer of TPA the non-exclusive option to develop the facilities, but did not intend to compel their construction as part of the sale process. Construction would have been a commercial decision for the new owner. Whether a new owner of TPA would have decided to construct the facilities is a moot point. The decision to order the construction of WUGS and the South West Pipeline was made by the Victorian Government only after the Longford emergency, in response to the system security needs of Winter '99.[12]

The Victorian Government made the decision to construct the pipeline in October 1998. The pipeline was completed in May 1999.

In summary, it appears that construction of the Southwest Pipeline and the WUGS facility was a long-standing objective of GPU GasNet's predecessors. However, as late

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6 *Ibid*.

7 *Access arrangement information for principal and western transmission pipelines by Transmission Pipelines Australia Pty Ltd and Transmission Pipelines Australia (Assets) Pty Ltd*, 3 November 1997, p. 15.

8 *Ibid*

9 Energy Projects Division, Department of Treasury and Finance, *Victoria's gas industry: Implementing a competitive structure, Information paper No. 3, Second edition*, April 1998, p. 53.

10 Victorian Auditor-General, *1998-99 Annual report*, p. 19.

11 *Ibid*.

12 GPU GasNet, *Response to further submission from BHP Petroleum*, 24 April 2001, p. 2.

as November 1997, EPD rejected related expenditure as being unnecessary in the five years to 31 December 2002. This stance was overturned as a result of the September 1998 Longford explosion when the Victorian Government decided that both facilities would be built and in operation by the winter of 1999 in order to supplement supplies to the PTS in the event that Longford processing capacity remained limited. GPU GasNet considers it a 'moot point' whether the Southwest Pipeline would have been constructed if the Victorian Government had not required it.

GasNet has described the rationale for the construction decision as follows:

> The decision to build the Southwest Pipeline was made by the Victorian Government in direct response to the Longford fire and explosion in order to ensure security of supply in winter 1999. At that time TPA (now GPU GasNet) was still under Government ownership. In addition to directly addressing winter 1999, this decision also supported improved security of supply and enhanced market competition over the longer term. [13]

2.2.2 Description of Southwest Pipeline

For the purposes of GPU GasNet's revisions application, the Southwest Pipeline comprises:

- the Southwest Link, which is a 500 mm diameter gas transmission pipeline (with a capacity of 200 TJ/day) approximately 144 km long linking Lara (on the PTS) with Iona (near Port Campbell), the site of the WUGS facility. Associated pressure and flow control regulators at Lara and Brooklyn which are necessary for the operation of the Southwest Link are included. The Brooklyn regulator, although not connected to the pipeline, is essential to the functionality of the Southwest Link; and
- the Western System Link, which is a 150 mm diameter gas transmission pipeline approximately eight km long, connects the Southwest Link at Iona with the WTS at North Paaratte. It is associated with a regulator and a small compressor station, both located at Iona.

GPU GasNet advises that a number of new withdrawal points would be created on the Southwest Pipeline. GPU GasNet has identified possible off-takes at Colac and Simpson as well as for withdrawals to refill the WUGS facility.

The Southwest Pipeline was built under an accelerated timetable in response to the Longford fire and explosion and as part of the broader winter 1999 project to boost available gas supplies on the PTS by that peak demand period. Its primary role is to provide additional sources of gas supply on an on-going basis during winter peak demand periods. The Commission understands that in the short term nearly all of the winter eastward flows will be sourced from Longford gas stored in the WUGS facility. The North Paaratte reserves previously supplying the WTS are understood to have been 'shut-in' early in 2001. GPU GasNet considers that there are good prospects for further gas field discoveries in the Otway Basin. It notes that Santos has developed the Mylor and Fenton Creek fields and is currently marketing the newly discovered Penryn field.

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[13] GPU GasNet, *Response to public submissions*, 2 March 2001, p. 2.

In addition an intensive new exploration program is being planned and the Minerva field is awaiting development.[14]

The WUGS facility will have an injection capacity from 2001 of 200 TJ/day, of which 197 TJ/day is reportedly under contract from 2001 to 2005.[15] Of the total capacity of 10 PJ, 8.6 PJ was reported to be contracted over this period. VENCorp forecasts that by 2005 peak demand for gas in Victoria in a 1 in 20 winter would be 1 253 TJ/day.[16] The Longford Pipeline (990 TJ/day) and the Interconnect Pipeline (92 TJ/day) would only partially meet this demand.[17] While it is expected that summer refills of the WUGS facility generally will be sourced from Longford, VENCorp reported that some of the gas stored for the winter of 2000 was sourced from an Otway Basin well.[18]

GPU GasNet advises that the pipeline and facilities (with the exception of the Iona compressor) were constructed over a period of six months, rather than the standard of at least 18 months for a pipeline of that size.

2.2.3 Costs

GPU GasNet states that it recognises that a significant period has elapsed between the date of commissioning of the Southwest Pipeline (1 June 1999) and the date when it proposed that revised tariffs would commence (1 October 2000).[19] While the Code does not specify a methodology to apply when such a delay occurs with respect to new facilities investment, it notes that section 8.13 (which applies to new pipelines) provides that the opening value of the asset must be reduced by the amount of depreciation identified during the period. GPU GasNet has applied real straight-line depreciation to the costs of the Southwest Pipeline assets to estimate the values shown in this chapter. No recognition is proposed of revenues generated on the Southwest Pipeline prior to 1 October 2000.

GPU GasNet states that the Victorian Government compensated it for an amount of $7.3 million to cover additional costs incurred due to the accelerated timetable. GPU GasNet proposes that this amount be deducted from total construction costs of $82.8 million so that net new facilities investment of $75.5 million could be rolled-in to the capital base. This approach is consistent with the treatment of the $2.2 million the Victorian Government contributed towards the Interconnect Assets. Table 2.1 below identifies the components comprising the Southwest Pipeline and their capital costs.

The Victorian Government also initiated five year contracts between GPU GasNet's predecessor and the three foundation retailers commencing October 2000 to help underpin the investment in the Southwest Pipeline. While the Commission proposes to agree to a request by GPU GasNet that details of these arrangements be considered on a confidential basis, it notes that the revenues due to flow to GPU GasNet are substantial.

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14 GPU GasNet, *Application for revisions to access arrangement*, 11 September 2000, pp. 16-17.
15 VENCorp, *Annual Gas Planning Review, 2001 to 2005*, 30 November 2000, p. 17.
16 *Ibid*, p. 32.
17 *Ibid*, p. 21.
18 *Ibid*, p. 17.
19 GPU, *GasNet Application for revisions to access arrangement*, 11 September 2000, p. 24.

Table 2.1: Proposed roll-in of Southwest Pipeline costs

Component	Cost ($ million)[(a)]
Southwest Link	59.4
Western System Link	1.7
Lara regulator	3.9
Brooklyn regulator	4.1
Iona regulator	2.5
Iona compressor	3.9
Total	75.5

Source: GPU GasNet application, p. 26.
Note: (a) Includes interest accrued during construction of $0.5 million.

Table 2.2 identifies the proposed annual allowances for incremental operation and maintenance costs. GPU GasNet notes that the total of $0.35 million equates to approximately $2.3 million per 1 000 km, which it states compares favourably with the $16 million per 1 000 km (in 1998 dollars) which the Commission accepted when it approved the PTS access arrangement. GPU GasNet expects that the identified costs will increase over time as major maintenance tasks become due after the initial access arrangement period.[20]

Table 2.2: Proposed incremental operation and maintenance costs

Component	Cost ($ million)
Pipelines (including valves)	0.14
Facilities (regulators and compressors)	0.11
Compressor and heater fuel	0.10
Total	0.35

Source: GPU GasNet application, pp. 27-28.

GPU GasNet advises that:

- the pipeline operating and maintenance costs are principally pipeline patrol and valve maintenance;
- most ($0.9 million/year) of the operating and maintenance cost for the facilities is for the Iona compressor station and city gate. The remainder is principally communications costs at Lara; and
- the fuel costs cover approximately 10 TJ/year for each of the Brooklyn and Lara heaters and 20 TJ/year as fuel for the Iona compressor station.

[20] *Ibid*, pp. 27-28.

2.3 Impact on reference tariffs

GPU GasNet estimates that the stand-alone five peak day tariff (excluding GST) needed to recover costs for the Southwest Pipeline would be in the range of $7-10/GJ, which it states would make gas injections in the Southwest zone uncompetitive compared with the existing tariff of $2.26/GJ for gas injections at Longford.[21] GPU GasNet states that, on an annual basis, the stand-alone tariff for a typical industrial end-user would be $0.12-0.17/GJ, which it notes would result in a price disadvantage to the Port Campbell field of $0.08-0.13/GJ compared with the Longford equivalent tariff of $0.04/GJ. GPU GasNet suggests that a price difference of this magnitude could be a significant disincentive to development of new fields at Port Campbell. The price differential for a residential market load would be higher at $0.16-0.26/GJ annually.

GPU GasNet considers that, in the case of the Southwest Pipeline, the economic feasibility test is difficult to apply, but that it passes the system-wide benefits test (see below). On this basis it seeks to expand the PTS capital base and amend the existing reference tariffs to reflect the actual costs of the Southwest Pipeline. GPU GasNet has estimated that its proposal would result in a 12.8 per cent increase in the NPV of revenues over the life of the pipeline system. Accordingly, users would on average face increased transmission charges commensurate with that amount over the period.

GPU GasNet proposes to use a form of back-end loaded depreciation such that $8.2 million of depreciation for the years 2000 to 2002 would be deferred (compared with that implied by a real, straight-line depreciation schedule), with the target revenue being levelized during the subsequent 20 years. GPU GasNet states that this approach would significantly reduce the target revenue in the early years (when flows are lower) with a commensurate increase in later years. Under this approach the total new revenue requirement would be higher by 7.8 per cent in 2000 and 8.7 per cent in 2001. Under a straight-line depreciation schedule the increases would be 13.0 per cent and 14.1 per cent respectively.

As noted earlier, GPU GasNet proposes that a new Southwest tariff zone and a Port Campbell injection tariff be introduced, with the latter set at the same level as an increased Longford injection tariff. The Port Campbell injection point will encompass injections from a number of fields in the Port Campbell area, including North Paaratte, Mylor, Fenton Creek and the WUGS facility at Iona. A number of new withdrawal points will be created on the Southwest Pipeline, including possible off-takes at Colac and Simpson, and refill withdrawals into the WUGS facility.

Table 2.3 and Table 2.4 below present the revised tariffs proposed by GPU GasNet. The two injection tariffs would be based on the flows on the combined five peak days, and contribute sufficient revenue to reflect the added capital costs of the Southwest Pipeline. [22]

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[21] *Ibid*, p. 18.

[22] The Port Campbell area encompasses injection points from a number of fields including North Paaratte, Mylor, Fenton Creek and the WUGS facility at Iona. For tariff purposes, these sources would be treated as a single injection point to be designated as the Port Campbell injection point.

A matched injection factor equating to the entire charge would be offered to retailers on the WTS who can match demand in the WTS to injections at Port Campbell. Therefore these retailers would not pay that part of the Port Campbell injection charge which can be matched to their withdrawals on the WTS.

Table 2.3: Current and proposed Longford and Port Campbell injection tariffs

For withdrawal in a transmission zone or at a transmission pipeline supply point	Transmission demand tariff component 1999 ($/GJ)[(a)]		Matched injection factor
	Current	Proposed	
All except La Trobe and Lurgi transmission zones	2.4819	3.1862	
La Trobe zone	2.4819	3.1862	0.293
Lurgi zone	2.4819	3.1862	0.324
WTS transmission pipeline supply point	2.4819	3.1862	1.000

Source: GPU GasNet application, Annexure 2, p. 16 and advice to the Commission, 15 September 2000.
Note: (a) 1999 tariffs for 5 peak day joint injection MDQ.

The current Metro anytime charge would apply on the Southwest zone. Users on the Southwest Pipeline, and refills into the WUGS facility, would be eligible for a matched withdrawal rebate on any matched volumes injected at Port Campbell, in which case the withdrawal charge will reduce to the non-locational anytime charge.[23]

Table 2.4: Proposed Southwest Zone withdrawal tariffs ($/GJ)[(a)]

Transmission zone	Standard	Matched booking
Southwest	$0.1200	$0.0848

Source: GPU GasNet application, Annexure 2, p. 17.
Note: (a) 2000 tariffs, Transmission volume tariff component.

Table 2.5 below demonstrates the impact of the proposed reference tariffs on users. The incremental revenue requirement has been allocated into two parts – the part which would be recovered from within the new Southwest zone, and the part which would be recovered as additional revenue from the existing Longford zone. GPU GasNet considers that it is the increase in the existing Longford zone charge which is most relevant to the system-wide benefits test (see below), since it is this component which measures the extent to which the tariff proposal does not satisfy the economic feasibility test.[24]

[23] The Metro anytime charge consists of a recovery of non-locational costs, and a recovery of locational operations and maintenance costs for transmission through the Metro Zone, GPU GasNet, *Application for revisions to access arrangement*, 11 September 2000, p. 23.

[24] GPU GasNet advice to the Commission, 20 September 2000.

Table 2.5 also shows:

- the percentage increase in the Longford tariff;
- the percentage increase in the revenues generated from the Longford pipeline, based on two scenarios of volumes on the Southwest Pipeline (the medium forecast splits the growth in load between Longford and the Southwest Pipeline, while the high forecast allows for maximum usage of the Southwest Pipeline, with the residual growth carried on the Longford pipeline); and
- the percentage increase in the total existing system revenues due to the incremental revenues on the Longford pipeline (but ignoring the revenues generated within the Southwest zone itself).

Table 2.5: Impact of proposed revisions on current revenues and tariffs (%)

	2000	2001	NPV over life
Total new revenue requirement over total existing revenues	7.8	8.7	12.8
Increase in Longford Tariff	35	39	
Increase in Longford revenues			
Medium forecast	35	39	55
High forecast	28	35	50
Additional Longford revenues over total existing revenues			
Medium forecast	4.5	4.9	7.9
High forecast	3.6	4.4	7.2

Source: GPU GasNet response to Commission, 20 September 2000.

The proposed impact in 2000 and 2001 is considerably less than over the life of the assets because of the deferred depreciation approach discussed below.

2.4 Proposed costs allocation

As noted above, GPU GasNet proposes that the current Longford injection tariff be increased and that a new Southwest zone tariff be introduced such that the two tariffs are at the same level and will contribute the appropriate revenue to reflect the additional costs of the Southwest Pipeline. No changes would be made to existing withdrawal and anytime charges. In addition, GPU GasNet proposes that $8.2 million of depreciation would be deferred in the years 2000 to 2002. Such a structure raises a number of cost allocation issues including:

- users would be expected to be indifferent to the gas source (assuming gas quality and price to be equal) with equal injection costs at Longford and from the Southwest Pipeline;
- the depreciation deferral would benefit users in the first years over users in later years; and

- recovery of all costs through increased injection charges would favour high load factor customers over low load factor customers such as households.

GPU GasNet notes that a stand-alone tariff for the Southwest Pipeline (that recovers the incremental capital and operating costs from the flows forecast on the pipeline) would be expected to be three to four times higher than the existing Longford injection tariff (the differential would depend on volume assumptions, the treatment of depreciation and contracted revenues). It considers that a large part of this difference is simply a vintage effect arising from the fact that the Longford pipeline is highly depreciated whereas the Southwest Pipeline is new capital. GPU GasNet notes that the pipeline from Longford to Pakenham (the asset which is recovered by the Longford injection charge) has a length of 141 km, which is similar to the length of the Southwest Pipeline from Iona to Lara of 144 km.

GPU GasNet notes that the original cost allocation methodology used to establish the PTS reference tariffs involved all assets being valued at their Optimised Replacement Cost (ORC), then those values were scaled down as a group so that the group value equalled the total Depreciated Optimised Replacement Cost (DORC) of all assets. This method effectively ignored the vintage of each asset and assigned the same proportion of depreciation to each asset irrespective of the actual age of that asset. Consequently, older assets were written down by the same proportion as relatively new assets.

GPU GasNet considers that this method would be in keeping with the original philosophy of the tariff model, and that it is generally accepted as a legitimate means for cost allocation where vintage bias is a concern. However, GPU GasNet states that this is not its preferred option as its effect would be to transfer the deemed Southwest Pipeline depreciation costs onto the withdrawal tariffs in all zones, whereas the decision to use the Southwest Pipeline is principally a choice of supply point between Port Campbell and Longford.

2.5 Tariff methodology

GPU GasNet states that all tariff calculations in its application utilise the same current cost accounting methodology as originally employed in the access arrangement. All asset values, depreciation charges and returns on assets are escalated at the CPI each year.

GPU GasNet proposes to use updated forecast injection volumes based on published VENCorp forecasts, its internal assessment of peak gas used in power generation and exports of 7–8 TJ/day into NSW based on current flows.[25] GPU GasNet states that this has no substantive effect on the revenues received by GPU GasNet as they are ultimately based on the delivered volumes. However, GPU GasNet considers that the approach presents users with a more reasonable and cost reflective injection tariff, and minimises the extent to which delivery tariffs will be adjusted through the price control procedures (as the revised forecast volumes will be more closely aligned to the actual expected flows). It is assumed that this load is supplied principally from Longford and

[25] GPU GasNet, *Application for revisions to access arrangement*, 11 September 2000, Annexure 3, p. 28.

the Southwest Pipeline, with small supplementary volumes provided from imports via the Interconnect Pipeline and injections of liquefied natural gas (LNG).

The proposed injection tariff for the Longford and Port Campbell injection points has been calculated using the following procedure:

1. calculate the sum of the revenue requirements of the Longford injection pipeline and the Southwest Pipeline for the years 2000 to 2002 inclusive;
2. forecast the combined injection volumes from Longford and Port Campbell on the five peak injection days;
3. levelize the tariff from 2001 to 2002 at an escalation rate of CPI; and
4. back-date the revised injection tariff to the year 1999. The tariffs for the years 2001 and 2002 are then determined by applying the modified price control procedures each year.

GPU GasNet notes that the original tariff for the Longford injection point was designed to recover the full revenue requirement of the Longford injection pipeline over the period 1998 to 2002 and that a levelized tariff (CPI-2.7%) was derived taking into account the forecast reduction in injections from 990 TJ/day (in 1998, 1999 and 2000) to 853 TJ/day (in 2001 and 2002). It states that, as the revenues for 1999 and 2000 are deemed to have been recovered at the published tariff, the appropriate revenue requirement for 2001 and 2002 is the forecast revenue based on the product of the published tariff (escalated each year at CPI-2.7%) and the forecast injection volume (from the existing tariff model). It notes that the published injection tariff slightly over-recovers the revenue requirement since a matched injection rebate is paid to withdrawals in the Latrobe and Lurgi zones, and that the forecast rebates are deducted from the forecast injection revenues to derive the revenue requirement.

The proposed revenue requirement for the Southwest Pipeline has been derived from the following financial and economic parameters:

- a capital investment of $75.5 million;
- commissioning of the South West Pipeline in June 1999 and the Iona compressors in March 2000;
- an opening asset value obtained by depreciating the capital investment from the commissioning date to the tariff commencement date, using real, straight-line depreciation;
- incremental annual operating and maintenance costs of $0.35 million;
- a pre-tax real weighted average cost of capital of 7.75 per cent; and
- an economic life ending in 2033 (as for the main assets of the PTS).

2.6 Prudency of investment

Under the Code only new facilities investment that is prudent may be rolled-in to the regulated asset base. GPU GasNet provided a Capital Cost Benchmarking Analysis in

support of its application.[26] The study compared the capital cost of the Southwest Pipeline with a range of oil and gas transmission pipelines built in Australia since 1980. GPU GasNet considers that the unit cost of $820/mm/km for the Southwest Pipeline is consistent with the norms of the last ten years (average of $812/mm/km with a standard deviation of $163/mm/km) and that results of the analysis demonstrate that it has met this requirement. Unit costs recorded for the first ten year period of the study were higher.

Nonetheless, GPU GasNet recommends caution in interpreting these data. It notes that the results show a wide range of dispersion about the mean which it states demonstrates that uncontrolled variables are present in the data. GPU GasNet gave the following examples of factors that can bear on the final construction cost:

- the level of development and land use en route;
- the number of road, rail and river crossings;
- the terrain;
- the foreign exchange rate; and
- the level of supply and demand for pipe and for construction crews.

GPU GasNet also states that the size of the Southwest Pipeline is appropriate:

> The selection of a pipeline with a diameter of 500 mm between Lara and Iona was made on the basis of the design capacity of the underground storage, the anticipated need for this capacity in the market, and the efficient development of this pipeline over time.
>
> The initial design capacity of the Western Underground Storage is understood to be 200 TJ/day (to be in place by winter 2001). This quantity can be delivered by a 500 mm pipeline but not by a 450 mm pipeline. The capacity of the 500 mm pipeline can be expanded to 300 TJ/day with additional expenditure on the Brooklyn loop, and to 415 TJ/day with installation of the Stonehaven compressor.
>
> A smaller pipeline option (such as a 450 mm pipeline) was rejected because it could not have carried 200 TJ/day without additional expenditure of at least $28 million for a partial Brooklyn loop. This cost is well in excess of the additional cost of a 500 mm pipeline.[27]

GPU GasNet states that it is not aware of any benchmarking analysis that can be applied to facilities such as the compressor and city gates installed on the Southwest Pipeline, as the costs are directly related to the specific design requirement of each facility. Nevertheless, GPU GasNet states that it believes that the costs of these facilities, after adjustment is made for the effects of accelerated design and construction, are reasonable and prudent.

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26 *Ibid*, Annexure 5.
27 *Ibid*, Annexure 1, p. 14.

2.7 System-wide benefits

PTS access arrangement extensions and expansions policy

Section 3.1 below outlines the PTS access arrangement extensions and expansions policy and related Code requirements. Briefly, GPU GasNet considers that its investment in the Southwest Pipeline:

- does not pass the economic feasibility test;[28]
- is prudent; and
- is eligible for roll-in to the capital base on the grounds that it generates system-wide benefits that justify a higher tariff for all users.

System security benefits

GPU GasNet considers that two aspects of system security benefits need to be taken into account:

- system security benefits provided in the winter of 1999; and
- on-going system security benefits.

Following the September 1998 fire and explosion at Longford, the Victorian Government initiated a number of projects to provide additional security of supply in case gas production at Longford did not return to full capacity before peak demands were experienced in the winter of 1999. The principal projects designed to secure alternative sources were the Moomba-Melbourne Augmentation Project (MMAP)[29] and the Southwest Pipeline. GPU GasNet describes the potential contribution of these projects as follows:

> The Southwest Pipeline was constructed at government direction under an accelerated schedule, and linked with accelerated field development work at North Paaratte, Mylor and Fenton Creek, and the installation of additional gas processing capacity at Iona. The entire project was designed to supply at least 100 TJ/day into the Principal Transmission System by winter 1999.
>
> The Southwest Pipeline (supplying 100 TJ/day) and the Moomba-Melbourne Augmentation Project (supplying 92 TJ/day) together provided a delivery capacity of at least 192 TJ/day during winter 1999, sufficient to satisfy the bulk of the shortfall from Longford in the event that Gas Plant No. 1 did not return to production.[30]

GPU GasNet notes that the Longford plant did return to full production for the winter of 1999, but considers that the Southwest Pipeline provided a critical element in the planning for system security for that winter in the context of uncertainty associated with supply from Longford at that time. On this basis it states that the system security benefits of the Southwest Pipeline (and the MMAP) were established in the planning

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[28] In addition to GPU GasNet's assessment that incremental revenue would only be expected to cover part of the costs of the assets, it is not clear as to which reference tariff would be applicable if the assets passed the economic feasibility test, given that there is currently no reference tariff for the Southwest Pipeline.

[29] The Commission assessed the MMAP in part when approving roll-in of the Interconnect Assets.

[30] GPU GasNet, *Application for revisions to access arrangement*, 11 September 2000, p. 12.

for the winter of 1999. GPU GasNet estimates that the value of these benefits accruing from the Southwest Pipeline was in the range of $80 million to $3.2 billion.[31]

GPU GasNet identifies on-going system security benefits in that the Southwest Pipeline could, if necessary, supply the entire needs of the WTS (either from the WUGS facility or from Longford), or deliver at least 200 TJ/day (compared with the Longford deliverability of 990 TJ/day) to the PTS to supply Melbourne and country centres. GPU GasNet considers that the Southwest Pipeline provides a high level of enhanced system security in the event of:

- a failure at the Bass Strait wells or gathering lines;
- a failure at the Longford gas processing plant;
- a failure of the Longford to Dandenong pipeline (which it notes is unduplicated for one third of its length);
- a failure of the LNG facility during peak shaving operations (which it notes is relied upon for up to 150 TJ/day); and
- a failure at the North Paaratte processing plant or associated wells or gathering lines.

GPU GasNet considers that the Southwest Pipeline supplements the security provided by the Interconnect Pipeline and the LNG facility, but that it allows a significantly greater quantum of protection. It states that the security benefits can range from fewer involuntary curtailments during a partial supply failure (such as the June 1998 'ice-plug' incident), to the support of critical loads and the maintenance of minimum system pressure during a total supply collapse (such as occurred in September 1998). GPU GasNet estimates the value of these benefits to be in the range of $40 million to $400 million.

Competition benefits

GPU GasNet believes a fundamental issue of gas reform in Victoria (and elsewhere) is the market power of the incumbent producers. It states that Esso-BHP has had a virtual monopoly on gas supply in Victoria for 30 years and that its market power has been largely undiminished by the gas market reforms introduced by the Victorian Government. While reforms such as the introduction of three foundation gas retailers and, later, ENERGEX (with access to shares of the on-going gas supply contract between Esso-BHP and GASCOR) have the potential to set a cap on gas prices, GPU GasNet is concerned about the level of peak deliverability that is available. It comments:

> [W]hilst the gas contracts make available a significant quantity of gas at a contract price to each of the three retailers, it is our understanding that there are limits to the amount of peak deliverability that is available. Given that the load in Victoria is very peaky and requires a firm supply, and given that firm peak deliverability from Esso-BHP is limited, it follows that Esso-BHP still retains considerable market power. In theory, in the absence of additional sources of peak supplies into the

[31] *Ibid*, p. 14. GPU GasNet has followed the same estimation methodology as it used for its Interconnect Asets revisions application.

market, a producer in such a position may be able to use this market power to influence the price of gas and the growth of the gas market.[32]

GPU GasNet notes that upstream reform has been identified as a potential source of increased producer competition both between and within basins but that it appears these reforms will take some time to develop. In the shorter term it considers the most appropriate means to introduce competition to the gas supply market are through connections to new gas basins and new sources of peak and seasonal supplies. It contends that the Southwest Pipeline contributes in both ways.

In the context of gas flows to and from NSW via the Interconnect Pipeline and to NSW through the EGP, GPU GasNet states that competitive pressures are expected to develop on the commodity price of gas from Esso-BHP. GPU GasNet states:

> The Southwest Pipeline connects the Victorian market to the gas fields at Port Campbell. This allows gas owned by other producers to compete in the market against gas from Bass Strait, and further enhances the competitive pressures on Esso-BHP. There are good prospects for further gas field discoveries in the Otway Basin. Santos has developed the Mylor and Fenton Creek fields, and is currently marketing the newly discovered Penryn field. An intensive new exploration program is being planned.
>
> The presence of the Southwest Pipeline (and a reasonable tariff on this pipeline) must act to stimulate further exploration in this region. In the absence of a pipeline connection to Melbourne, the likelihood is that small fields would not be economic to develop, and therefore exploration would not occur (small field developers could not afford to build a stand-alone pipeline connection to Geelong, nor could the Western zone absorb more than a small level of production).
>
> The Minerva field is awaiting development, and this field could also utilise the Southwest Pipeline for carriage of some or all of the reserves to the Victorian demand centres. This field is permitted to BHPP, but to the extent that BHPP is distinct from the Esso-BHP Joint Venture in Bass Strait, there may be some prospect of further competitive pressure on Bass Strait.[33]

GPU GasNet states that retailers currently obtain firm gas supply during periods of peak demand by use of the existing peak delivery rights under the Esso-BHP contract, the use of LNG to shave the 'needle peak' and by limited imports of Moomba gas. GPU GasNet states that the former two sources of peak supply are almost fully utilised. Further, it is GPU GasNet's understanding that peak supply entitlements from Bass Strait will be reduced in 2001. To meet their peak delivery needs, the retailers must source more gas from Moomba, purchase additional peak delivery rights from Esso-BHP at Longford, or purchase capacity in the WUGS facility.

GPU GasNet states that the WUGS facility will be able to contribute up to 200 TJ/day in the winter of 2001 in direct competition with the peak deliverability provided by the Esso-BHP producers at Longford, and that it will significantly diminish their market power. GPU GasNet contends that a competitive tariff is required on the Southwest Pipeline to facilitate this competition.

2.8 Retailers' take-or-pay obligations

GPU GasNet states that it will offer to relieve the three foundation retailers of certain take-or-pay obligations if the Commission approves the roll-in proposal as presented in

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[32] *Ibid*, p. 15.
[33] *Ibid*, pp. 16–17.

its application. GPU GasNet has advised that these obligations relate to separate five year contracts commencing 1 October 2000 that were arranged by the Victorian Government at the time of privatisation between GPU GasNet's predecessor and the three foundation retailers for gas transportation. The contracts match the retailers' contracted use of part of the WUGS facility capacity and are based on a tariff which is significantly higher than that proposed in GPU GasNet's application.[34] The total contracted quantity is 100 TJ/day.[35]

The Commission understands that the Victorian Government instituted these contracts to underpin a substantial portion of the investment in the Southwest Pipeline. It also understands that the Victorian Government instituted similar contracts with TXU to supply gas from the WUGS facility at agreed prices for a five year period and that these contracts represent about half the capacity of the WUGS facility.[36] The WUGS facility has nominal storage capacity of 10 PJ and an injection capacity of 200 TJ/day.[37]

GPU GasNet has advised the Commission that it considers certain details of these contracts are commercially sensitive and has requested that the Commission consider them on a confidential basis.[38] The Commission has agreed to treat the contracts on this basis.

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34 GPU GasNet, advice to the Commission, 9 November 2000.
35 GPU GasNet, *Response to public submissions*, 2 March 2001, p. 3.
36 Victorian Auditor-General, *1998-99 Annual report*, p. 20.
37 VENCorp, *Annual Gas Planning Review, 2001 to 2005*, 30 November 2000, p. 16.
38 GPU GasNet, advice to the Commission, 17 November 2000.

3. Assessment criteria

Section 2 of the Code sets out the consultative process the Commission must follow when reviewing revisions to an access arrangement that would result in changes to the reference tariffs. The Commission must issue a draft decision on the revisions after considering submissions from interested parties. The Commission will then request submissions on the draft decision before issuing its final decision.

Pursuant to section 2.46 of the Code, the Commission may approve the proposed revisions only if it is satisfied the access arrangement as revised would contain the elements and satisfy the principles set out in sections 3.1 to 3.20 of the Code (the mandatory elements). Conversely, the Commission must not refuse to approve revisions solely for the reason that the revised access arrangement does not address a matter that sections 3.1 to 3.20 do not require an access arrangement to address.

In assessing proposed revisions, the Commission must take into account the provisions of the access arrangement and the following factors which are described in section 2.24 of the Code.

(a) the Service Provider's legitimate business interests and investment in the Covered Pipeline;

(b) firm and binding contractual obligations of the Service Provider or other persons (or both) already using the Covered Pipeline;

(c) the operational and technical requirements necessary for the safe and reliable operation of the Covered Pipeline;

(d) the economically efficient operation of the Covered Pipeline;

(e) the public interest, including the public interest in having competition in markets (whether or not in Australia);

(f) the interests of Users and Prospective Users;

(g) any other matters that the Relevant Regulator considers are relevant.

3.1 Relevant Code and access arrangement provisions

This section identifies sections of the National and Victorian gas codes and provisions of the PTS access arrangement which are specifically relevant to the revisions proposed by GPU GasNet.[39] The convention has been adopted in this *Final Decision* of identifying relevant Victorian Code provisions where they differ from current provisions of the National Code.

New facilities investment

Section 8.15 of the Code allows for the capital cost of new facilities investment to be incorporated into the capital base at the start of a new access arrangement period in recognition of costs incurred in the provision of services. Alternatively, the service

[39] Section 2.46(b) of the Code requires the regulator to take into account the provisions of an access arrangement when assessing proposed revisions.

provider may submit revisions to this effect during the access arrangement period in which new facilities investment was made.

Pursuant to section 8.16(a), the amount by which the capital base can be increased is the actual capital cost of the investment provided that the investment is prudent. That is, it does not exceed the amount that would be invested by a prudent service provider acting efficiently, in accordance with accepted good industry practice, and to achieve the lowest sustainable cost of delivering services. This is the 'prudent investment' test.

In addition, the new facilities investment must meet one of the following conditions:

- the 'economic feasibility' test: that anticipated incremental revenue is expected to exceed the cost of the investment (section 8.16(b)(i));
- the regulator is satisfied that the new facility generates system-wide benefits that justify a higher reference tariff for all users (section 8.16(b)(ii));[40] or
- the new facility is necessary to maintain the safety, integrity or contracted capacity of services (section 8.16(b)(iii)).

As noted, GPU GasNet submits that its new facilities investment is prudent (section 8.16(a)) and satisfies the system-wide benefits test (section 8.16(b)(ii)).

In assessing the prudency of an investment, the regulator must consider factors such as economies of scale, the increments with which capacity can be added, and the matching of forecast demand and capacity over a reasonable time frame to achieve the lowest sustainable cost of delivering services (see section 8.17 of the Code). The Commission is also guided in its assessment by other principles and criteria set out in section 8 of the Code.

The Code allows an access arrangement to provide that the service provider may undertake new facilities investment that does not satisfy section 8.16.[41] If this is the case, the capital base may be increased by that part of the investment that does satisfy section 8.16 (the recoverable portion). Section 8.19 allows an access arrangement to provide that the balance of the investment may be placed in a speculative investment fund, of which any part may subsequently be included in the capital base provided section 8.16 is satisfied.

Capital contributions and surcharges

A capital contribution or a surcharge from users of a new facility can recover any part of the balance that does not meet all the criteria in section 8.16. It is explicitly noted, in section 8.23 which relates to capital contributions, that nothing in the Code prevents a user from agreeing to pay a charge higher than the reference tariff '… in any circumstance including, without limitation, if the excess is paid in respect of funding a New Facility'. Sections 8.25 and 8.26 deal with surcharges that may be levied on users of incremental capacity to recover some or all of the costs that cannot be recovered at

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[40] The Code (section 10.8) distinguishes between users and end-users. In the instance of the PTS, users contract directly with GPU GasNet while end-users acquire gas from users.

[41] In accordance with section 8.18 of the Code, clause 5.7.2 of the PTS access arrangement allows new facilities investment that does not meet the criteria in section 8.16 of the Code to be undertaken.

the prevailing tariffs. The portion of the new facilities investment to be recovered by a surcharge must meet the prudent investment test of the Code.

Victorian Code provisions

The Commission approved the PTS access arrangement in December 1998 under the *Victorian Third Party Access Code for Natural Gas Pipeline Systems* (the Victorian Code). Sub-section 24A(3) of the *Gas Industry Acts (Amendment) Act 1998* provides that access arrangements approved under the Victorian Code continue to be subject to sections 3, 8 and 9 (so far as it applies to sections 3 and 8) and to sections 2.33 and 2.48A of the Victorian Code. These sections are not subject to the corresponding provisions of the Code until the first scheduled review of the access arrangements under section 2 of the Code. GPU GasNet's application does not cite these provisions.

Extensions and expansions policy

Under section 3.16 of the Code an access arrangement is required to contain an extensions and expansions policy. The Commission has previously assessed the extensions and expansions policy in the PTS access arrangement.[42] The revisions proposed by GPU GasNet must comply with this policy in addition to the above mentioned provisions of the Code.

Clause 5.7.1 of the PTS access arrangement extensions and expansions policy provides that, in general, an extension or expansion to the PTS will be automatically treated as part of the PTS access arrangement. Clause 5.7.1(c) provides that GPU GasNet may elect that certain extensions, which are referred to as significant extensions, will not be treated as part of the PTS access arrangement. While the Southwest Pipeline meets the requirements of a significant extension according to the policy, GPU GasNet has chosen to seek its inclusion in the PTS access arrangement.

New facilities investment that passes the economic feasibility test is able to be included in the capital base and existing reference tariffs are applied (clause 5.7.2(a)). New facilities investment that does not meet the economic feasibility test can be recovered under clause 5.7.2(b) of the PTS access arrangement. The portion of the investment that meets the economic feasibility test can be recovered by the existing reference tariffs. The remaining portion can be:

- recovered by a surcharge under section 8.25 of the Code;
- recovered by a capital contribution;
- included in a speculative investment fund; or
- any combination of these options.

Clause 5.7.2(c) of the PTS access arrangement provides that new facilities investment that does not pass the economic feasibility test may be recovered outside the standard procedure.[43] This may occur where either: the regulator is satisfied that the new facility generates system-wide benefits that justify a higher reference tariff for all users; or the new facility is necessary to maintain the safety, integrity or contracted capacity of

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[42] See ACCC, *Victorian Final Decision*, 6 October 1998, pp. 138-145.

[43] 'Standard procedure' refers to the options in clause 5.7.2(b) as outlined above.

services. As noted earlier, GPU GasNet submits that its new facilities investment of the Southwest Pipeline satisfies the system-wide benefits test (section 8.16(b)(ii) of the Code and clause 5.7.2(c)(1) of the PTS access arrangement). There is no provision in the PTS access arrangement for part of the investment to be rolled-in under the system-wide benefits test and for the remainder to be recovered by the other avenues mentioned above.

When approving the PTS access arrangement the Commission determined that certain capital expenditure forecast to be undertaken during the initial access arrangement period (1999 to 2002) would be included in the capital base and contribute to the revenue target for that period. While the capital expenditure forecasts were accepted for this purpose, the Commission determined that the tests pursuant to section 8.16 of the Code would be applied at the time of the scheduled review in 2002, which would also be the default time for reviewing capital expenditure (such as for the Southwest Pipeline) that had not been forecast. The Code allows for the service provider to submit revisions to incorporate capital expenditure in the capital base prior to the scheduled revisions date.

3.2 Revisions approval process

The approval process under the Code distinguishes between revisions submitted as required by an access arrangement (for example, at the first scheduled review) and others, as in this case, where revisions are submitted on a voluntary basis.

The assessment process for revisions required by an access arrangement can result in any one of the following outcomes: approval of the revisions as proposed (section 2.38(a)(i)); approval of the revisions as revised by the service provider in accordance with amendments required by the regulator (section 2.38(b)(i) or 2.41(a) or (b)); or the regulator drafts and approves its own revisions (section 2.42).

In contrast, revisions submitted voluntarily can be approved (section 2.38(a)(i)) or not approved (section 2.38(a)(ii)), but the regulator may not require them to be amended. In the event that the regulator proposes (in a *Draft Decision*) or decides (in a *Final Decision*) not to approve revisions, the Commission considers that its statement of reasons may provide guidance to the service provider regarding the potential for submitting subsequent revisions.

4. Assessment of proposed revisions

This chapter provides the Commission's assessment of the proposed revisions in terms of the Code requirements and the contents of the PTS access arrangement as outlined in the previous chapter, taking into consideration information and submissions from GPU GasNet and interested parties.

The core elements of this assessment are the prudent investment test (section 4.1 of the *Final Decision*), the economic feasibility test (section 4.2) and the system-wide benefits test (section 4.3). A number of interdependent issues are relevant across these tests. Where appropriate they are most fully examined under the first of these sections.

4.1 Prudent investment test

As noted in the previous chapter of this *Final Decision*, new facilities investment must satisfy the prudent investment test in section 8.16(a) of the Code in order to be rolled in to the regulated asset base. That is, the investment must not exceed that which would be invested by a prudent service provider acting efficiently, and in accordance with accepted good industry practice.

The Commission has considered issues raised by GPU GasNet and by interested parties regarding the prudency of the investment to achieve the winter 1999 system security objectives of the Victorian Government when it directed construction of the Southwest Pipeline. It has also considered prudency from the perspective of the on-going system security and competition benefits that form the basis of GPU GasNet's roll-in application. In addition, the prudency of the investment is examined in a technical sense and against specific Code provisions. Consideration has also been given to an issue raised by an interested party as to whether there is a need for the additional system capacity provided by the Southwest Pipeline and whether that investment is reasonable relative to other options.

Submissions

TXU Australia Pty Ltd submitted that the Southwest Pipeline is a prudent investment.[44]

TXU provided data in support of this position as shown in the table below and in charts (not shown) taken from a recent VENCorp annual gas planning review document. On this basis it states that the entire capacity of WUGS would be required in 2001 to meet not only a 1 in 20 peak day but also a 1 in 2 peak day. It further comments that WUGS capacity would be required on the 37 highest demand days in a 1 in 20 winter in 2001 and that the reliance on WUGS becomes greater in the years 2002 – 2005.

[44] TXU submission, 15 December 2000, pp. 1-2.

Table 4.1 Contracted Supply – Demand (TJ)

Year	Aggregate supply Including LNG	1 in 2 peak day Demand	1 in 2 peak day Surplus	1 in 20 peak day Demand	1 in 20 peak day Surplus
2001	1 220	1 061	159	1 140	79
2002	1 220	1 078	142	1 159	61
2003	1 063	1 107	-45	1 190	-128
2004	1 048	1 139	-91	1 225	-177
2005	1 043	1 166	123[(a)]	1 223	-210

Source: VENCorp, *Annual Gas Planning Review 2001 to 2005*, 30 November 2000, p. 32.

Note: (a) The supply and demand estimates for 2005 indicate a negative balance of -123 TJ.

BHPP raises concerns about the cost-effectiveness of incremental system security enhancements in addition to the Interconnect Assets. Citing the Commission's *Final Decision* in that instance it comments:

> Clearly the Commission is of the view that 100% redundancy in a gas supply system is not cost effective or practical. It logically follows that each increment of enhanced system security above a base level of system security must have an ever decreasing value. BHP believes that the intangible system security value that may be provided by the SWP does not outweigh the 100% certain cost to users.[45]

BHPP identifies the following alternative sources of incremental supply security as being available to PTS users which it suggests the Commission should take into its assessment of prudency if it considers that additional security of supply is appropriate for the PTS:

- user funded demand side management; and
- additional supply capacity from the GPU GasNet owned compressors located at Young and Bulla Park on the MSP which are not currently part of the PTS access arrangement.[46]

BHPP submits that VENCorp has noted that the Victorian Government's contingency planning for the winter of 1999 identified over 40 TJ/day of interruptible load. It also states that GPU GasNet's compressors located on the MSP provide an additional 42 TJ/day of capacity via the Interconnect Pipeline. BHPP contends that these sources together could immediately provide in excess of 80 TJ/day of capacity for supply security at a lower cost to PTS users than the proposed roll-in of the Southwest Pipeline.

45 BHPP submission, 17 January 2001, p. 11.

46 BHPP submission, 17 January 2001, p. 12.

In response, GPU GasNet contends that the Code only requires an assessment of the benefits of an actual project against the project costs to be rolled-in:

> The actual project will either pass or fail this objective test, irrespective of whether a "better" project could have been implemented. Hence it is not a relevant requirement to assess this project against real or hypothetical alternatives.[47]

Nonetheless, GPU GasNet argues that the Victorian Government did conduct a thorough review of alternatives to meet possible supply shortages in the winter of 1999 which it considers indicates 'that a rational evaluation process was undertaken, and that the optimum options under the circumstance were implemented. This review considered options such as demand management in addition to augmented supply from Moomba and the Southwest Pipeline.'[48]

In a later submission, BHPP identified additional alternative supply sources. It referred to the announcement on 20 March 2001 that the participants in the BassGas project had entered into binding heads of agreement with Origin Energy Retail Limited for the sale of 260 PJ of gas from the Yolla field at a minimum delivery rate of 20 PJ/year.[49] The project would involve construction of a new processing plant and a trunkline to inject gas at the Dandenong city gate. BHPP noted that stated benefits to South East Australia from the project include increased security of gas supply and increased competition in the supply of gas. BHPP commented:

> It will be noted by the Commission that Yolla intends to interconnect with the GPU system at the Dandenong City Gate and therefore avoid paying the Longford Injection Charge. The Bass Gas participants have developed an economically rational supply solution. BHP agrees that if interconnection is made at the Dandenong City Gate the Bass Gas Venture should not have to pay the costs associated with the Longford to Dandenong pipeline.[50]

In response, GPU GasNet stated:

> GPU GasNet has not argued that no new fields will be developed without a roll-in decision. Our argument is that roll-in of the Southwest Pipeline will result in enhanced supply competition.
>
> The GPU GasNet Application argued that supply competition is an important aspect of the system-wide benefits provided by the Southwest Pipeline. More particularly, it referred to the supply competition from the development of new fields in the Port Campbell region, and to the competition for peak deliverability between Longford and the Western Underground Storage (WUGS) at Port Campbell.
>
> The fact that Yolla may be developed has no bearing on the argument of enhanced supply competition from field development at Port Campbell. Yolla is not impacted by the GPU GasNet Application. On current indications Yolla will connect to the GPU GasNet system at Dandenong, and avoid both the Longford and Southwest injection pipelines.
>
> Santos is conducting an extensive exploration program in the Port Campbell region and is developing a number of new fields. In physical terms this gas will supply the Western System (up to 17 TJ/day), and assist to refill the WUGS in summer. The remainder will be transported on the Southwest Pipeline into the Metro zone. At the margin, a lower tariff on the Southwest Pipeline will encourage more development at Port Campbell, and therefore provide more gas-on-gas competition in Victoria.[51]

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47 GPU GasNet, *Response to public submissions*, 2 March 2001, p. 4.
48 *Ibid*.
49 BHPP submission, 9 April 2001, p. 2.
50 *Ibid*, p. 2.
51 GPU GasNet, *Response to further submission from BHP Petroleum*, 24 April 2001, p. 2.

BHPP also referred to the announcement by Santos on 21 March 2001 regarding its discovery of a new field approximately 15 km north west of Port Campbell which it expects to be in production in time for the 2001 peak winter demand period. BHPP commented:

> Increased competition in gas supply has occurred due to the fact that customers are contestable and that access is open not because transmission tariffs have been distorted and costs loaded on to incumbent producers.[52]

The Commission received further submissions following the release of the *Draft Decision*. ENERGEX commented that the sizing of the Southwest Pipeline indicated it was purpose built to match the WUGS facility and that the amount of contracted capacity signals that the facility was constructed to 'replace the Longford MDQ shortfall in the GASCOR contract.'[53]

Commission's considerations

This section provides the Commission's consideration of issues arising in the assessment of the prudency of the Southwest Pipeline investment. These issues include:

- need for additional system capacity to meet anticipated demand;
- rationale for constructing the Southwest Pipeline;
- system planning for the winter of 1999;
- on-going role and benefits of the Southwest Pipeline;
- demand management; and
- technical and engineering considerations.

Need for additional system capacity to meet anticipated demand

Table 4.1 above presented contracted supply information provided by TXU on the Victorian transmission system. TXU is of the view that the additional 200 TJ/day of peak day gas supply made available by the Southwest Pipeline and the WUGS facility is needed to meet likely market conditions from 2001.

The Commission notes that the supply data provided by TXU (as shown in Table 4.1) relate only to quantities that had been contracted at the time of VENCorp's study rather than to the likely level of supply. For example, the sharp fall in available contracted supply in 2003 reflects the end of market participants' reported LNG contracts and the further decline in 2004 and 2005 relates to reductions in contracted Interconnect Pipeline quantities.[54] In contrast, the demand estimates are based on likely consumption rather than contracted quantities.

Adjusting for the above reporting differences between supply and demand estimates, Table 4.2 below incorporates data for prospective supply. The supply-demand balances indicate that the capacity made available from the Southwest Pipeline and the WUGS

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52 BHPP submission, 9 April 2001, p. 2.
53 ENERGEX submission, 21 May 2001, p. 2.
54 VENCorp, *Annual Gas Planning Review, 2001 to 2005*, 30 November 2000, p. 32.

facility would not be expected to be required in the period to 2005 under the assumption of a 1 in 2 peak day demand. Under the more severe 1 in 20 peak day demand scenario, the Southwest Pipeline-WUGS capacity would be expected to be needed after 2003.

VENCorp's *Annual gas planning review* provides a comprehensive review of likely supply and demand scenarios.[55] VENCorp comments that, with all prospective supplies made available to the market, the forecast 1 in 20 peak day demand can be met comfortably with a small LNG supplement in 2005.[56]

Table 4.2: Contracted and prospective Supply – Demand (TJ)

		1 in 2 peak day		1 in 20 peak day	
Year	**Aggregate supply Including LNG**	**Demand**	**Surplus**	**Demand**	**Surplus**
2001	1 364	1 061	303	1 140	223
2002	1 377	1 078	299	1 159	218
2003	1 402	1 107	294	1 190	211
2004	1 388	1 139	249	1 225	163
2005	1 388	1 166	222	1 223	135

Source: VENCorp, *Annual Gas Planning Review 2001 to 2005*, 30 November 2000, p. 33.

It was noted in section 2.2.1 of this *Final Decision* that the Victorian Department of Finance and Treasury determined in 1997, on the basis of a consultancy, that no expenditure for the Southwest Pipeline or WUGS projects should be included in the target revenue calculation for the initial access arrangement period (1999 to 2002) of the PTS as it did not consider that additional capacity would be required. More recently, GPU GasNet has referred to 'the excess of transmission capacity into Victoria.'[57]

The Commission is not aware of any outcomes since 1997 that would change this evaluation. However, it notes that GPU GasNet's application is based on the benefits of providing peak capacity from an alternative source to Longford rather than on the need to provide additional peak capacity *per se*. The Commission understands that GPU GasNet's predecessor determined that an additional 200 TJ/day of system deliverability could have been achieved through looping of the remaining unlooped section of the Longford to Pakenham pipeline and a minor upgrade of the Gooding compressor.[58] The Commission understands this would cost approximately $50 million in 2001 dollars, only about two thirds of the cost of the Southwest Pipeline.

55 *Ibid*, pp. 24-26.
56 *Ibid*, p. 33.
57 GPU GasNet, *Response to public submissions*, 2 March 2001, p. 2.
58 GTC, *Proposed intergas expansion of the Victorian natural gas transmission system*, May 1996, Appendix H.

Importantly, a comprehensive assessment would also consider any additional costs associated with either commissioning the Southwest Pipeline or looping of the Longford to Pakenham pipeline. The Southwest Pipeline can only provide the additional 200 TJ/day capacity in conjunction with the WUGS facility, which is understood to have cost TXU approximately $120 million (excluding $26.9 million for the acquisition of the rights to the Iona reservoir gas reserves).[59] Similarly, the processing capacity of the Longford plant may need to be expanded in conjunction with looping. While the associated cost is unknown, it has been reported that the cost of upgrading the Longford plant to accommodate the substantial flows contracted to be supplied to Tasmania from 2002 would be modest.[60]

On the basis of this analysis the Commission considers that the Southwest Pipeline would not be cost-effective if the only relevant output was additional system peak deliverability. Section 4.4 of this *Final Decision* contains the Commission's assessment of system-security and competition benefits accruing from the Southwest Pipeline in terms of the Code's system-wide benefits test.

Rationale for constructing the Southwest Pipeline

GPU GasNet's predecessors first contemplated construction of the Southwest Pipeline approximately a decade prior to the Victorian Government's decision to construct it as part of supply security planning for the winter of 1999. GPU GasNet has commented that it is a 'moot point' whether a new owner of the PTS would have built the Southwest Pipeline in the absence of the requirement imposed by the Victorian Government as part of the privatisation process.[61] The Commission infers from GPU GasNet's comments that it is unclear whether the Southwest Pipeline would have been built on purely commercial grounds.

GPU GasNet has also identified secondary benefits in the form of 'the broader objectives of long term security and market competition' as influencing the Victorian Government's decision.[62] These benefits are assessed as part of the system-wide benefits evaluation in section 4.3 of this *Final Decision*.

The Commission accepts that the Victorian Government's predominant motivation in directing the construction of the Southwest Pipeline was to meet the very short term objective (for an asset with such a long life) of supporting system security for the winter of 1999. In principle, this factor could have been reflected by adopting a kinked depreciation schedule thus resulting in most of the value of the Southwest Pipeline being depreciated over the winter of 1999, with the balance depreciated over the remainder of its effective life. However, this approach has not been proposed by GPU GasNet and there is insufficient information to accurately quantify the relative influence of these drivers of the Victorian Government's decision-making. The Victorian Government's capital contribution of $7.3 million and its institution of take-

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59 In November 1998, the Victorian Government entered into agreements for the sale and development of the WUGS facility to TXU for a total price of $58.5 million, with TXU agreeing to further capital expenditure estimated at approximately $85 million. Victorian Auditor-General, *1998-99 Annual report*, p. 19.

60 *Deals in pipeline for Duke*, Herald Sun, 10 April 2001, p. 35.

61 GPU GasNet, *Response to further submission from BHP Petroleum*, 24 April 2001, p. 2.

62 GPU GasNet, *Response to public submissions*, 2 March 2001, p. 6.

or-pay contracts are consistent with a rapid return of capital in the early phase of the life of the assets. The Commission expects that GPU GasNet's parent company, GPU Incorporated, would have taken these considerations into account when bidding for the Victorian gas transmission assets.

The Commission has considered the views of BHPP and GPU GasNet regarding consideration of alternative approaches to deliver desired outputs. As noted by GPU GasNet, the Code does not provide for the Commission to determine which investment among a group of alternatives should be undertaken. However, an important factor in assessing the prudency of any new investment is whether the approach that has been taken is a reasonably prudent means to achieve the desired outputs.

The Commission considered the planning approach undertaken by the Victorian Government in some detail as part of its *Final Decision* on the Interconnect Assets roll-in proposal and concluded that the process undertaken that led to the installation of the Springhurst compressor and valves was reasonable under the circumstances.[63] It also concluded that the choice of this option and the level of investment (which had a regulatory valuation of $20.9 million) was prudent in the light of pressing system security concerns.

However, the Commission did not assess at that time whether other aspects of the planning approach were prudent such as investment in the Southwest Pipeline, the Young and Bulla Park compressors, or demand side management. The Commission notes that, while BHPP has suggested that these approaches should be considered as alternatives, they were instituted by the Victorian Government as part of a suite of measures.

The Commission considers it appropriate to assess the prudency of an investment taking into consideration the circumstances at the time of the investment, including the rationale for the investment, and the information then available.[64] Subsequent operational history may then help inform the assessment. Accordingly, the Commission has taken into consideration the separate issues of system security for the winter of 1999 project and system security and market competition in the longer term.

System planning for the winter of 1999

The Commission acknowledges the responsibility borne by the Victorian Government to formulate and enact policy in response to pressing system security concerns arising over the winter of 1999. However, its decisions were not made in terms of the Code and therefore would not provide an indication of whether the investment in the Southwest Pipeline would be expected to satisfy Code requirements. This is reflected in the Victorian Government's contribution of $7.3 million towards the Southwest Pipeline and $39.4 million for the MMAP. In addition, the Victorian Government partly underwrote the investments in the Interconnect Pipeline, the Southwest Pipeline and the WUGS facility by initiating contracts between the Southwest Pipeline service

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63 ACCC, *Final Decision, Access arrangement for the Principal Transmission System, Application for revision by GPU GasNet Pty Ltd*, 28 April 2000, p. 24.

64 Section 8.17 of the Code requires the regulator to consider factors such as forecast sales and capacity over time and the ability to add capacity incrementally. This is a different consideration to that of assessing benefits which may in part be sunk (refer to section 4.3).

provider and the foundation retailers that, as the Commission understands, are on favourable terms for GPU GasNet. The foundation contracts for the Southwest Pipeline and the direct Victorian Government contribution of $7.3 million may be viewed as compensation to GPU GasNet for its public policy contribution, in particular during the winter of 1999.

The Commission regards the system planning undertaken by the Victorian Government as an important factor in this assessment of the proposed revisions to the current access arrangement. However, the actions of the Government do not indicate the prudency or otherwise of the investment in terms of the Code.

On-going role and benefits of the Southwest Pipeline

While the Victorian Government's augmentation choices were tightly constrained by the objective of adding to supply security during the winter of 1999, the capability of existing and alternative options are relevant when considering the secondary criteria GPU GasNet referred to of on-going system security and market competition (which provide the focus for the assessment later in this chapter in relation to the Code's system-wide benefits test).

The Longford explosion highlighted the possibility of severe disruption to users of the PTS. The Commission understands that, in the event that the system was completely exhausted, air could potentially enter the system creating an explosive mixture that could take months to purge. However, as argued by GPU GasNet in its application for roll-in, imports of gas from NSW through the Interconnect Pipeline provide security against total system collapse in addition to gas available from the Dandenong LNG facility.

The Commission notes that VENCorp is currently reviewing its need for continued entitlement to LNG storage capacity and that relevant jurisdictions are developing cross border gas emergency protocols. These initiatives illustrate the range of issues associated with system security measures.

As part of its review VENCorp is undertaking scenario based modelling to determine its optimal system security reserve. The Commission understands that VENCorp's modelling incorporates a range of assumptions and other inputs to determine a realistic risk assessment. This includes allowances for factors such as differing response times and capabilities for the different supply sources and under different conditions. For example, the Dandenong LNG facility can generally respond very quickly to an emergency but has comparatively little capacity. On days when the WUGS facility is already injecting into the system it will effectively be able to respond immediately. However, if it is not injecting there will be start up or turn around time delays. Moreover, there may be little useable gas held between late winter and the next summer. GPU GasNet has not provided any quantification of the amount of gas likely to be held in the WUGS facility over the annual cycle. The Commission is not aware of any currently available information which would allow it to forecast usage of the WUGS facility with any certainty.

The Commission expects that the VENCorp review will provide valuable insights into the appropriate level of system security and the respective contribution of these

facilities. This will be particularly useful given the current absence of any substantial operational history with the WUGS facility in place.

In support of its application, GPU GasNet has focused on the potential benefits of the Southwest Pipeline providing additional supplies of peak deliverability gas, including from prospective discoveries and developments, sourced from the Otway Basin.

Subsequent to the lodgement of GPU GasNet's application, the BassGas proponents announced plans to supply gas from the Yolla field, which is located between Victoria and Tasmania, to the Dandenong city gate for fifteen years from 2004. A number of options have been proposed since the 1980s to develop the Yolla field, including a recent proposal to supply gas to Tasmania.

The minimum announced supply rate from the Yolla field of 20 PJ/year is twice the nominal capacity of the WUGS facility. The BassGas project will be aware of the high value placed on peak deliverability gas in Victoria when it determines the supply characteristics of its new processing plant. Accordingly, peak deliverability may exceed the implied average supply of 55 TJ/day by a considerable margin.

In terms of the current assessment, the significance of this additional supply source is its potential ability to provide broadly similar outputs (in terms of on-going system security and competition benefits) to those identified as accruing from the Southwest Pipeline in conjunction with the WUGS facility. To the extent that the BassGas project would be in competition with those facilities it would be expected to also reduce demand for those facilities. The impact on Southwest Pipeline revenues, which would depend on the pricing behaviour of the facility operators and the demand characteristics of users, may be substantial.

The Commission recognises that the BassGas announcement of negotiation of a binding heads of agreement does not in itself ensure that the project will progress as planned. It also recognises that in October 1998 the Victorian Government is likely to have only been aware in broad terms of the potential for supply of Yolla gas to Victoria. However, the uncertainties associated with the BassGas proposal do not appear to be of a greater order than those underpinning GPU GasNet's current proposal.

The Commission considers that the expected on-going role of a new facilities investment is an important factor in an assessment under the Code's prudent investment test. In this instance the on-going role of the Southwest Pipeline described by GPU GasNet raises some concern about the prudency of the investment.

Demand management

The Commission has also considered the issue of alternative sources of supply. BHPP specifically referred to demand management. It also referred to additional capacity made available by the GPU GasNet owned compressors located on the MSP. The Commission understands that those compressors are still in place.

Demand management has formed an integral part of the Victorian market rules since market commencement in 1999 and is driven by market forces. The Commission notes that voluntary demand management may be able to provide a substantial contribution to

supply security. It understands that an amount of voluntary demand management 'of the order of 200 Megawatts' was introduced into the Victorian electricity industry over the summer of 2000-2001 and that some of this capacity was recognised by the National Electricity Market Management Company Ltd (NEMMCO) as contributing to additional reserve buffer.[65]

The Commission has considered the scope for voluntary demand management to provide additional supply security and notes that VENCorp identified 40 TJ/day of interruptible loads as part of its contingency planning for the winter of 1999. A number of factors would seem to bear on the usefulness of this estimate in the current context. First, VENCorp has noted that a 'reasonable proportion' of this quantity would be flexible enough to be bid into a daily market.[66] Second, potential interruptibility identified in the context of supply shortages immediately following the Longford emergency may not provide a realistic indication of end-users' willingness to be curtailed under other circumstances.

The Commission notes VENCorp's comment that, although no controllable interruptible loads had been registered with it as at 30 November 2000, industrial users could enter directly into commercial interruptible contracts with market participants.[67]

The Commission notes that it is the current availability of 'virtual capacity' from voluntary demand management that is relevant to its assessment of the adequacy of the current deliverability of the PTS. When comparing the virtues of potential alternative approaches to the provision of additional supply security it is the extent of the additional deliverability and the associated costs which are relevant.

The Commission acknowledges the potential contribution of voluntary demand management to system security for the PTS. However, it is unclear whether additional deliverability that might be available from this approach would be sufficient in terms of quantum and cost effectiveness to establish a preferable approach to that of constructing the Southwest Pipeline.

Technical and engineering considerations

Pursuant to section 8.17(a) of the Code, the Commission must consider whether the Southwest Pipeline exhibits economies of scale or scope and the increments in which capacity can be added. It must also consider section 8.17(b) which notes that the objective of achieving the lowest sustainable cost of delivering services over a reasonable time may require the installation of a new facility with sufficient capacity to meet forecast sales over that time frame. Together these considerations acknowledge the importance of factors such as economies of scale and the incremental nature of pipeline capacity augmentation when capacity is added to long lived infrastructure systems.

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65 Hon Candy Broad MP, *Ministerial address*, Victoria Power Conference 2001, 20 February 2001, pp. 2-3.

66 VENCorp, *Annual Gas Planning Review 2001 to 2005*, 30 November 2000, p. 37.

67 *Ibid*.

As noted by TXU, it is relevant that the Southwest Pipeline's capacity of 200 TJ/day matches that of the WUGS facility. A smaller capacity would be insufficient to allow full utilisation of the WUGS facility. Additional capacity does not appear to be currently warranted, although this may change if substantial Otway Basin gas developments come on stream, if additional storage capacity is installed or if there is additional demand for withdrawals at Iona (for example, if the mooted pipeline is constructed from Iona to SA). BHPP has noted that Santos plans to supply gas from its onshore Otway Basin well Tregony 1 prior to the winter of 2001.[68] Beach Petroleum has also foreshadowed supplying onshore Otway Basin gas from the McIntee 1 well by mid 2001.[69] GPU GasNet has commented that the 500 mm diameter of the pipeline between Lara and Iona has an initial capacity of 200 TJ/day and can be expanded to 300 TJ/day with additional expenditure on the Brooklyn loop, and to 415 TJ/day with installation of the Stonehaven compressor.

GPU GasNet provided Capital Cost Benchmarking Analysis in support of its application. The Commission has considered this study and other benchmarks as part of its assessment of the construction cost of providing the services available from the Southwest Pipeline. It has concluded that its unit costs are consistent with accepted standards once the $7.3 million compensation from the Victorian Government for accelerated construction is deducted. The investment in the Southwest Pipeline appears to be prudent in a technical and engineering sense.

The Commission notes that TXU's argument regarding the need for the Southwest Pipeline be constructed in order for the WUGS facility to be utilised (and for its capacity to be available to users of the PTS) is linked to the issue as to which parties are the prime beneficiaries of the investment in the Southwest Pipeline. TXU's investment in the WUGS facility would be stranded in the absence of the Southwest Pipeline. This issue is examined later in this chapter.

The Commission is of the view that the investment in the Southwest Pipeline is prudent technically to the extent that its capacity matches that of the WUGS facility and that its unit costs are consistent with established benchmarks (after costs due to accelerated construction are deducted). The Commission considers that the investment in the Southwest Pipeline meets the criteria set out in section 8.17 of the Code.

Conclusion

While the Commission considers that the Southwest Pipeline is prudent in the technical and engineering sense, regard must be given to each of the aspects of the prudency test as discussed above. The broader question of whether the approach taken in constructing the Southwest Pipeline is prudent raises a number of issues. Most importantly, the decision to construct the Southwest Pipeline was driven to a very large extent by the Victorian Government's objective of supporting system security for the winter of 1999. It is noted therefore that a kinked depreciation schedule might be appropriate, with most of the investment depreciated over the winter of 1999. While GPU GasNet has not proposed adoption of this methodology, it is consistent with the

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68 BHPP submission, 9 April 2001, p. 5.

69 Beach Petroleum, *News release: Otway Basin exploration heightens for Beach with second wildcat spudding*, 30 March 2001, p. 1.

Victorian Government's contribution to the cost of the assets (through a capital contribution and the institution of take-or-pay contracts). The Commission expects that GPU Incorporated would have taken these value considerations into account when bidding for the Victorian gas transmission assets.

The Commission has considered whether the Southwest Pipeline is a prudent approach to achieve the additional system capacity it has made available (in conjunction with the WUGS facility). It has concluded that this would only be the case if the approach also generated substantial system-wide benefits. However, at present there is insufficient information provided by GPU GasNet to reasonably determine the extent of these benefits. The Commission's assessment of system-wide benefits is provided in section 4.3 of this *Final Decision.*

4.2 Economic feasibility test

Pursuant to clause 5.7.2(a) of the PTS access arrangement, where new facilities investment passes the economic feasibility test the new facility is included in the capital base and its use is charged at the reference tariff. GPU GasNet states that the economic feasibility test is difficult to apply for the Southwest Pipeline in the absence of a new zonal reference tariff as there is no additional revenue available from the reference tariff to recover its capital costs. GPU GasNet considers that the Southwest Pipeline does not satisfy the economic feasibility test and states that it has elected to seek a roll-in to the PTS capital base on the basis that it satisfies the system-wide benefits test.

Submissions

BHPP considers that the Southwest Pipeline may satisfy the economic feasibility test. It notes the level of usage of the Southwest Pipeline to January 2001, including:

- approximately 22 PJ entered the PTS from the Southwest Pipeline with the peak day flow being 130.5 TJ;
- Southwest Pipeline injections accounted for 37 per cent of all injections into the PTS on 9 April 2000;
- the Southwest Pipeline injected over 3.5 PJ into the PTS during April 2000, 21 per cent of the total injections for the month; and
- Southwest Pipeline injections totalled around ten per cent of all injections on the five peak system injection days for the year 2000.[70]

According to BHPP:

> History shows that both peak and base load supply competition ex the SWP has occurred without any roll-in arrangement.[71]

In addition, BHPP notes VENCorp's estimates which it says indicate significantly more demand for underground storage than assumed by GPU GasNet. BHPP believes that GPU GasNet has contracts in place for at least 197 TJ/day of deliverability until at least the end of calendar 2005 and comments that GPU GasNet has not demonstrated why it

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[70] BHPP submission, 17 January 2001, p. 6.
[71] *Ibid*.

cannot be reasonably expected that these contracts will extend for the economic life of the asset. BHPP considers that these existing contracts should be taken into consideration in the assessment of the economic feasibility test along with consequential revenues accrued on other parts of the PTS as a consequence of use of the WUGS facility.

Further points raised by BHPP include:

- that the interconnect assets fall into three categories (serving the WTS; linking PTS and WUGS facility; and purely speculative) and that any economic feasibility analysis should be by asset grouping rather than as a single asset group;
- that GPU GasNet must have concluded that the Southwest Pipeline was economically viable on the basis of the existing contracts otherwise it would not have proceeded with the project; and
- that western Victoria is a very prospective region and so there is no reason to assume that non-underground storage supply will decrease.[72]

In contrast to BHPP, TXU supports GPU GasNet's view that the Southwest Pipeline does not satisfy the economic feasibility test:

> TXU submits that the stand alone tariff for the SWP, as quoted by GPU in its submission, would materially affect the quantities of gas transported along the pipeline. The rate of $7-$10/GJ (p.21 GPU submission) is significantly higher than the rate of $2.26 applicable at the Longford injection point (rates exclude GST). TXU understands that the actual rate would be at the higher end of the $7-$10 range unless major adjustments were made to the depreciation schedule.
>
> TXU believes that the tariff would reduce flows for two reasons. Firstly, it would make supplies from WUGS less competitive as compared to other sources of supply. The incentive for participants would be to contract and schedule cheaper, more competitive supply sources.
>
> Secondly, the tariff would act as a disincentive for new gas discoveries in the Port Campbell, Otway Basin area. Shippers of gas (of which TXU is one) need to compare the costs of getting alternative supplies to the market. A significantly higher tariff on the SWP as compared to the Longford to Dandenong pipeline makes new gas sources in the Port Campbell area relatively unattractive. Shippers would only be prepared to pay a proportionately lower price for the source gas. This in turn discourages producers from developing otherwise economic discoveries. Competition in the upstream gas industry would therefore be actively discouraged.[73]

Origin Energy stated that it 'accepts that, in the absence of the discovery of a major gas field in the Otway Basin, the Southwest Pipeline is unlikely to ever be economic while relying on revenue generated solely by carriage through the pipeline.'[74] While ExxonMobil did not directly address the economic feasibility test, it did refer to the Southwest Pipeline as 'a project of dubious economic viability'.[75]

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72 *Ibid*, pp. 7-8.
73 TXU submission, 15 December 2000, p. 3.
74 Origin Energy submission, 14 December 2000, p. 1.
75 ExxonMobil submission, 15 December 2000, p. 2.

In response to BHPP's suggestion that the Southwest Pipeline would pass the economic feasibility test GPU GasNet comments that:

> If the South West Pipeline had been built before the first Access Arrangement, then the asset would have been rolled-in automatically without having to pass the economic feasibility test. However, it was built after this date, and hence is subject to the test.[76]

Commission's considerations

GPU GasNet's application for roll-in under the system-wide benefits test follows from its contention that the Southwest Pipeline would not pass the economic feasibility test. As noted in section 3.1 of this *Final Decision,* there is currently no provision in GPU GasNet's PTS access arrangement for part of an investment to be recovered pursuant to the economic feasibility test and for the remainder to be rolled-in under the system-wide benefits test. At issue is whether the full investment in the Southwest Pipeline would pass the economic feasibility test.

The Commission notes that most parties concur with GPU GasNet, either explicitly or implicitly, that the Southwest Pipeline would not pass the economic feasibility test.[77] In contrast, BHPP has presented a number of arguments to support the contention that the Southwest Pipeline would pass the economic feasibility test. If this were the case, the Southwest Pipeline would be able to generate sufficient incremental revenue to exceed GPU GasNet's investment.

Based on past and projected Southwest Pipeline usage data, there appears to be support for the contention that sufficient transportation earnings could be achieved over the life of the assets in the absence of roll-in. GPU GasNet has advised of its understanding that the usage data generally reflected the five year take-or-pay contracts established prior to privatisation by the Victorian Government (between the three foundation retailers, TXU and GPU GasNet) that would not be expected to represent arms length commercial arrangements. GPU GasNet expects that the three foundation retailers would welcome its proposal to relieve them of their obligations to GPU GasNet in the event that the Commission approves the current application.

The Commission understands that the retailers are committed to similar contracts for the use of the WUGS facility. Under a take-or-pay contract a party will pay for the total contracted quantity of services (up to a specified amount) regardless of whether any gas is shipped or stored. Effectively, these costs are sunk. Accordingly, under the current contracts the three foundation retailers might be expected to ignore the need to make these payments (that is, treat the services as being of no cost) when making decisions about use of the Southwest Pipeline and the WUGS facility up to the contracted take-or-pay quantities. As these services are of some value to the retailers they would have strong incentives to fully utilise those quantities regardless of the level of charges. Consequently, usage to date, and projected under the existing contracts, may provide little indication of what price users would be willing to pay to use these assets.

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[76] GPU GasNet, *Response to public submissions*, 2 March 2001, p. 6.

[77] Not all parties supporting GPU GasNet's system-wide benefits claims have explicitly commented on the economic feasibility test.

Further information provided by GPU GasNet suggests that the projected Southwest Pipeline usage data cited by BHPP substantially overstate the quantities that have been contracted. GPU GasNet advises with respect to the projected 197 TJ/day reported by VENCorp for utilisation of the WUGS facility that the only corresponding contracts it has in place are for 100 TJ/day with the foundation retailers.[78] GPU GasNet suggests that the high flows on the Southwest Pipeline in 2000 'are anomalous and will not be repeated'. GPU GasNet comments that special circumstances applying over 2000 included the need to "bed-down" the WUGS facility and that large amounts of gas were consumed at the Newport and Jeeralang power stations following a major and extended outage at a coal-fired power station.[79]

In response, BHPP notes the existence of flows from Otway Basin wells and its expectation that the WUGS facility will be full by the commencement of the withdrawal season. This suggests that the Southwest Pipeline would be carrying volumes above that of the foundation contracts. BHPP considers that there is no reason to assume this will not continue:

> Neither the filling of storage or the announcement of additional flows from Otway Basin discoveries has been made conditional on the ACCC accepting non-cost reflective tariffs on the SWP.[80]

BHPP also notes that Santos expects one of its two recent Otway Basin discoveries to be on-stream for the 2001 winter peak.

GPU GasNet stated in response to BHPP's comments that the flows experienced in 2000 are unlikely to be repeated for some time and that a significant proportion of Santos' Otway Basin discoveries 'will physically supply the Western system and will not be carried on the Southwest Pipeline'.[81]

The Commission has considered the throughput issues raised by BHPP and GPU GasNet's response. It expects that the foundation retailers' take-or-pay obligations will form the basis of most flows on the Southwest Pipeline for the duration of those contracts. Consistent with operations to date, it appears likely that additional flows will also occur. In particular, the projected tight electricity supply-demand balance in Victoria and SA over the next few years may result in substantial usage of gas for power generation. The Commission expects that the terms negotiated commercially for transporting additional flows will provide a useful input into the economic feasibility assessment as they would indicate a tariff level that users will voluntarily pay.[82]

The Commission has also considered the other issues raised by BHPP. In particular, it agrees that contracted throughputs and consequential revenues accrued on other parts of the PTS should be included in its economic feasibility assessment. It is not convinced, however, by BHPP's suggestion that GPU GasNet's commissioning of the Southwest Pipeline indicates that GPU GasNet did so solely on the basis of the existing contracts.

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78 GPU GasNet, *Response to public submissions*, 2 March 2001, p. 3.

79 *Ibid*.

80 BHPP submission, 9 April 2001, p. 5.

81 GPU GasNet, *Response to further submission from BHP Petroleum*, 24 April 2001, p. 3.

82 GPU GasNet advises that, in the absence of a reference tariff, parties seeking to contract to use the Southwest Pipeline are able to negotiate with it on a bilateral basis, http://www.gpugasnet.com.au /docs/services/Tariff Explanation (GST).doc

The Commission expects that GPU GasNet would have considered a range of factors, including relevant Code provisions, when making its decision. The Commission notes BHPP's expectation that the full capacity of the WUGS facility, which is approximately double the capacity contracted as a result of Victorian Government initiatives in 1998, would be used for the winter of 2001. It also notes that usage of the Southwest Pipeline and the WUGS facility is expected to increase over time as demand grows.

Conclusion

The impact of stand-alone pricing (compared with the roll-in proposal) on usage of the Southwest Pipeline is critical to the assessment of the economic feasibility test. GPU GasNet and a number of parties (including TXU) contend that stand-alone pricing would reduce usage substantially. In contrast, BHPP considers roll-in is not required.

The Commission has considered the transmission price differentials identified by GPU GasNet of $0.08-0.13/GJ for an industrial customer based on stand-alone pricing above that for pricing based on rolled-in costs. It notes that, while this differential is substantial compared with the existing transmission tariff, it is a comparatively small part of the total cost of delivered gas to end-users and may not be sufficient to substantially affect use. It is not clear that such a differential would have a material impact on gas production in the Otway Basin given the current commodity price in Victoria of approximately $2.70/GJ. Similarly, it is not clear that this differential would have a material impact on usage of the WUGS facility given that the additional costs incurred in using that facility for an industrial user appear to be in the range of $0.50/GJ to $2.57/GJ.[83]

It is the Commission's view that the Southwest Pipeline is unlikely to pass the economic feasibility test, though this would depend on market participants' responses to factors such as pricing. Little operational history currently exists to guide this assessment. Pursuant to clause 5.7.2(b) of the PTS access arrangement, where new facilities investment only partially passes the economic feasibility test, that proportion that does pass the test would be included in the capital base (clause 5.7.2(b)(1)). The remainder could be recovered by a surcharge or a capital contribution, be placed in a speculative investment fund, or a combination of these options (clause 5.7.2(b)(2)).

New facilities investment that does not pass the economic feasibility test in full may be recovered if it provides system-wide benefits or if it is necessary to maintain the safety, integrity or contracted capacity of services (clause 5.7.2(c)). GPU GasNet's application is in terms of the Southwest Pipeline satisfying the system-wide benefits test under section 8.16(b)(ii) of the Code and clause 5.7.2(c)(1) of the PTS access arrangement.

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[83] The estimate is based on the assumption that gas is injected at Longford and stored in the WUGS facility in summer, then withdrawn in the Metro region the next winter. The largest cost component is for storage in the WUGS facility. In addition there are higher GPU GasNet and VENCorp charges.

Impact of timing of construction on roll-in

GPU GasNet has suggested that the Southwest Pipeline would not have to pass the economic feasibility test if it had been built before the commencement of the initial access arrangement period and that it would in those circumstances have been rolled-in automatically. This comment is presumably based on section 8.16(b)(ii) of the Code, which specifies that the economic feasibility test only applies to new investment. However, GPU GasNet's comment does not reflect the use of depreciated optimised replacement cost methodology pursuant to section 8.10(b) when the initial capital base was established for the PTS. If the Southwest Pipeline had been in place at that time the relevant value would have been determined through a process of optimisation rather than being automatically included in the PTS asset base as suggested by GPU GasNet.

4.3 System-wide benefits

Section 8.16 of the Code allows the regulated asset base to be increased by the 'actual cost incurred' provided that the investment is prudent and system-wide benefits would justify 'the approval of a higher tariff for all users'. The PTS extensions and expansions policy (clause 5.7.2 of the access arrangement) does not allow for an amount that is less than the total new facilities investment to be rolled-in.[84]

Interested parties have generally expressed their views on whether GPU GasNet's investment in the Southwest Pipeline would pass the system-wide benefits test. In addition, GPU GasNet and a number of interested parties have commented on the interpretation of the system-wide benefits test and on the extent that guidance is available from the Code and from regulatory precedents. This section considers issues relevant to the Commission's assessment in relation to this test.

Submissions

BHPP comments that the only regulatory precedent to date on the application of the system-wide benefits test under the Code has been the Commission's decision in 2000 on GPU GasNet's application to roll-in the Interconnect Assets.[85] BHPP notes that in this instance the Commission determined that roll-in was justified on the basis of system-wide benefits. It also notes the Commission's view expressed in its *Final Decision* that the system-wide benefits test is forward looking. BHPP comments:

> The Commission's Interconnect Assets decision has set a precedent against which future roll-in proposals can be compared. The key criteria was that the system wide benefits were certain and substantial. That is sufficient gas could be supplied in an emergency in order to present total system collapse and supply essential services.
>
> The Commission's consideration of the SWP roll-in application will determine if the system wide benefits test extends to less substantial and less certain benefits and if benefits that may occur justify a substantial 100% certain cost impost on users. At stake are the principles that users should only

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[84] In contrast, if part of a new facilities investment passes the economic feasibility test that part may be included in the capital base and charged at the reference tariff. The remainder could be recovered through a surcharge, a capital contribution, placed in a speculative investment fund, or by a combination of these options.

[85] BHPP submission, 17 January 2001, p. 9.

pay for the assets they use and that the market should determine the merit order of peak day and base load supply sources.[86]

ExxonMobil has also commented on the interpretation of the system-wide benefits test. It considers that the Code provisions relating to public interest in market competition should not extend to overall upstream competition.[87]

AGL considers that the Southwest Pipeline generates both system-security and competition benefits:

> The connection of this new area of supply offers strategic benefits for the market as a whole both in terms of the potential for inter-basin competition and in terms of security of supply to the market. These benefits are dependent on competitive entry of Otway gas and the Iona storage facility into the market and could not be fully realised with the stand-alone tariffs indicated in GPU GasNet's application.
>
> AGL therefore supports the proposed rolling-in of the costs of the Southwest pipeline into the cost base of the Principal Transmission System, thereby sharing the cost amongst all users who will benefit directly and indirectly from having the new source and storage facility connected to the market.[88]

AGL's submission subsequent to the *Draft Decision* noted that it supported the tariffs proposed by GPU GasNet and that:

> While we are disappointed that the Commission has taken a different view, we accept that the quantification of system wide benefits is not easy with currently available information. We do not take issue with the Commission's conclusion that it is not clear whether those benefits justify the proposed increases to existing tariffs.[89]

Santos supports GPU GasNet's position that the Southwest Pipeline generates system-security benefits:

> It is clear that in the event of a further interruption of gas supply from Longford, the interconnect which allows Moomba gas to be supplied to the Victorian Principal Transmission System would be inadequate to meet the Victorian gas demand. … New sources of supply for system security therefore need to be found and the Southwest Pipeline and its connected sources of supply provide additional security for the whole system. The danger of interruption to supply in Victoria is exacerbated by the fields supplying the Longford Plant now also being used to supply New South Wales via the Eastern Gas Pipeline.
>
> With regard to the costs and design of the pipeline Santos suggests that the pipeline has been designed to be expanded at minimal cost. This encourages further exploration and development in the Otway Basin. It allows peaking gas to be quickly injected into the Principal Transmission System. Those benefits add substantially to system security and should be contributed to by all beneficiaries of the security.[90]

Santos also considers that the Southwest Pipeline generates competition benefits:

> Santos Limited notes that a high tariff would reduce incentives for gas exploration and development in Western Victoria. New smaller gas discoveries in the region will not be able to compete at high

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86 *Ibid*.
87 ExxonMobil submission, 15 December 2000, p. 2.
88 AGL submission, 15 December 2000, p. 1.
89 AGL submission, 30 May 2001, p. 1.
90 Santos submission, 15 December 2000, pp. 1-2.

transport costs and will not be brought into production, thus depressing exploration and development expenditure in the region.[91]

TXU also supports GPU GasNet's position that the Southwest Pipeline generates system-security benefits:

> Recent problems with the Epic Moomba to Adelaide pipeline caused many large industrial customers, including gas fired generators to be curtailed. Any gas system that is reliant on a single transmission pipeline and a single processing facility is exposed to a serious risk position.
>
> Today, if there is a problem with supplies from Longford, the extra 200TJ/day that is supplied by the SWP will ensure that essential services are not curtailed and that system pressures are maintained.
>
> The combination of the WUGS facilities and the SWP provide an important balancing service to the PTS. The storage capacity at WUGS enables gas to be stored during Summer and then reinjected during the peak Winter period. This allows more efficient use of production, processing and transmission assets as it reduces the capacity required from the Longford processing plant and Longford to Dandenong transmission pipeline.[92]

In response to the *Draft Decision*, TXU reiterated its view that the Southwest Pipeline provides system-security benefits. TXU refers to a current review of the system security guidelines by VENCorp and contends that preliminary results show that the WUGS generates significant security of supply benefits and contributes to the management of a number of emergency safety-related scenarios.[93]

Moreover, TXU questions some of the assumptions used by the Commission in its *Draft Decision* regarding the level of gas available for security purposes. It submits that there exists a quantity of cushion gas at the Iona reservoir, as well as toll processed gas at the Port Campbell injection point that was not recognised by the Commission. On this basis TXU states:

> A combination of WUGS stored gas and toll processed gas totalling 200 terajoules per day could supply the Victorian Principal Transmission System for between one and two months. The number of days would increase as the volume of the toll processed gas increases. It is submitted, therefore, that the SWP provides significant system security benefits justifying the roll-in of the SWP investment.[94]

In addition, TXU considers that the Southwest Pipeline generates competition benefits:

> TXU submits that the SWP provides competition benefits to all users of the PTS. Competition is enhanced in two distinct markets, the upstream supply and peak day supply markets.
>
> Esso and BHPP gas from Bass Strait dominates gas supply to the Victorian gas market. The SWP enables Otway basin gas to be delivered to Melbourne and therefore provides real basin on basin competition to the Gippsland basin and the Esso/BHPP joint venture. Before the commissioning of the SWP the only market for Otway basin gas was the Western System. This market constitutes only 3[P]J-4[P]J per year. Since commissioning of the SWP there has been evidence of increased exploration and development of existing and new discoveries. Major producers such as Santos and Origin Energy have increased exploration and development of reserves. Fields such as Mylor, Fenton Creek, Dunbar, Skull Creek, North Paaratte, Wallaby Creek, Iona and Penryn have come on line or will soon be on line as a direct result of the construction of the SWP. Further production is expected. There has also been increased interest shown by smaller producers such as Beach Petroleum, Essential Petroleum and Strike Oil.

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91 *Ibid*, p. 2.
92 TXU submission, 15 December 2000, p. 4.
93 TXU submission, 12 June 2001, p. 1.
94 *Ibid*, p. 2.

> The SWP also enhances competition in the peak day supply or maximum daily quantity (MDQ) market. This market is quite distinct from the gas supply market. It is the market for capacity not annual volume. Before WUGS was connected to Melbourne by the SWP, Esso and BHPP possessed a near monopoly in the MDQ market. The WUGS facility now provides 200TJ/day of MDQ. This provides real competition to the Longford plant.[95]

TXU's response to the *Draft Decision* also suggests that there would be a significant loss to competition benefits if injection charges are not equalised between Longford and Port Campbell:

> Effectively, ExxonMobil/BHP Petroleum would add the difference between the two charges to its price for firm supply and capture that rent. This additional rent will provide a subsidy that will make it difficult for new capacity to enter the market in competition with incremental capacity at the Longford plant.[96]

Origin Energy also considers that the Southwest Pipeline generates competition benefits:

> [T]he mere existence of the pipeline, with the Western Underground Gas Storage (WUGS) facility at its end, caps the price BHP/Esso can charge for MDQ supply as WUGS is the only significant alternative to BHP/Esso for MDQ supply. It is, therefore, reasonable to credit the pipeline for this service. GPU Gasnet's proposal will have the effect of further limiting the MDQ price cap which will be to the benefit of virtually all Victorian consumers, given BHP/Esso's predominate supply position.
>
> It is difficult to establish the value of the credits referred to above as the price of MDQ which would have been charged by BHP/Esso, assuming the WUGS facility and Southwest Pipeline did not exist, cannot be readily determined. However, in Origin Energy's judgement, the cost of the pipeline is justified by its system wide benefits of capping MDQ market costs plus its ancillary and tangible benefits of enhancing system security, encouraging exploration in the Otway Basin and facilitating the possible extension of the Victorian gas transmission system to Adelaide with its attendant competitive advantages.

The Energy Users Association of Australia (EUAA) also supports roll-in on the basis that it generates competition benefits by providing 200 TJ/day in competition to Esso/BHP and that it provides on-going system security benefits.[97]

EdgeCap Pty Ltd (EdgeCap) expressed its support for GPU GasNet's roll-in proposal in terms of a need for equal tariff charges on the Southwest Pipeline to facilitate competition on the PTS:

> From a competition point of view it would be undesirable to allow GPU GasNet to apply a tariff, to the Southwest Pipeline, which would essentially exclude any new entrant from participating in the Victorian Gas Market.
>
> EdgeCap, as a wholesale energy trader, intends to pursue/promote all available sources of gas to trade in the Victorian Gas Market (thus in the medium to long term facilitating upstream competition). To be effective, EdgeCap therefore requires a level playing field to be created. The sooner this level playing field is created the sooner benefits of competition will flow onto customers.
>
> EdgeCap is of the view that the proposed revision to the Access Arrangement by GPU GasNet Pty Ltd appears to be moving in the right direction. That is attempting to open up access to the Principle

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95 TXU submission, 15 December 2000, p. 4.

96 TXU submission, 12 June 2001, p. 1.

97 EUAA submission, 21 December 2000, p. 1.

> Transmission System from the South West, thus improving the chances of gas fields (proven and unproven) in that area being developed.[98]

In contrast, ExxonMobil rejects key aspects of GPU GasNet's arguments concerning system-wide benefits. In particular, it disagrees with GPU GasNet's statement that system security benefits would accrue to all gas users in Victoria. ExxonMobil notes that the Southwest Pipeline would provide insufficient capacity to protect all PTS customers in the event of a major system failure preventing or restricting the flow of gas from Longford. In contrast, it states that the Southwest Pipeline has sufficient capacity to supply all WTS customers in the event of failure at North Paaratte. ExxonMobil comments that only PTS users would contribute to the cost of the Southwest Pipeline and that GPU GasNet's proposal would result in unacceptable subsidisation of system security benefits that would be enjoyed by WTS customers by the PTS customers who purchase gas from Longford. ExxonMobil considers that '[t]his distortion of prices sets a dangerous precedent for future pipeline development decisions and adds to the level of uncertainty surrounding investment returns and system costs.'[99]

ExxonMobil also rejects GPU GasNet's arguments concerning competition benefits:

> The Code provisions relating to public interest in market competition should … be limited to participating pipeline issues and not extend to issues relating to overall upstream competition. In our view the proposal advanced by GPU is flawed in that it involves no genuine system wide benefits but rather would result in the subsidisation by Longford customers of a project of dubious economic viability.[100]

BHPP also rejects key aspects of GPU GasNet's arguments concerning system-wide benefits and questions the validity of underlying assumptions:

> All of GPU's analysis of the competitive environment in Victoria seems to assume that there is or will be no competition between suppliers of gas, whether base load or peak, at the inlet flanges to the GPU system. GPU cannot possibly know the economic drivers of all the possible supply sources and hence their analysis is fundamentally flawed and based on a sweeping assumption.
>
> Similarly, GPU seems to assume that without a roll-in approval very limited competition will occur because the SWP would to have a high standalone tariff. This would only be true if GPU were not an economically rational firm. GPU has sunk its investment and the physical asset exists. On a look forward basis, GPU will set a tariff on its sunk investment that meets the market and is sufficient to return the highest portion of fixed costs that the market will stand. Any competition benefits will therefore be available to gas users without the need to impose an arbitrary and unreasonable roll-in.[101]

While ENERGEX did not explicitly comment on system-wide benefits, it did suggest that increased Longford injection tariffs could deter Esso/BHP from entering additional contracts to supply Victorian gas users:

> Finally, it is interesting to speculate as to what response is likely from Longford producers should [the] proposal to artificially increase the injection charge at Longford be successful. The recent commissioning of the EGP and the long heralded construction of the gas pipeline to Tasmania places Bass Basin producers in a new and unique commercial position. Importantly, the interstate hub formed by the interaction of these new pipelines, the PTS and individual State markets will provide

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98 EdgeCap submission, 21 December 2000, p. 1.
99 ExxonMobil submission, 15 December 2000, p. 2.
100 *Ibid*.
101 BHPP submission, 17 January 2001, p. 17.

> greatly enhanced degrees of decision making for Bass Basin producers. Assuming similar wellhead production costs at the individual pipeline gate, decisions as to where to ship gas (through new contracts) will become largely matters of delivery cost to the end use market (and available margins). Efficient pricing of the transportation infrastructure will be a significant element in Victoria's ability to attract additional gas contracts from the Bass Basin's producers. Given the importance to retailers of sourcing new gas contracts for the Victorian market, proposals that deter producers should be viewed with caution.[102]

In response to the *Draft Decision*, ENERGEX directly addresses the issue of competition benefits:

> … ENERGEX Retail does not agree that artificially inflating the efficient price of the Longford injection charge is an appropriate (or even creditable) method for promoting producer competition. As indicated in our original submission, ENERGEX Retail's view is that the end affect of the GPU GasNet's proposal will be to artificially alter and dull price signals in the wholesale market.[103]

4.3.1 Threshold level of system-wide benefits

The Code does not provide any quantitative guidance of the threshold level of system-wide benefits that might need to exist for section 8.16(b)(ii) to apply. Rather, the test is whether the regulator considers that the system-wide benefits would justify the approval of a higher reference tariff for all users. In making this assessment the Commission must assess the change in the service level provided by the PTS as a result of system enhancement through investment in the Southwest Pipeline.

Implicitly there is a nexus between the extent of the increased system-wide benefits and the quantum of the increase in the reference tariff that is justified. As GPU GasNet is proposing a significant increase in the reference tariff, it is necessary to determine whether commensurate system-wide benefits accrue from the Southwest Pipeline. However, any measurement of benefits raises difficulties.

4.3.2 Nature of system-wide benefits

GPU GasNet has identified two sources of system-wide benefits: enhanced system security and increased competition.

Benefits of enhanced system security

As noted in section 2.7 above, GPU GasNet considers that system security benefits arose in the winter of 1999, and that there are on-going system security benefits.

GPU GasNet has provided estimates suggesting that the value of these system security benefits is in the range of $80 million to $3.2 billion. The Commission considers that any measurement of expected benefits is likely to raise difficulties (refer to section 4.3.4 of this *Final Decision*).

Benefits of increased competition

As also noted in section 2.7 above, GPU GasNet considers that competition benefits arise from the Southwest Pipeline in the context of the potential impact on Esso-BHP's virtual monopoly on gas supply in Victoria in the future. GPU GasNet is concerned

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[102] ENERGEX submission, 15 December 2000, p. 4.
[103] ENERGEX submission, 21 May 2001, p. 1.

that, if the roll-in application is not successful, Esso-BHP will retain market power due to limitations on the peak deliverability of gas on the PTS which has a very peaky load.

GPU GasNet argues that the Southwest Pipeline can provide significant supply competition in the form of additional peak deliverability by transporting gas from the WUGS facility at Iona.

The Southwest Pipeline also connects the PTS to the gas fields at Port Campbell. GPU GasNet contends that this connection, provided the tariff is not too high, can spur exploration and development activity in that region, increasing the level of potential producer competition.

Submissions

Allen Consulting, in a report commissioned by ExxonMobil, submits that system-wide benefits are by their nature external benefits and comments that '[e]conomic externalities occur where production or consumption of a particular item creates costs or benefits to parties *other than those to the particular transaction*.'[104] On this basis Allen Consulting argues that:

> The particular type of externality that is relevant to the GPU GasNet application is a positive consumption externality, that is, where the 'consumption' of the new pipeline will create benefits beyond those participants who choose to use the asset. The two examples of potential provided in GPU GasNet's proposal are that the existence of the new pipeline will enhance competition in the market generally (and so benefit non-users of the pipeline), and that it will also reduce the threat of market suspension and so provide benefits to participants that cannot be purchased in the gas spot market.[105]

4.3.3 Distribution of system-wide benefits

GPU GasNet has noted that the Code is silent in regard to the distribution of benefits from new facilities investment. It states that:

> … the accompanying words "System-Wide" suggest that a broad definition should be adopted, namely that there should be benefits for a substantial portion of the customers whose gas is transported through the relevant system.[106]

ExxonMobil comments that system security benefits 'would not be enjoyed by all users or enjoyed equally by all users' as a major disruption of Longford flows could lead to curtailment of supplies to some PTS customers.[107] ExxonMobil states that users of the PTS and not users of the WTS would pay higher system charges reflecting security benefits (as WTS users would be expected to source gas from the Otway Basin). As it contends that customers of the WTS would enjoy greater benefits than PTS customers it is concerned that the former would be subsidised by users of Longford gas.

BHPP is of the view that the roll-in application appears to cover three categories of assets.[108] It describes these as: assets that serve the WTS; assets that link the WUGS facility with the PTS; and 'assets that are purely speculative in nature such as the

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104 Allen Consulting, report commissioned by ExxonMobil, 9 February 2001, pp. 1 and 10.
105 *Ibid*, p. 10.
106 GPU GasNet, *Application for revisions to PTS access arrangement*, 11 September 2000, p. 11.
107 ExxonMobil submission, 15 December 2000, pp. 1-2.
108 BHPP submission, 17 January 2001, p. 4.

branch valves on the south west link that have been installed to provide for future distribution connections'. BHPP considers that the Southwest Pipeline assets should be split into these categories and assessed separately. Allen Consulting also comments that the incremental costs of users of the Western Link would not be recovered from those users.[109]

In response, GPU GasNet suggested that these arguments rely on the assumption that gas will only flow from east to west. GPU GasNet noted that the facilities between Iona and North Paaratte have been designed to support a range of flow patterns including from west to east. GPU GasNet considers that there is considerable uncertainty about how these facilities will be used and suggests a number of scenarios under which PTS users could potentially benefit from the use of these facilities. It suggests that the North Paaratte processing plant might be brought back on stream to process new gas discoveries in the area, and used to supply both the PTS and the WTS. Similarly, a future Minerva gas production plant might supply both the PTS and WTS. GPU GasNet also suggests that, given the significant variations in gas specification between the fields in the Port Campbell area, it is possible that gas will be transferred between various locations at Port Campbell in order to optimise the production, processing, storage and delivery processes. GPU GasNet concludes:

> Given the difficulty of forecasting likely gas flows in this region, GPU GasNet prefers to amalgamate the region around Port Campbell into one injection point with a single tariff, rather than to attempt to align forecasted flows with specific assets. We believe this will lead to a simpler, more transparent tariff and encourage development in the area.[110]

Allen Consulting considers that system-wide benefits only arise to the extent that externalities are generated. NERA comments in a report commissioned by BHPP that '[t]he benefits of this project will accrue to its users, and it is these users that should pay for it'.[111]

The EUAA noted that recovery of all costs through increased injection charges would favour high load factor customers over those with poor load profiles. EUAA considers this feature to be important as it would benefit 'those customers who contribute towards the efficient management of the transmission system.'[112]

In response to the *Draft Decision*, TXU stated that the 'ACCC's decision on the level of system-wide benefits necessary to justify roll-in should be based, not on the 100% of the cost of the Southwest Pipeline but on the 60% of costs recovered by the increase in the Longford injection charge'.[113]

Commission's considerations

Section 8.16 of the Code does not provide any explicit guidance on the link between the beneficiaries of system-wide benefits and those who pay for those benefits. Sections 8.38 and 8.43 establish the general principle that users should contribute to revenue in accordance with the allocation of costs between users. Section 2.46 requires

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109 Allen Consulting, report commissioned by ExxonMobil, 9 February 2001, p. 21.
110 GPU GasNet, *Response to public submissions*, 2 March 2001, p. 3.
111 NERA, report commissioned by BHPP, 16 January 2001, p. 8.
112 EUAA submission, 21 December 2000, p. 1.
113 TXU submission, 12 June 2001, p. 1.

the Commission, when assessing proposed revisions to an access arrangement, to take into account 'the public interest, including the public interest in having competition in markets (whether or not in Australia)'. This is a broad consideration but relevant to the issue of where the benefits of new facilities investment may lie. The Commission considers that this criterion is relevant to its assessment of externalities generated.

An important element of the system-wide benefits test is that the benefits must justify a higher reference tariff for all users. The Commission notes that in most cases these costs and benefits will accrue to the same parties. For example, it would be expected that the users of the Southwest Pipeline will pay for the asset and they will enjoy system-security and competition benefits.

However, in this case a number of parties who appear to be substantial beneficiaries of the proposal are not users of the PTS and would not contribute directly to the costs. These include: the retailer and end-users of the WTS (when they source gas from Port Campbell but enjoy system security from the availability of Longford supplies); the owner of the WUGS facility (as the facility would be less attractive if the tariffs on the Southwest Pipeline are cost-reflective); current and prospective Otway Basin producers (for subsidised access to the PTS); and the proponents of the proposed pipeline from Iona to SA (to the extent that Longford gas will also be available). In addition, under GPU GasNet's proposal to relieve the three foundation retailers of their current take-or-pay obligations related to the Southwest Pipeline there would be a shift of costs and risks from GPU GasNet and these retailers to other users of the PTS. New entrant retailers such as ENERGEX and AGL Energy Sales and Marketing Ltd would bear these costs directly.

One interested party infers that system-wide benefits are externalities and would be enjoyed by parties other than those participating in the transactions giving rise to those benefits. Certainly in the current instance the claimed benefits do involve external benefits. However, it does not follow that system-wide benefits are limited to those enjoyed by parties outside the transaction.

The Commission is of the view that the benefits and costs attributable to the Southwest Pipeline would generally be expected to accrue to the same parties for roll-in to be accepted. Private benefits that would accrue outside the PTS should be excluded from the assessment of the system-wide benefits test. Similarly, PTS users should not be expected to pay for private benefits which, as a group, they do not enjoy. In particular, based on current information it would appear to be more appropriate for the Western System Link to be paid for by WTS users.

Section 4.5 of this *Final Decision* discusses the proposed reallocation of costs and risks associated with certain take-or-pay contracts from GPU GasNet and the three incumbent retailers.

As the EUAA has noted, recovery of all costs through increased injection charges would favour high load factor customers compared with those with poor load profiles. Cost allocation and tariff structure is discussed in section 4.6 below.

The Commission notes TXU's suggestion that the level of system-wide benefits necessary to justify roll-in should be based on only that part of the investment in the

Southwest Pipeline (60 per cent) which GPU GasNet estimates would be recovered by the increase in the Longford injection charge. The Commission considers that this approach is incompatible with the relevant Code and access arrangement provisions (which are outlined in sections 3.1 and 4.3 of this *Final Decision*). In addition, a practical problem would arise from the need to accurately forecast the revenue which would be recovered from the increased Longford injection charge (to allow comparison with the benefits enjoyed by those users). The Commission has not formed an assessment of this revenue under GPU GasNet's proposal or under alternative tariff structures that might be more compatible with Code objectives. The Commission's approach has been to compare both the costs and the benefits of the investment in the Southwest Pipeline as they apply to all users of the PTS.

4.3.4 Commission's overall assessment of system-wide benefits

This section examines the extent of the benefits that arise from the Southwest Pipeline.

Quantification of system-wide benefits

GPU GasNet has attempted to quantify the value of the benefits of enhanced system security by estimating the product of the probability of an incident occurring, the volume of gas supplied and the value of that gas. Table 4.3 below shows the inputs used by GPU GasNet and the estimated benefits. For example, in the case of on-going benefits, GPU GasNet estimated that there is a five per cent probability in a year of an incident occurring, that 10 PJ of gas would be used with a value of $80/GJ to $800/GJ, and that the value of on-going system security benefits would be in the range of $40 million to $400 million.[114] For the winter of 1999, GPU GasNet estimated and that the value of security benefits would be in the range of $80 million to $3.2 billion.

Table 4.3: GPU GasNet's quantification of system-security benefits

Period	Winter 1999	On-going
Probability (%)	20-80	5
Quantity (PJ)	5	10
Value ($/GJ)	80-800	80-800
Benefits ($m)	80-3 200	40-400

Source: GPU GasNet, revisions application, p. 14.

While GPU GasNet has not provided a quantification of competition benefits it has highlighted the cost differential for users of the Southwest Pipeline between stand-alone and rolled-in pricing. It considers that an average transmission price differential of $0.08 to $0.13/GJ for an industrial user 'could be a significant disincentive to development of new fields at Port Campbell.'[115] GPU GasNet states that, in the absence of roll-in '[i]t is conceivable that this price difference could be claimed by the

[114] GPU GasNet states that the value of lost load avoided is based on the value of the Administered Price Cap ($80/GJ) and the VoLL ($800/GJ). GPU GasNet *Application for revisions to access arrangement*, 11 September 2000, p. 14.

[115] GPU GasNet *Application for revisions to access arrangement*, 11 September 2000, p. 18.

incumbent Bass Strait producers in the form of a higher price for new peak deliverability.'[116]

Commission's considerations

The Commission acknowledges that the Southwest Pipeline provided some system-wide benefits as part of system planning for the winter of 1999. It also acknowledges the view that these historical benefits are sunk. GPU GasNet has attempted to quantify these benefits. While the urgency of providing additional supply from non-Longford sources has now passed, it is recognised that on a forward-looking basis it is the potential of these assets to provide system security insurance that provides system-wide benefits. While it may be reasonable to assume that the likelihood of another major supply disruption is small, the events of 1998 demonstrated the risks attached to being largely reliant on a single supply source. In addition, the Southwest Pipeline provides additional peak supply capacity which may help meet projected peak demand growth in the short to medium term.

GPU GasNet's calculations illustrate the difficulties of estimating unmarketed benefits. The methodology is highly dependent on the choice of inputs used and results in a wide range of estimated values.

As discussed in the *Draft Decision*, GPU GasNet has not provided any support for the assumption that the maximum supply capability of the WUGS facility (10 PJ) would be available and used in the event of a supply disruption. It was noted that this assumption contrasts with the smaller quantity (5 PJ) which GPU GasNet has advised is currently contracted for transmission on the Southwest Pipeline and the likelihood that the WUGS facility will be largely depleted for much of its annual cycle.

The Commission has considered TXU's support for GPU GasNet's volume assumption, which TXU bases on the grounds that quantities of toll processed gas and cushion gas would also be available to contribute to system security. However, it understands that the availability of these supplies is uncertain. It notes that the VENCorp review to which TXU refers does not appear to recognise the availability of toll processed gas as a significant factor in providing supply security. It also notes that TXU describes cushion gas as 'gas [that] will remain in the reservoir indefinitely as it is not economic to produce that gas (at reducing daily rates) and then refill the reservoir each year.[117] The VENCorp review includes modelled scenarios which assume 'WUGS gas was not available due either to full depletion or plant outage'[118]. While the Commission is aware of recent Otway Basin discoveries, the extent to which these supplies would be developed and made available to PTS users is currently unknown.

The five per cent probability estimate used by GPU GasNet for an incident occurring in a year seems high given the history of pipeline operations in Australia and the availability of gas from NSW and the LNG facility.

Further, while use of the Victorian gas market VoLL of $800/GJ in calculating the value of the gas may be appropriate for a short term disruption, it would be excessive in

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116 *Ibid*.

117 TXU submission, 12 June 2001, p. 2.

118 VENCorp, *Review of VENCorp LNG System Security Reserves*, May 2000.

the event of an extended disruption lasting 50 days (as implied by GPU GasNet's estimates).

Consequently, the Commission considers that GPU GasNet's estimates in relation to VoLL, the probability of an incident and the volume of gas available result in it substantially overstating the system security benefits generated by the Southwest Pipeline.

The Commission has also considered the May 2000 report *Review of VENCorp System Security Reserve* which TXU suggests provides evidence that the WUGS facility 'contributes significantly to the management of a number of emergency scenarios'.[119] This study assesses the quantity of LNG that would be required in an emergency under various scenarios. For example, VENCorp estimated that 5 500 to 6 500 tonnes of LNG (depending on the curtailment response) would be required if a total Longford outage occurred when WUGS gas is not available. The Commission understands that VENCorp and other interested parties are currently considering the results of the study with a view to determining the appropriate level of LNG reserves to be held by VENCorp.

The information provided by various parties indicates that the Southwest Pipeline does provide some system security benefits to the users of the PTS.

GPU GasNet has also argued that the Southwest Pipeline provides competition benefits. The Commission noted in its decisions relating to the Interconnect Assets revisions that the entry of even a comparatively small source of supply into the Victorian market may lead to worthwhile competition. At the time the only substantial contract in place for southward flows was with Energy 21 for 5 PJ/year over five years.[120] This contract was instituted by the Victorian Government prior to privatisation to help underpin the investment in the Interconnect Pipeline. The Commission noted the expectation of increased flows as existing supply contracts expire and as a result of factors such as the potential for discounting by shippers and price competition by producers. It was the stated expectation of GPU GasNet and EAPL that more substantial flows would develop in the medium term.

While there has as yet been little evidence of additional flows on the Interconnect Pipeline, the Commission remains of the view that an additional source of supply, though small, may lead to worthwhile competition. The Commission considers that the Southwest Pipeline provides the opportunity for additional peak supply on the PTS from the WUGS facility and the potential for Otway Basin supply. However, the extent of the likely benefits is currently uncertain.

The Commission has considered GPU GasNet's argument that substantial competition benefits are generated by the Southwest Pipeline but that roll-in is needed to facilitate usage and to cap the price the Bass Strait producers can charge for new peak delivery. This argument was supported by TXU who suggested that without equal injection charges for Longford and Port Campbell competition benefits would be significantly

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119 TXU submission, 12 June 2001, p. 1.

120 ACCC, *Final Decision, Access arrangement for the Principal Transmission System, Application for revision by GPU GasNet Pty Ltd*, 28 April 2000, p. 44.

reduced. In contrast, ENERGEX considers that the effect of equal injection charges would be to artificially alter and dull price signals in the wholesale market and that GPU GasNet's proposal would not be an appropriate or creditable method for promoting producer competition. The Commission concluded in section 4.2 of this *Final Decision* that it is not clear that stand-alone pricing would have a material impact on gas production in the Otway Basin or on usage of the WUGS facility.

The Commission has considered BHPP's view that GPU GasNet's analysis of the competitive environment in Victoria is 'fundamentally flawed and based on a sweeping assumption' as GPU GasNet would not be aware of the economic drivers of the possible supply sources.[121] The Commission recognises that producers' and other participants' behaviour cannot be predicted with certainty. It examined a number of potential influences on the Victorian natural gas sector in section 4.1 of this *Final Decision*, including the BassGas project's proposal to develop the Yolla field and inject gas at Dandenong. It also noted the high cost of using the WUGS facility and its potential impact on the competitive influence of the Southwest Pipeline.

Potentially, Yolla gas could provide broadly similar competition benefits to those attributed to the Southwest Pipeline by GPU GasNet, including that it would act to cap producers' prices. However, the respective contributions of these projects to the level of competition in the Victorian natural gas sector is currently largely a matter of conjecture.

On balance, the Commission considers that the Southwest Pipeline does provide some system-wide benefits in the form of competition benefits.

Accordingly, the Commission accepts that the Southwest Pipeline provides some system-wide benefits in terms of section 8.16(b)(ii) of the Code. This includes additional system security for the PTS users and enhanced competition. Importantly, it provides an additional source of supply at times of peak demand (including following an incident). However, the Commission considers that the extent of the likely benefits is currently uncertain.

The Commission must be reasonably confident that sufficient system-wide benefits will be generated to justify roll-in of an investment. At the same time, some judgement must be exercised when assessing benefits, especially if they are projected to be generated in the future. The Commission used this discretion when it accepted GPU GasNet's expectation of increased flows over time on the Interconnect Pipeline when making its Interconnect Assets *Final Decision*.

Conclusion

The Commission has concluded that the Southwest Pipeline does generate some system-wide benefits in the form of system security and competition benefits. However, as in the *Draft Decision*, it is not persuaded by the information currently available to it that the quantum of these benefits would be sufficient to justify a commensurately higher reference tariff for all users.

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[121] BHPP submission, 17 January 2001, p. 17.

4.4 Capital contribution by the Victorian Government

As part of the Victorian Government's privatisation process for the Victorian gas transmission assets, prospective purchasers were asked to indicate the level of capital contribution appropriate to compensate them for the MMAP and the accelerated construction of the Southwest Pipeline. GPU Incorporated (the parent company of GPU GasNet) successfully bid $1.025 billion for the business and accepted a capital contribution of $46.7 million.[122]

GPU GasNet has provided the Commission with a confidential extract from the TPA Sale Agreement which confirms that the capital contribution for the Southwest Pipeline was $7.3 million.[123] The balance ($39.4 million) was for the MMAP. Under the terms of the agreement, GPU GasNet will not seek to recover these amounts through increased tariffs or through a surcharge.

Submissions

BHPP noted comments by the Victorian Auditor-General that, at the time of privatisation of the PTS, the Victorian Government advised prospective purchasers that it was willing to provide funding of up to $59 million in relation to the accelerated construction of the Southwest Pipeline and the MMAP.[124]

BHPP stated:

> The buyers of the TPA assets did not have the SWP foisted upon them. Instead they were invited to bid for the entire TPA system, knowing that the SWP would be part of the package. To now seek to effectively write up the economic value of the SWP is double dipping.[125]

BHPP commented in its response to the *Draft Decision* that Victorian gas users have already contributed to the provision of infrastructure with system-wide benefits through Victorian Government contributions to the asset owners. In particular, the Government contributed $37 million to the cost of the two compressors on the MSP which provide additional capacity to the PTS through the Interconnect Pipeline. In light of this investment, BHPP considers that Victorian gas-users 'should not have to pay for additional system wide benefits infrastructure until the benefits available from what they have already paid for are fully utilised'.[126]

Commission's considerations

The Commission notes BHPP's concern that GPU GasNet should not be over-compensated for costs associated with the Southwest Pipeline. Consistent with the TPA Sale Agreement, GPU GasNet has proposed that the Victorian Government's capital contribution of $7.3 million towards the cost of the Southwest Pipeline be excluded from the proposed roll-in. The Commission has also considered BHPP's view that Victorian gas users have already contributed to the cost of infrastructure that

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122 *Report of the Auditor-General – Victorian Government's Finances, 1998-99*, pp. 13& 15.
123 *TPA Sale Agreement*, p. 36.
124 *Report of the Auditor-General – Victorian Government's Finances, 1998-99*, p. 12, quoted in BHPP submission, 9 April 2001, p. 4.
125 BHPP submission, 9 April 2001, p. 5.
126 BHPP submission, 18 May 2001, p. 1.

provides system-wide benefits through Victorian Government contributions to the asset owners.

The Commission expects that GPU Incorporated's successful bid for the transmission assets of $1.025 billion (less the capital contribution of $46.7 million) would have taken into account the purchaser's assessment of the costs and benefits associated with the Southwest Pipeline and the MMAP, including that of related risks. The purchase price does not impact on the regulated asset base which was determined as part of the Commission's approval of the PTS access arrangement in 1998 (prior to privatisation) and has since been adjusted to reflect GPU GasNet's investment in the Interconnect Assets.

4.5 Retailers' take-or-pay obligations

GPU GasNet is the beneficiary of a number of gas transportation contracts instituted by the Victorian Government prior to privatisation of the PTS to partly underwrite the investment in the Southwest Pipeline. The contracts place take-or-pay obligations on the three foundation retailers. The Commission understands that the contracts, which commenced on 1 October 2000, provide substantial benefits to GPU GasNet. GPU GasNet has offered to relieve the retailers of the take-or-pay obligations in the event that the Commission approves the revisions as proposed.

Submissions

ENERGEX, a second tier retailer, considers that GPU GasNet's proposed approach would effectively transfer these obligations to all users of the PTS, including any that do not use the Southwest Pipeline.

> GPU makes comment in their proposal of their intention to relieve the SWP foundation shippers of (some of) their contractual obligation if the pipeline application is successful. ENERGEX maintains that this will provide incumbent retailers with a windfall competitive advantage (post sale) at the expense of 2nd tier retailers and their customers.
>
> Under the current arrangement, incumbent retailers presumedly manage the existing contractual obligations associated with the SWP through either a specific charge to customers using the section of pipe or via a general increase in costs to all consumers in their portfolio. Importantly, 2nd tier retailers who do not have contractual arrangements with the SWP do not currently incur costs for this pipeline. As an offsetting cost, 2nd tier retailers who do not hold non-Longford gas face higher costs through increased uplift risk in the wholesale market.
>
> If the roll-in application is successful, 2nd tier retailers whose physical book does not contain Ottoway basin gas will incur increased costs for their Longford injections through the proposed higher injection charge without affecting their market Uplift risk management costs. Incumbent retailers as foundation shippers on the other hand, will enjoy lower contractual risk and retain their lower risk position in the wholesale market (ie by receiving ancillary payments as an offset for Uplift risk). Whist it is open for 2nd tier retailers to purchase capacity from WUGs, the current asking price of $120/MDQ GJ plus 1c/GJ in/out for this largely monopoly facility is unlikely to be competitive in either the wholesale or retail market.
>
> ENERGEX is not familiar with the prices contained in the transmission contract signed between GPU GasNet and the three incumbent retailing businesses during the negotiation process. We are also not aware of the terms and conditions of these contracts. GPU Gasnet advises in their submission that ***"it will relieve the three foundation retailers of certain take-or-pay obligations if the commission approves roll-in".*** Presumedly, other financial obligations related to the transportation contracts of the foundation retailers will likewise be suspended (ie shipping costs, maintenance charges etc) if an approved tariff is implemented as proposed. In total, the proposal will substantially reduce cost recovery risk for both GPU Gasnet and the incumbent retailers and

will add "post sale" value to the companies at the expense of the consumers generally, and Longford based 2nd tier retailers in particular.[127]

ENERGEX also raised the issue of the allocation of property rights currently associated with these contracts.[128] ENERGEX considers it reasonable to assume that property rights in the form of Authorised Maximum Demand Quantity (AMDQ) certificates would have been issued to the foundation shippers commensurate with their contracted capacity. ENERGEX questions whether the foundation shippers will retain these rights if the roll-in application is successful. It also asks how additional AMDQ from the Southwest Pipeline will be allocated and how any additional revenue raised from issuing these instruments will be managed.

In addition, ENERGEX notes:

> … Longford users partially fund SWP assets even though their gas is not transported through this pipeline. ... [T]he question arises as to how the property rights associated with this level of cross subsidy should be allocated. That is, will Longford injectors be entitled to a portion of these rights (as Longford AMDQ) commensurate with the level of cross subsidy?
>
> ENERGEX believes that guidance as to how SWP property rights should be managed can be taken from the methodology for the allocation of the original Longford based AMDQ. VENCorp issued these instruments to individual "D" tariff customers and globally to "V" tariff customers. ENERGEX assumes that the underpinning rationale approved by ACCC for this approach was that those parties who pay for the infrastructure should be awarded the attendant property rights for the pipeline. We suggest that under this principle, Longford injectors role in funding part of the SWP should be recognised (if the proposal is approved) and a proportionate allowance should be made in the allocation of those property rights.[129]

In response, GPU GasNet stated:

> GPU GasNet can allocate up to 200 TJ/day of AMDQ on the Southwest Pipeline. Currently 100 TJ/day has been allocated to Retailers, and these Retailers will be offered the option to annul these contracts if the roll-in proposal is approved. We do not anticipate that there will be any shortage of AMDQ in the near future, and hence we believe that all existing and new Retailers will have the opportunity to contract for AMDQ at the new approved rates on the pipeline. In general we would expect the contracting party to enter into a take-or-pay obligation commensurate with the volume and term that is contracted. In the longer term it is possible that the pipeline will eventually be fully contracted. In this case GPU GasNet will expand the capacity of the pipeline and allocate additional AMDQ to those parties which are willing to underwrite the investment.
>
> Energex suggests that if the Longford tariff is increased as part of the roll-in proposal, then Longford users should be allocated AMDQ on the Southwest Pipeline. We do not see any relationship between issues of pipeline valuation and the allocation of AMDQ. In our opinion AMDQ is a hedging mechanism on the system which is intended to give certainty to market participants. Hence it should be allocated to those parties who make a commitment to use the capacity of a pipeline (whether an existing line or a prospective pipeline expansion) by entering into an underwriting arrangement.[130]

BHPP notes that, pursuant to section 2.24(b) of the Code, the Commission must take existing contractual obligations into account when it is assessing GPU GasNet's application, and suggests that the Commission take into account the proposed 'transfer

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127 ENERGEX submission, 15 December 2000, p. 3.
128 *Ibid*, pp. 1-2.
129 *Ibid*, p. 2.
130 GPU GasNet, *Response to public submissions*, 2 March 2001, pp. 1–2.

of risk from GPU and the parties that have contracted 197 TJ/d of deliverability to users.'[131] BHPP comments:

> Under the existing arrangements it is the retailers and GPU that take on the risk that the services the SWP provides are in fact demanded by the market at a price that covers cost. If the ACCC approves GPU's application GPU and the retailers will have that risk removed from them. Instead users will pay for the assets regardless of market demand for them.[132]

AGL also has reservations about GPU GasNet's proposal:

> We express some concern about GPU GasNet's offer "to relieve the three foundation retailers of certain take or pay obligations" under existing contracts. This would appear to represent a windfall gain to those retailers, and the effect of the proposed tariff structure would be that it may be funded by their customers through the pass-through of the increased Longford tariff. We have no knowledge of the magnitude of this effect, but the Commission's issues paper suggests that it may be significant. AGL has been a strong proponent of the principle that regulatory decisions should not override pre-existing commercial arrangements and we believe that it should also apply here.[133]

Commission's considerations

The Victorian Government imposed substantial take-or-pay obligations on the three foundation retailers to help underwrite GPU GasNet's investment in the Southwest Pipeline. GPU GasNet has advised that it would offer to remove these obligations if the Commission were to approve the proposed revisions. The Commission agrees that it would be inappropriate for GPU GasNet to "double-dip" by continuing to receive revenue under the contracts while earning additional revenue from higher Longford injection charges. However, it is unclear how the removal of these obligations could be ensured.

The Commission notes the issues identified regarding risks, rights and obligations associated with the existing contracts between GPU GasNet and the three foundation retailers and with the roll-in application. The Commission is of the view that the proposals would, if accepted, result in a reallocation of costs and risks currently faced by GPU GasNet and the three foundation retailers so that they would be shared by all users of the PTS. Such a reallocation might be attractive to GPU GasNet and the foundation retailers. However, it would not appear to be equitable to other parties, especially if the benefits associated with the Southwest Pipeline were not also reallocated on a commensurate basis. To the extent that the reallocation would reduce the cost-competitiveness of new entrant retailers it would be expected to act to reduce the level of competition in the Victorian gas industry. This factor is an important consideration in the Commission's assessment of the proposed tariff structure in the following section.

As noted earlier, GPU Incorporated would be expected to have taken the likely costs and benefits associated with the Southwest Pipeline into account when it successfully tendered a net purchase price of $0.978 billion for the Victorian gas transmission assets. This assessment would have included the impact of the take-or-pay contracts.

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131 BHPP submission, 17 January 2001, p. 10.

132 *Ibid*.

133 AGL submission, 15 December 2000, p. 2.

The Commission notes the intention of the Victorian Government that these contracts should help underwrite GPU GasNet's investment in the Southwest Pipeline. It also notes that foundation retailers were aware of these obligations when they purchased the Victorian businesses and that they would be expected to have taken these obligations into consideration when bidding for the assets. While the Commission would be hesitant to be involved in the unwinding of existing contracts it recognises that these parties are free to do so if they so decide.

GPU GasNet will continue to achieve a not insignificant return from these contracts while they are in force. These returns are not currently included in its regulated revenues.

4.6 Cost allocation and tariff structure

GPU GasNet has proposed that the capital costs of the Southwest Pipeline would be recovered through an increase in the Longford injection charge and the introduction of a new Port Campbell injection charge set at the same level. GPU GasNet has projected that approximately 60 per cent ($45 million) of these costs would be recovered through the Longford injection charge, with the balance ($30 million) recovered from usage charges of the Southwest Pipeline.[134] Operations and maintenance costs of $0.35 million a year would be recovered through anytime charges on the new Southwest zone. The Commission has considered whether this proposal satisfies Code principles in sections 8.1 and 8.2 and other requirements, including those of section 8.16(b)(ii).

Submissions

The EUAA supported the structure of the tariff proposal which favours high load factor customers. EUAA considers that these customers contribute towards the efficient management of the PTS.

The proposed tariff structure is opposed by BHPP and ExxonMobil and their respective advisers NERA and Allen Consulting. These parties generally contend that any increases in tariffs to pay for the Southwest Pipeline should reflect the benefits enjoyed by customers.

BHPP argues that the proposed tariff structure is inconsistent with key and secondary tariff design principles set out in section 8.1 of the Code:

> The proposed tariff structure does not replicate the outcomes of a competitive market as required by 8.1(b), in fact it does the complete opposite. In a competitive market, an investor invests in an asset and hopes to earn a return from that asset. If the investor cannot earn a return it will continue to operate the asset provided revenue exceeds variable costs. A competitive market does not allow an investor to build a asset and then recover the costs of that asset from users of another asset or service as proposed by GPU.
>
> The proposed tariff structure clearly will have a distorting effect on both upstream and downstream investment decisions and GPU has made clear that it is intended to do so. This does not meet the objective 8.1(d).
>
> From an upstream perspective the tariff structure will clearly impact the economics of upstream gas base load producers and peak day suppliers. The price paid by Eastern Victorian producers to deliver

[134] GPU GasNet, *Application for revision to PTS access arrangement*, 11 September 2000, p. 25.

> their product to a demand centre will be in excess of the cost of providing the service, while the price paid by Western Victorian producers to deliver gas to a demand centre on the PTS will be significantly below the cost of providing the service. This very significant distortion may, for example, lead to the Minerva field being developed before the Kipper field. Clearly the Commission must not approve a tariff structure that may fundamentally damage the competitive nature of one supplier over another by loading it up with a tariff in excess of cost.
>
> Objective 8.1(a) makes clear that GPU is not to be guaranteed a revenue stream that covers the efficient costs of delivering the Reference Service. GPU through their proposed tariffs are virtually guaranteeing themselves a revenue stream that covers their SWP costs. The asset risk which GPU freely elected to carry would be transferred to gas users while the rewards would be kept by GPU.
>
> The proposed tariff is not efficient in its structure as required by 8.1(e) even if it were accepted that the SWP assets should be rolled in on the basis of system wide benefits. The alleged system wide benefits (at least in part) apply to all users of the PTS and WTS not just users of the Longford injection point on peak injection days.
>
> The structure of the Reference Tariff will determine the competitive landscape in Victoria. If the Commission accepts GPU's design proposal it will send a clear signal to all stakeholders that the ACCC has disregarded the user pays principal [sic] and the ability of the market to determine how to most efficiently ensure supply.[135]

NERA puts forward broader arguments that roll-in is not a viable economic concept and that it creates subsidies between customer groups.[136] NERA also summarises the evolution of the approach taken in the US by the Federal Energy Regulatory Commission (FERC)which led to a September 1999 policy change to adopt incremental capacity for new pipeline capacity.[137] NERA states that 'FERC only supports rolled-in pricing where obvious system wide benefits will occur.'[138]

ExxonMobil comments that the Western Link would provide little, if any, benefits to users of the PTS and suggests that users of the Western Link should bear its entire cost.[139] ExxonMobil also suggests that the proposal would require 'PTS users to cross-subsidise the Southwest Pipeline in order to artificially improve the economics of Otway production and the WUGS facility.'[140] ExxonMobil considers that costs would not be recovered in a way that minimises distortions to consumption decisions and that upstream investment decisions would be potentially distorted.

Allen Consulting discusses the importance of the user pays principle in terms of Code requirements and broader economic efficiency considerations. It also notes the prospect of PTS users of Longford gas subsidising WTS users. Further, Allen Consulting states:

> … the proposal may well provide dis-benefits by potentially distorting upstream competition. The proposal requires PTS users to cross-subsidise the Southwest Pipeline in order to artificially improve the economics of Otway exploration and the WUGS facility and production. New entrants in the Gippsland Basin seeking to provide peaking or base load gas would be placed at a distinct disadvantage. The lowest cost field would not necessarily be developed, and the end users would ultimately bear the higher costs.[141]

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135 BHPP submission, 17 January 2001, pp. 18-19.
136 NERA, report commissioned by BHPP, 16 January 2001, pp. 3-4.
137 *Ibid*, pp. 17-24.
138 *Ibid*, p. 24.
139 ExxonMobil submission, 9 February 2001, p. 1.
140 *Ibid*, p. 2.
141 Allen Consulting, report commissioned by ExxonMobil, 9 February 2001, p. 21.

GPU GasNet responded to the key points it identified in these submissions. It defended the use of rolled-in pricing, commenting that the move to incremental pricing in the US is part of a long history of regulatory change in that country and that the processes and pricing rules that support new investment in transmission capacity in the electricity industry are still being determined. GPU GasNet considers that some of the arguments advanced against rolled-in pricing do not apply in Australia:

> For example, some of the undesirable outcomes of rolled-in pricing, such as over-building of capacity, will ***only*** apply where the pipeline builder expects that a new investment will be rolled-in (as was the situation in the US in the past). In such an environment, there are clear and obvious incentives to over-build new capacity. However under the Code, the presumption is that a new investment will ***not*** be rolled-in (unless it satisfies the system-wide benefits test). A pipeline company which overbuilt new capacity in the hope that it would be rolled-in would be taking an extraordinary risk under the Code. Hence many of the objections mounted by NERA against rolled-in pricing do not apply to the Code as it stands.[142]

GPU GasNet also suggested that its tariff proposal would have been acceptable if it had been built before the commencement of the initial access arrangement period:

> However, it is worth noting that if the South West Pipeline had been built one year before the Access Arrangement, and tariffed under the generally accepted volume-distance pricing rule, then the approved tariffs on the Longford and South West Pipeline would have been equal, and this would have been regarded as an appropriate tariffing outcome. The fact that it was built one year later places the burden of the incremental pricing rule on this pipeline, but as discussed above, we believe that this principle should be put aside in light of the demonstrated system-wide benefits.[143]

GPU GasNet states that it 'would be willing to rebalance tariffs in some other way if this is the preference of the market; however no parties other than Esso and BHPP have raised this as an issue.'[144]

ENERGEX noted that the commissioning of the EGP and the planned construction of a transmission pipeline to Tasmania create new opportunities for Esso/BHP to market Gippsland Basin gas. The producers would be expected to consider transportation costs and available margins when entering into new contracts. In this context ENERGEX suggested that increased Longford injection tariffs could deter Esso/BHP from entering into additional contracts to supply Victorian gas users. ENERGEX considers that the proposal should be viewed with caution given the importance to retailers of sourcing new gas contracts for supply into Victoria.

Commission's considerations

The Commission's current assessment is in terms of the Code in its present form which does provide for roll-in under certain circumstances. The Commission notes GPU GasNet's comment that the presumption under the Code is that a new investment will not be rolled-in unless it satisfies the system-wide benefits test.

GPU GasNet has suggested that the question of incremental or rolled-in pricing would not have arisen for the Southwest Pipeline if it had been built before the commencement of the initial access arrangement period and that equal injection tariffs would have been regarded as an appropriate tariffing outcome under the volume-

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142 GPU GasNet, *Response to public submissions*, 2 March 2001, p. 5.
143 *Ibid*, p. 8.
144 *Ibid*.

distance pricing rule. The Commission considers that the volume-distance pricing method is likely to be appropriate if it achieves cost-reflective tariffs. However, this methodology has not been applied to the PTS access arrangement. Instead, the approach approved by the Commission in 1998 allocated the total target revenue across the tariff zones on the basis of the respective optimised replacement costs of the assets in those zones. The tariff in each zone was then determined by dividing its revenue allocation by its forecast volumes. Under this approach the level of the Southwest Pipeline tariff would critically depend on the level of forecast volumes. Therefore, the Commission does not agree with GPU GasNet's argument that the issue of pricing would be irrelevant but for the timing of the investment.

Pursuant to section 8.16(b)(ii) of the Code the Commission must be satisfied that the system-wide benefits attributed to new facilities investment justify the approval of higher reference tariffs for all users of that system. It is relevant to note that the Code (section 10.8) makes a distinction between users and end-users. A user is defined as 'a person who has a current contract for Service or an entitlement to a Service as a result of an arbitration.' An end-user is a person who acquires or proposes to acquire natural gas from a user or a prospective user. The Commission notes that ENERGEX, a user, does not propose to use the services of the Southwest Pipeline but would contribute to its costs under GPU GasNet's proposal.

If the Commission is satisfied that there are significant system-wide benefits that would justify higher tariffs, it cannot limit those increased tariffs to any particular class of user. However, while reference tariffs may rise for all users, the tariff structure implemented may result in the higher tariffs impacting on some users more than others. Under GPU GasNet's proposal, the increase in reference tariffs would have the effect of shifting costs accepted by GPU GasNet and the three foundation retailers at privatisation onto new entrant retailers and favour high load factor usage.

GPU GasNet has commented that the Code is silent in regard to the distribution of benefits and is of the view that a broad definition of 'system-wide benefits' should be taken. It considers 'there should be benefits for a substantial portion of the customers whose gas is transported through the relevant system'.[145]

The Commission has considered the general cost reflectivity principle that there should be a nexus between those who enjoy benefits and those who bear the costs; on this basis costs associated with benefits that clearly accrue to only a sub-set of users might be expected to be borne by them. It has also considered the public interest (pursuant to sections 2.46(a) and 2.24(e) of the Code).

The Commission notes the view of some interested parties that the proposal would shift costs and risks from GPU GasNet and the three foundation retailers to other parties. The Commission is concerned that the proposal will interfere with contractual obligations entered into at the time of privatisation which would have been reflected in the prices paid for the businesses.

In principle, alternative efficient and equitable approaches could include increases in peak charges, anytime charges, or both, with increases in the form of equal dollar

[145] GPU GasNet, *Application for revisions to PTS access arrangement*, 11 September 2000, p. 11.

charges or as a percentage of the existing tariff. In practice, a number of variations may have a substantial impact on the balance of charges paid by class and location of customer.

The Commission engaged in an extensive process of public consultation regarding appropriate cost allocations and efficient and equitable tariff design when approving the PTS access arrangement in 1998 before concluding that the tariffs, once adjusted for changes required by the Commission, would '… recover from each user a fair and reasonable share of costs'.[146] This review included an assessment that the allocation of costs between users reasonably reflected the costs incurred by the service provider and the benefits enjoyed by those users. In April 2000 the Commission approved an amended reference tariff structure that reflected roll-in of the Interconnect Assets through increased anytime tariffs.

The current review must determine if a higher reference tariff is justified for all users based on system-wide benefits accruing from the Southwest Pipeline. Accordingly, changes to the way the reference tariff is borne by users would be expected to reflect changes to the benefits enjoyed by users.

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. A revised tariff structure may more explicitly recognise the impact of multiple injection points. The review would also be expected to cover issues related to the proposed introduction of hourly multi-zone pricing.

Conclusion

The Commission has considered concerns raised by interested parties regarding compliance of the proposal with the objectives expressed in the Code. Of particular relevance is the objective (section 8.1(d)) of not distorting investment decisions in pipeline transportation systems or in upstream or downstream industries.

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.

4.7 Depreciation

GPU GasNet has proposed to apply real straight-line depreciation to the actual cost of the Southwest Pipeline from the time of its commissioning (1 June 1999) to the proposed implementation date for the revised tariff (1 October 2000) in order to determine the amount of the investment to be rolled-in to the capital base (see section 2.2.3 of this *Final Decision*).

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[146] ACCC, *Victorian Final Decision*, p. 91.

In addition, under GPU GasNet's proposal, $8.2 million of depreciation would be deferred for the years 2000 to 2002, with the target revenue being levelized during the subsequent 20 years. This approach would significantly reduce the target revenue in the early years (when flows are lower) with a commensurate increase in later years.

Submissions

No comments were received from interested parties on the proposed use of real straight-line depreciation up to the proposed implementation date.

The EUAA supported the use of back-end loaded depreciation and the levelization of target revenue over the subsequent 20 years which it commented is in line with expected flows over the life of the investment. The EUAA commented that this was preferred to the approach proposed for a number of access arrangement applications in recent years which it considered disproportionately front-end loaded depreciation schedules had been sought.[147]

AGL states that it 'also supports the proposed deferral of depreciation in order to avoid unrealistically high tariffs in the early years of the pipeline's life.'[148]

Commission's considerations

GPU GasNet's proposal to apply real straight-line depreciation from June 1999 to October 2000 and then adopt a back-end loaded approach contrasts with the alternative kinked depreciation schedule approach discussed in section 4.1 of this *Final Decision*.[149]

The Commission considers it appropriate that changing usage over time be reflected for regulatory purposes in the depreciation schedule. It has concluded that GPU GasNet's proposal to back-end load depreciation from October 2000 is not unreasonable.

To be consistent with this approach, the depreciation profile prior to roll-in should reflect the usage of the assets at that time. However, measuring the contribution of the Southwest Pipeline over this period is problematic. As noted in section 4.3.4 of this *Final Decision*, GPU GasNet estimated that the value of system security benefits over the winter of 1999 would be in the range of $80 million to $3.2 billion. While the Commission has reservations about the reasonableness of these estimates, it has concluded that the assets made a contribution to system security over the winter of 1999. The Commission does not consider that real straight-line depreciation would adequately reflect usage of the pipeline prior to October 2000.

In addition, real straight-line depreciation may not be consistent with the quantum of revenue earned prior to October 2000.

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147 EUAA submission, 21 December 2000, p. 1.

148 AGL submission, 15 December 2000, p. 2.

149 This approach recognises that most of the value of the Southwest Pipeline was generated by providing system security during the 1999 winter.

4.8 Operation and maintenance costs

Annual operation and maintenance costs are estimated at $0.35 million

The Commission did not receive any submissions from interested parties regarding the level of operation and maintenance costs included in GPU GasNet's application. The Commission has undertaken its own analysis of these costs and has concluded that they are not unreasonable.

4.9 Timing issues

As discussed in section 4.7 of this *Final Decision*, GPU GasNet proposes to apply real straight-line depreciation to the costs of the Southwest Pipeline in recognition of the period of time that elapsed between June 1999 and October 2000. Recognition of revenues earned on the Southwest Pipeline during this period is not proposed.

This approach is in contrast with that adopted for the Interconnect Assets revisions where a NPV approach was used to recover the return between the commencement of the operation of the assets and the start of the revised reference tariff, taking into account costs and revenues incurred over that period.[150]

The Commission is generally of the view that the latter approach is the more appropriate as it would be consistent with the objective specified in section 8.1(a) of the Code of providing the service provider with the opportunity to recover the costs of the assets over the expected life. In the current instance the Commission notes that significant flows occurred on the Southwest Pipeline prior to October 2000.

No submissions were received from interested parties on this issue. The Commission considers that GPU GasNet should be able to achieve a reasonable return over the life of these assets and that it is reasonable to adopt the NPV approach.[151]

When GPU GasNet submitted its revisions proposal to the Commission on 12 September 2000 it nominated 1 October 2000 as the commencement date for the revisions. The Commission understands that the latter date was chosen as it aligns with the contracts held with the foundation retailers and that it was not intended to restrict the public consultation process required under the Code. GPU GasNet's billing procedures allow some latitude in implementing increased tariffs effective from 1 October 2000 if the Commission were to approve the revisions with a later implementation date.

4.10 Scope of the current review

Compliance with the Code

Pursuant to section 2.46 of the Code, the Commission may approve revisions to an access arrangement only if it is satisfied that the access arrangement as revised would

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150 ACCC, *Final Decision, Access arrangement for the Principal Transmission System, Application for revision by GPU GasNet Pty Ltd*, 28 April 2000, p. 54.

151 See ACCC, *Victorian Final Decision*, p. 27.

contain the elements and satisfy the principles set out in sections 3.1 to 3.20 of the Code. Therefore, while the current review focuses on the revisions proposed by GPU GasNet, the Commission has also considered whether any of the elements of the access arrangement as revised would be inconsistent with the requirements of sections 3.1 to 3.20 of the Code. In addition, the Commission has considered certain grandfathered provisions of the Victorian Code (see section 1.2 of this *Final Decision*) that would appear to limit its ability to revisit other aspects of the access arrangement at this stage.

The Commission does not consider it appropriate for the current assessment to extend to repeating the full review of the access arrangement it conducted between November 1997 and December 1998, or to anticipate the review to be conducted during 2002. The current review therefore focuses on the impact of the proposed revisions and on whether circumstances have changed since 1998 such that the access arrangement would no longer contain the elements and satisfy the principles set out in sections 3.1 to 3.20 of the Code. Interested parties have not raised any issues in this context to suggest that the revised access arrangement would not comply with the Code.

In considering the issue of compliance with the Code the Commission notes that one area where relevant circumstances may have changed substantially since the October 1998 *Victorian Final Decision* is the prevailing conditions in the market for funds. The Commission must consider the market for funds in relation to the appropriate rate of return pursuant to section 8.30 of the Code. At the time of the *Victorian Final Decision* the real risk free rate was 3.43 per cent and the expected annual inflation rate was 2.5 per cent.[152] The market for funds and inflationary expectations have moved since October 1998. As of June 2001, the real risk free rate and the expected inflation rate had fallen to 3.33 per cent and 2.11 per cent respectively. Thus the post-tax nominal cost of equity and the real cost of capital would be less in June 2001 than that set in the *Victorian Final Decision.*

The Commission has considered the costs and uncertainties likely to be associated with frequent reassessment of the regulated rate of return. It is of the view that any early review would only be justified if there were strong grounds to believe that changes in the prevailing conditions in the market for funds since the rate of return was set have been so substantial that the reference tariff principles established by section 8 of the Code would no longer be satisfied. While the changes since October 1998 may be significant, the Commission is of the view that a reassessment of the regulated rate of return is not currently justified.

[152] *Ibid*, p. 62.

5. Final decision

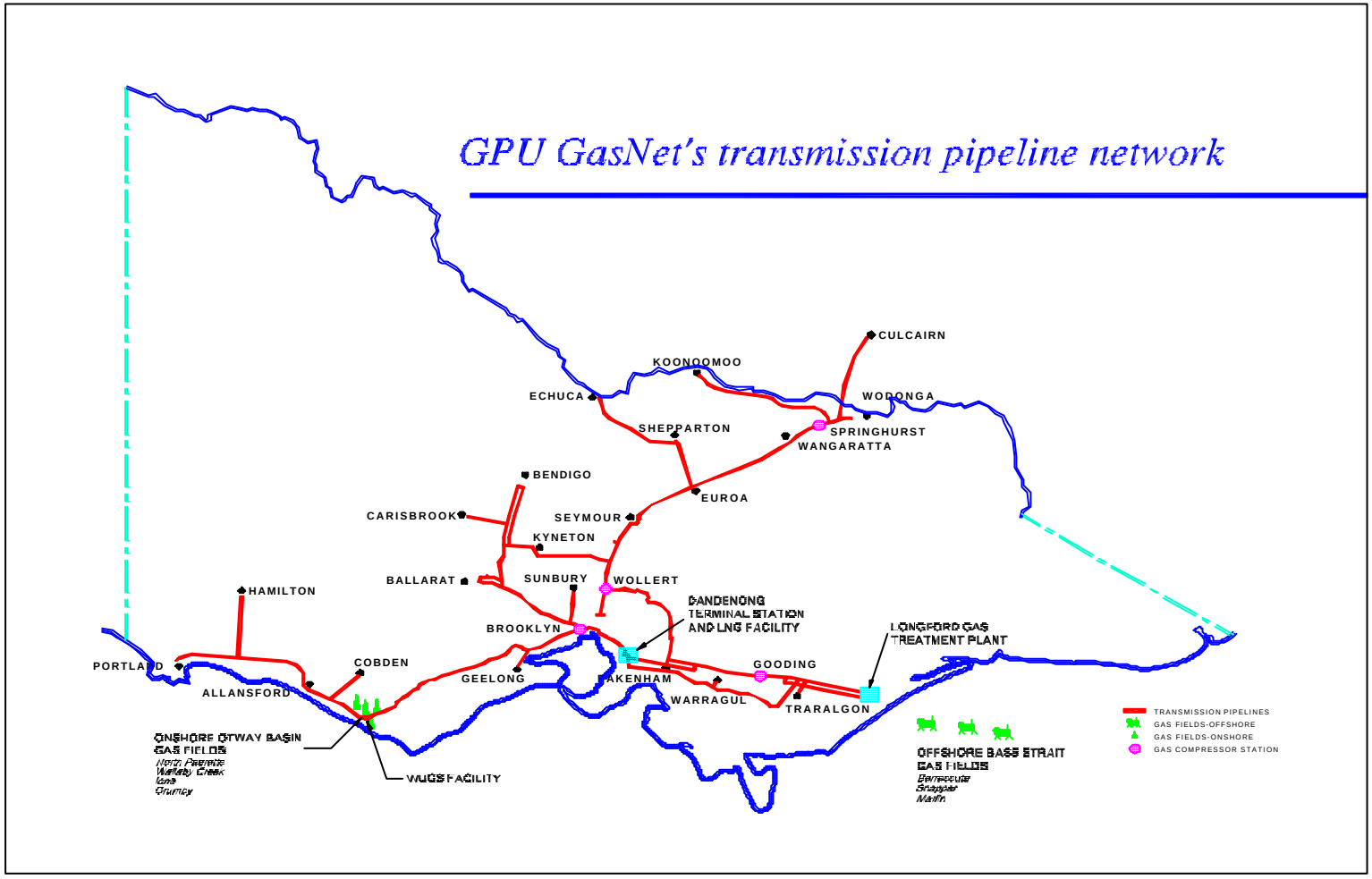
The Commission has now made a final decision under section 2.38(a)(ii) of the Code that it does not approve the proposed revisions to the PTS access arrangement.

One interested party expressed concern in response to the Commission's *Draft Decision* that no reference tariff would apply for Iona withdrawals for the remainder of the initial access arrangement period and that retailers would need to negotiate interim arrangements with GPU GasNet.[153] It asked the Commission to consider whether it would be desirable for a reference tariff to apply for that period. It also requested that the Commission indicate whether it would approve a revised application for a Southwest Zone withdrawal tariff.

The Commission remains of the view that insufficient operational history currently exists to provide a sound basis for assessing GPU GasNet's claims and recommends that GPU GasNet submit its amended roll-in proposal at the time of the scheduled review of the access arrangement in 2002. It notes that section 2.28 of the Code provides that a service provider may submit revisions then or at any other time. It also notes that GPU GasNet has announced that it will charge a 5 peak day injection tariff of $8.33/GJ in the interim.

[153] AGL submission, 30 May 2001, p. 1.

Appendix A: GPU GasNet's gas transmission system



Source: GPU GasNet application.

Appendix B: Submissions by interested parties

Pre Draft Decision

Origin Energy, 14 December 2000

AGL, 15 December 2000

BHPP, 15 December 2000

ENERGEX, 15 December 2000

ExxonMobil, 15 December 2000[154]

Santos, 15 December 2000

TXU, 15 December 2000

Energy Users Association of Australia[155], 21 December 2000

EdgeCap, 21 December 2000

BHPP, 17 January 2001

ExxonMobil, 9 February 2001[156]

BHPP, 9 April 2001

Post Draft Decision

BHPP, 18 May 2001

ENERGEX, 21 May 2001

AGL, 30 May 2001

TXU, 12 June 2001

[154] Lodged by Esso Australia Pty Ltd for and on behalf of Esso Australia Resources Pty Ltd.

[155] Formerly the Australian Gas Users Group. Members include large energy users such as manufacturers and Government agencies. GPU GasNet is also a member.

[156] Lodged by Esso Australia Pty Ltd for and on behalf of Esso Australia Resources Pty Ltd.